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INFORMATION SYSTEM OF SCHOOLS AND COLLEGES OF ISLAMABAD



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**A report submitted in partial fulfillment
of the requirements for completion
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QUAID-I-AZAM UNIVERSITY
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Dated: November , 2002

FINAL APPROVAL

This is to certify that we have read the project report submitted by Miss. Ayesha Ashiq and it is our judgment that this report is of sufficient Standard to warrant its acceptance by the Quaid-I-Azam University, Islamabad for the degree of Post Graduate Diploma in Computer Science.

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TO THE GREATEST BENEFFACTOR

Dedicated to the greatest benefactor of mankind who communicated the word ALLAH, with diligence and devotion and who was regarded by all --- both friends and foes --- as an embodiment of truth, honesty, justice and fair play.



*TO
MY PARENTS
AND
ALL THE TEACHERS*

ACKNOWLEDGMENT

First of all, I would like to extend my sincere gratitude to Almighty ALLAH whose blessings, help & guidance has been a real source of all my achievements in all my life.

“All praise belongs to ALLAH alone, Lord of all the worlds, who created the heavens and the earth and all that is between the two and indeed in them there are many signs for those who use their understanding. (Al-Quran)”

And then I pay my hearty tribute and like to thank my respected teacher and supervisor Javed Hussain for his consistent help, encouragement and valuable suggestions. His never-ending guidance helped me to carry out this project in the best way as possible.

My thanks goes to all of my friends for their nice company, encouragement moral Support, and co-operation especially to Razia Sultana. I will always cherish her continuous help and excellent corporation during my project.

And finally I would like to admit that all my achievements are due to my loving parents. Words are inadequate to express my veneration for their Prayers, encouragement and good wishes.

Ayesha Ashiq

ABSTRACT

The Computer has brought a revolution not only in the field of science but also in every field of human endeavor. The computer has to handle large volume of data and perform routines and procedures constantly. In 1990 after a great revolution in Internet. The world has become a global village.

Computerization of a system involves the study of present system in depth along with all its weakness and drawbacks, suggestion a suitable computer system implementation a new system and then looking at its proper functioning.

Information system of Schools and colleges cannot be managed manually nowadays the information system not only provides easiness in the activities but also it reduces the tedious documentary work.

This project provides a great facility to the management staff of Directorate of Education for their Information system.

The Information System Of Schools And Colleges of Islamabad has been developed by the using ORACLE 8i under window 2000 Professional and Active Sever Pages (ASP). The design system keeps the records of schools and colleges in ICT (Islamabad Capital Territory). It also keeps the records of number of student enrollment in each class of schools and colleges of Islamabad. The system also provides efficient means of data storage and retrieval of information in the form of printed reports in oracle and ASP and queries, which are required by the Directorate of Education management. The system exhibits a user-friendly environment for insertion, deletion and updating of data. With the implementation of this system most of the problem faced by the organization regarding this aspect would be solved.

PROJECT BRIEF

- Project Title** : **Information System Of Schools And Colleges Of Islamabad Under Directorate Of Education Islamabad.**
- Undertaken by** : **Ayesha Ashiq
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- Starting Date** : **July, 2002.**
- Completion Date** : **November , 2002.**
- Software Used** : **Oracle 8i And Developer 6i
Active Server Pages (Version 3.0)**
- Operating System** : **Microsoft Window 2000 Professional.**

PREFACE

The report is concerned with the analysis, design and implementation of 'Information system of schools and colleges'. The entire work is presented in 8 chapters followed by appendices.

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- Chapter 2: Introduction to the Database
- Chapter 3: Preliminary Investigation And Existing System
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CHAPTER # 1



**Introduction to the
Organization**

1.1 INTRODUCTION

In the present era, the user of computer technology is increasing day by day. Different organizations have a computerized system to meet their objectives and those who have manual system are taking decisions to develop such a system. Now lots of questions arise in our mind. Why do these organizations feel the need of a computerized system and what are the reasons to develop such a new system. The answer of these questions is very simple that the organizations faced this problem due to the old manual system. Therefore in order to overcome such problems of manual system, the organizations are adopting computerized systems.

1.1.2 INTRODUCTION TO FEDERAL DIRECTORATE OF EDUCATION

Federal Directorate of Education, was established in 1967 as an attached department of Federal Ministry of Education with the responsibility to provide educational facilities to the children of Federal Government Employees and the residents of Islamabad and its adjoining rural areas, comprising 133 villages.

Director General heads the Directorate. It has four Directors, namely, Director (Colleges), Director (Planning & Development & Administration), Director (Schools) and Director (Model Institutions) who are assisted by Deputy Directors, Assistant Directors, Admn.Officers and other ancillary staff.

Immediately after its inspection, the Directorate started acquiring plots from CDA for construction of educational institutions in different sectors and initiated development of these institutions in a phased program and established 23 schools and 2 (male and female) colleges upto 1973-74. 139 rural schools were taken over from the Government of Punjab in June, 1974. One college for Men housed in H-9,sector was also taken in the fold of Federal Government in 1974.

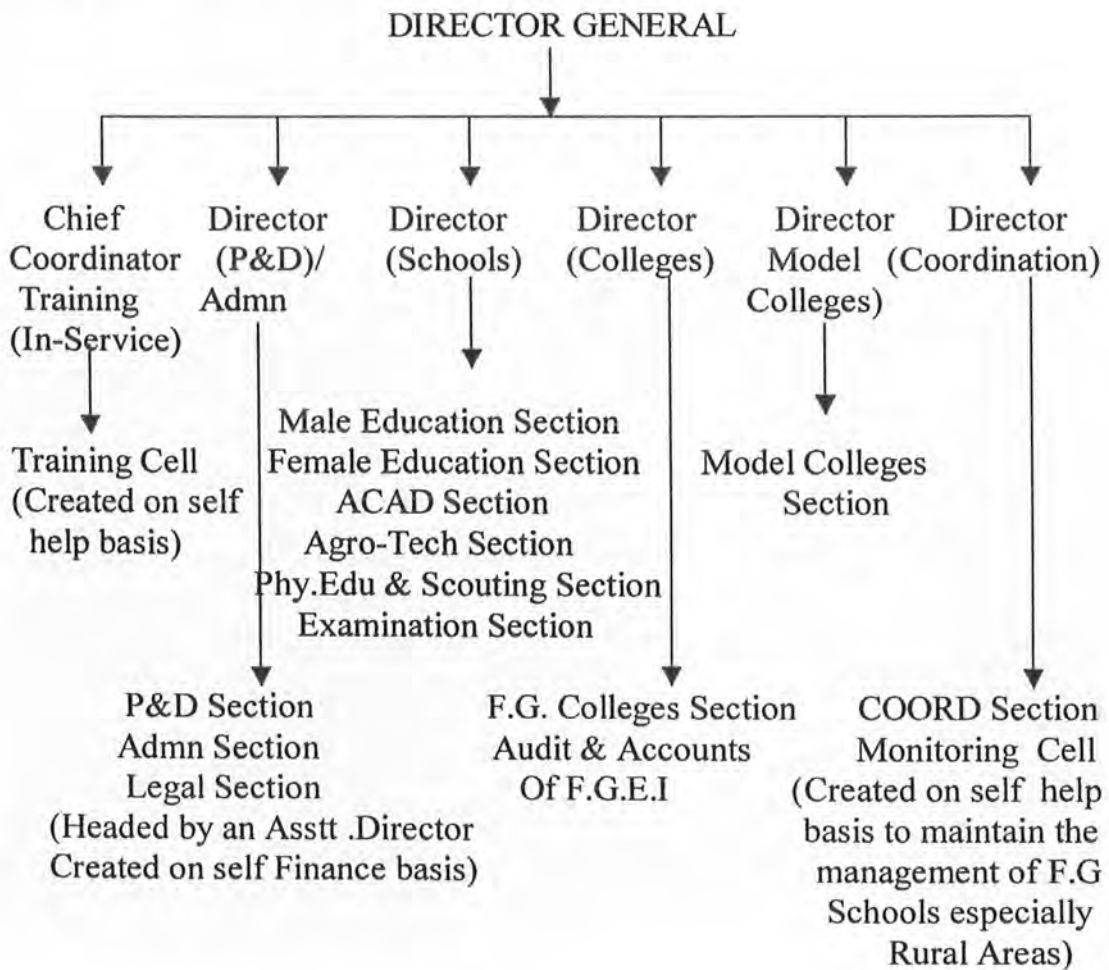
Expansion of educational facilities continued over the years and at present we have 392 institutions.

1.1.3 ADMINISTRATIVE STRUCTURE

Director General heads the Federal Directorate of Education. It has four Directors namely, Director (Colleges), Director (Schools), Director (P&D) & Admn. And Director (Model Colleges) who are assisted by Deputy Directors, Assistant Directors, Admn. Officers and other ministerial staff.

The administrative structure can be highlighted with the help of Organizational chart of Federal Directorate of Education, Islamabad.

1.1.4 ORGANIZATIONAL CHART



1.2 THE FUNCTION OF THE DIRECTORATE OF EDUCATION

- ❖ To provide educational facilities to both urban and rural population.
- ❖ To ensure effective administrative and academic control over educational Institutions under its jurisdiction.
- ❖ To prepare schemes for development projects and execute / implement same after their approval.
- ❖ To guide and oversee the conduct of co-curricular activities in educational Institutions.
- ❖ To keep control over the revenue and expenditure and to ensure proper audit of all government funds by the Auditor General.
- ❖ To arrange professional guidance and training of teachers and other staff.
- ❖ To organize and regulate the system of supervision, inspection and Monitoring of educational institutions.
- ❖ To coordinate with national and international donar agencies, extend cooperation in respect of financial and technical assistance related to Academic and development schemes.

Primary level. However, on account of shortage of funds, for supervision and inspection, teachers training, Parent teacher Association, quality aspect is suffering.

In consonance with the aims and objectives of setting up of the Federal Directorate of Education Institutions have continued being opened both in the ruralAs well as urban sectors .The Directorate has also been making endeavors to bridge the gap between male and female education leading to setting up of 392 institutions over the years from the Primary to the postgraduate levels catering to the needs of students.

1.2.1 MANAGEMENT STRUCTURE

The Federal Directorate Of Education, for the sake of decentralized administrative divided the Federal Capital Territory in the following sectors.

- ❖ Islamabad (Urban Area)
- ❖ Bharakau Sector (Rural Area)
- ❖ Nilore Sector (Rural Area)
- ❖ Tarnaul Sector (Rural Area)

Assistant Educational Officers are posted in each of the sectors by establishing the Assistant Educational Officers, these officers are not only responsible for the coordination with the Head office but they also look after the institutions in their sectors.

1.3 JOB DESCRIPTION OF OFFICERS OF FEDERAL DIRECTORATE OF EDUCATION, ISLAMABAD

DIRECTOR (SCHOOLS)

Over all administration of teaching staff of 430 Federal Govt. Educational Institutions Federal Area/ Islamabad, i.e. appointments/ Transfers/ Sanction of advance/ leave/ Deputations/ Seniority Lists/ forwarding applications/ promotion/ Moreover S. Grades etc.

Dealing with examination section Primary and Middle department examination. Scholarship Examination of Primary and Middle Schools.

Over all supervision of F.G. Male/Female, Higher Sec, Secondary, Model , Comprehensive , Junior Model , Middle , Primary , Mosque Schools , Islamabad and Federal Area and administration of following five sections in FDE.

- ❖ Male Education Section.
 - ❖ Female Education Section.
 - ❖ ACAD Section.
 - ❖ Examination Section.
 - ❖ Agro-tech Section.
 - ❖ Phy.Edu & Scouting Section.
- * Management of Institutions in terms of personnel management posting, transfers, promotion of advance increments, Disciplinary proceedings etc
 - * Monitoring of over all functioning of the institutions.

- * Appointment of Distributing & Disbursing officers.
- * Taking measures for enhancement and upbringing of academic/ Curricular and Co- curricular activities.

Deputy Director (MALE EDUCATION SECTION)

Over all supervision of section and deals with appointments /transfers /sanction of advance / leave deputations /Seniority Lists /forwarding applications /promotion /Moreover / S.Grades etc of Male Institutions.

Deputy Directress (FEMALE EDUCATION SECTION)

Over all supervision of section and deals with appointments /transfers /sanction of advance /leave /deputations /Seniority Lists /forwarding applications /promotion /Moreover / S. Grades etc of Female Institutions.

Assistant Director (ACAD / EXAM SECTION)

Over all supervision of Academic / Examination section . Dealing with primary /middle departmental /Scholarship examination. Arrangement of annual inspection program to analyses the performance of teachers on academic side. Co-ordinate with curricular wing in review of different courses as well as arrangement of teacher refresher courses for skill Development. Nomination for scholarships, professional and educational Courses etc.

Assistant Director (AGRO TECH SECTION)

Supervision of Agro Tech Section. To watch the activities of the tech. Education in FGEI . And also responsible for maintenance of the building of FDE He has been given the charge of transportation / Vehicles of the FDE.

Assistant Director (PHY.EDU SECTION)

To exercise over all control of the official working in the Physical section of the schools administration and to assist the Director (S) in the service matters of the Male /Female PTIs (Junior/senior) /DPEs of the FGEIs Islamabad / Federal Area.

DIRECTOR COLLEGES

Over all administration of teaching staff of 7-F.G (Colleges. Job description is the same as in case of above.

- ❖ Over all Budget of Federal Govt. Education Institutions at Islamabad/ Federal Area
Job description of Budget 430 Schools/ Colleges. Reappropriate / excess saving.
Monthly Expenditure Re- imbursement of Medical charges Etc.
- ❖ To look after the Audit work of 430 Federal Govt. Educational Institutions.
- ❖ Co-ordination section. Job description, Assembly question/ Senate question/
Correspondence with Ministries/ Divisions of general work.

Deputy Director (F.G COLLEGES SECTION)

Over all supervision of section and deals with appointments /transfers /sanction of advance / leave /deputations /Seniority Lists /forwarding applications /promotion /Moreover / S.Grades etc of Male / Female Institutions.

Assistant Director (AUDIT AND ACCOUNTS SECTION)

Over all supervision of section to watch the settlement of the audit observation concerning FDE / FGHI. To work regarding internal check Of Accounts and physical verification.

DIRECTOR P&D/ADMN

Over all planning and development of 14 Islamabad Model Colleges, 18- Colleges and 398 Federal Govt. Educational Institutions. Job description is to prepare schemes for opening new schools/Creation of posts, look after the construction work of school buildings/distribution of grants/repairing of buildings etc.

- ❖ Over all administration of the staff of FDE i.e. appointments/transfers/sanction of advances /leave / deputations /seniority lists /forwarding applications /promotion /Moreover S.Grades etc.
- ❖ Over all administration of non-teaching staff B-1 to B-16 employees of 430 Federal Government

- ❖ Educational Institution Federal Area /Islamabad Job description is the same as in case of Teaching Staff.
- ❖ Transport and Care Taker of the FDE Building.

Deputy Director (P & D SECTION)

All the matter related with the planning and development of the FGEI under this Directorate.

Assistant Director (P & D SECTION)

Over all supervision of section to support Deputy Director in all the matters related with planning and development, procurement of furniture grants.

Assistant Director (Admn SECTION)

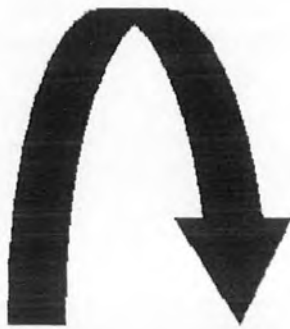
To exercise over all control of the officials working in the Admn-I section of the FDE administration and to assistant the Director(Admn) in the matters Of the FDE employees. Any other (special) works as and when assigned by the above senior officers.

DIRECTOR MODEL COLLEGES

Over all administration of 14-Islamabad Model colleges (teaching and non-teaching staff) i.e. Appointments /transfers /sanction of advances / Leave /deputations / Seniority lists /forwarding Applications /promotion /Moreover /S. Grades etc. Preparation of Budget of IMC, excess saving / Reimbursement of Medial charges.



CHAPTER # 2



**Introduction to the
DataBase**

2.1 INTRODUCTION TO DATABASE

Data:

Bare facts and figures that can be recorded are called data.

Information:

- ❖ Processed data.
- ❖ Data in the form that is useful for making decisions.

Database:

- ❖ A collection of related records stored with minimum of redundancy that many users can share simultaneously.
- ❖ An integrated, self-describing collection of related data.

Database Management System (DBMS):

A collection of software programs that enables the user to create and maintain a database e.g., Oracle.

Relational Databases Management System (RDBMS):

In recent years databases management system (DBMS) have established them as the primary means of data storage for information systems ranging from large commercial transaction processing applications to PC based desktop applications. At the heart of most of today's information systems, is relational databases management system (RDBMS). RDBMSs have been the workhorse for the data management operations for over a decade and continue to evolve and mature, providing the sophisticated storage, retrieval and distribution functions to enterprise- wide data processing and information management systems. Compared to the file system, relational database management systems provides organizations with the

capability to easily integrate and leverage the massive amounts of operational data into meaningful information system. The evolution of high powered database engines such as ORACLE, MS SQL SERVER etc has fostered the development of advanced “enabling” technologies including client/server, data ware housing and online analytical processing, all of which comprise the core of today’s state of the art information management system.

Examine the components of the term relational databases management system. First a database is an integrated collection of related data. Given a specific data item, the structure of a database facilitates the access to data related to it, such as a student and all of his registered course or an employee and his dependents. Next a relational database is a type of database based in the relational model, no relational databases commonly used a Hierarchical, network, or object oriented model as their basis. Finally, a relational database management system is the software that manages a relational database. These systems come in several varieties, ranging from single user desktop systems to full featured, global, enterprise wide systems, such as ORACLE AND MS SQL SERVER.

The *relational databases model* represents data in the forms of table or relations. The relational model is based on mathematical theory, and therefore has a solid theoretical foundation. We need only a few simple concepts however, to describe the relational model. According to McFadden (1994), the relational data model consists of following three components.

1. Data structure. Data is organized in the form of tables or relations.

2. Data manipulation. Powerful operations (such as those incorporated in the SQL language) are used to manipulate the data stored in the relations.

3.Data Integrity. Facilities are included to specify business rules that maintain the integrity of data when they are manipulated.

2.2 ORACLE and RDBMS

Oracle provides the flexible RDBMS called *Oracle 8i*. Using its features, you can store and manage the data with all the advantages of a relational structure plus PL/SQL, an engine that provides you the ability to store and execute the program unit. The server offers the options of retrieving data based on optimization techniques. It includes security features that control how a database is accessed and used. Other features include consistency and protection of data through locking mechanisms.

Oracle applications may run on the same computer as the Oracle server. Alternatively, you can run application on system local to the user and run the Oracle server on another system (client server architecture). In this client server environment, a wide range of computing resources can be used. For example, a form based airline reservation application can run on client personal computer while accessing flight data that is conveniently managed by an Oracle server on a central computer.

2.3 Components of a Database:

- **Data Defining Language (DDL):**

It helps to create and design a database.

- **Data Manipulating Language (DML):**

It helps to maintain the data stored in the database.

- **Data Control Language (DCL):**

It is used to revoke rights to certain operations on database.

2.3.1 Advantages of a Database approach:

A DBMS can provide:

- **Data consistency and integrity**
- **Application program independence**
- **Data sharing**
- **Back up and recovery**
- **Security and privacy**

2.4 Contents of a Database:

- **User data:**
Data users work directly by entering, updating and viewing the data.
- **Meta data:**
It is the data about data.

2.4.1 Database Development Process:

- **Requirement Gathering:**
Determine what the user is looking for. What functions should be **supported** and how the system should behave.
- **Data Modeling:**
Based on user requirements, develop a logical model of file system.
- **Implementation**
Based on data modeling, a database can be created. Applications are written to perform the required functions.
- **Testing:**
The system is tested using the real data.
- **Deployment:**
The system is deployed to the user. Maintenance of the system begins.

2.4.2 Designing a Database:

Tables:

A table is a data structure to store the data.

Relationships:

- It is an association between two entities.
- These relationships are bi-directional.
- The relationships are typically given names.
- A relationship may include one or more entities.

Relationships can be:

One to one

One to many

Many to many

Domains:

A domain is a set of values that a column may have. Domains also include the type and length of data found in each column. There are two types of domains:

Implicit domain

Explicit domain

Business Rules:

Business rules allow LIS to specify constraints on what data can appear on tables and what operations can be performed on data in tables. Business rules are enforced through constraints on the database.

Database System:

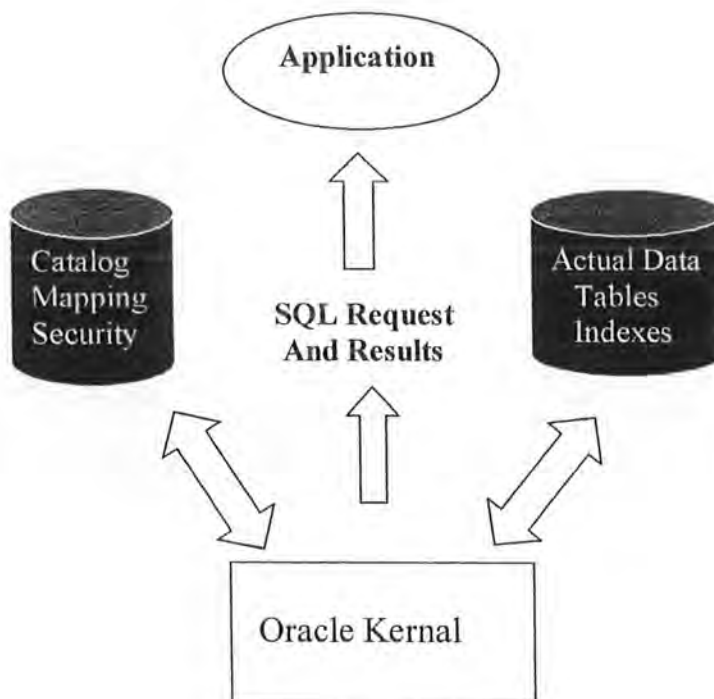
The database and the software together form a database system.

Functional requirements:

These consist of user-defined operations (transactions) that will be applied to the database. During analysis phase, these requirements are specified and Data Flow Diagrams are used for it.

Data Dictionary:

It contains the definition of a database. It contains information such as the structure of each file, type and storage format of each data item and various constraints on data. The information stored in Data Dictionary is called Meta data. It describes the structure of primary database.



E/R MODELING:

“A set of constructs used to interpret, specify and document logical data requirements for data processing system.”

ER models are conceptual models and cannot be directly implemented in a database.

Entity:

An object about which information is recorded. It can exist independently. It can exist physically (e.g., a person) as well as conceptually (e.g. job).

Attributes:

Each entity possesses some properties, called attributes for that entity. These attributes define an entity. Attributes may be:

- Simple/Atomic
- Composite
- Single-valued
- Multi-valued
- Derived and Stored
- Null

Key Attributes:

An attribute whose values are distinct for individual entity is called key attribute. In E/R Diagrams, each key attribute has its name underlined inside the oval. Note that an entity can have more than one key attributes.

Some Conventions used in *E/R Diagram*

- A rectangular box enclosing its name describes an entity.
- Attributes names are enclosed in ovals and are attached to their entity by straight lines

- Composite attributes are attached to their component attributes by straight line
- Multi-valued attributes are represented by double ovals.

A rhombus between two or more entities denotes relationships

2.5 DATABASE TERMINOLOGY:

There are three basic terms which are used in all databases.

FIELD:

A subdivision of a record containing a unit of information .For example; a payroll Record might have died following fields: Employee identification number. Name, Job title, Social Security number, etc.

RECORD:

A unit of data representing a particular transaction or a basic element of a file consisting in turn of a number of interrelated data elements.

FILE:

A collection of related records is called a file Example of a database file.

Thus we can say that, when the data is arranged as a table (rows and column) each Column represents a field, each line represents a record, and the table as a whole represents the file.

2.5.1 PRIMARY KEY AND FOREIGN KEYS:

Each time you have data inside a relational table, you need a way to identify each row stored into that table. For example, say Fernando Lozano has changed his e-mail address. How do I know the right row to update? Given the table ADDR_BOOK we've already been presented.

```
UPDATE ADDR_BOOK SET E_MAIL = lozano@blnet.com
WHERE NAME = 'Fernando Lozano'
```

2.6 TYPES OF DATABASE:

1. Hierarchical Databases
2. Networking Databases
3. Relational Databases

Hierarchical Databases:

In Hierarchical Database, data elements are related to one another as "Parent;" and "Children". A PARENT 'data element is higher in the hierarchy. Than Child and, and connected to it. A' CHILD is a data element subservient to Parent, and Connected to it. In a hierarchical database a parent can have more than one child, but each child can have only one parent. Hierarchical database is The Item data element is the parent of the Cost, Quantity, Substitute, and Purchase Order data elements. For Example. The Substitute data element consists of the item number and the item name.

Networking Databases:

In a NETWORK DATABASE, data elements are related to one other as parents and Children as in a hierarchical database, with only one difference; a child can have more than One parent data contained in hierarchical database, the difference. Is that we have added some new data elements on the right of The Supplier data Element is Order, Address, and Contact data elements. In other words, Purchase Order.

Relational databases:

A relational database stores all its data inside tables, and nothing more. All operations on data are done on the tables themselves or produces another tables as the result. You never see anything except for tables.

A table is a set of rows and columns. This is very important, because a set does not have any predefined sort order for its elements. Each row is a set of columns with only one value for each. All rows from the same table have the same set of columns, although some columns may have NULL values, i.e. the values for that rows was not initialized. Note that a NULL value for a string column is different from an empty string. You should think about a NULL value as an "unknown" value.

The rows from a relational table are analogous to a record, and the columns to a field. Here's an example of a table and the SQL statement that creates the table:

```
CREATE TABLE emp
(ID_NO number (20),
name varchar (35))
```

ID_NO	Name
101_366_102	Ahmad
102_685_101	Hassan

2.7 ADVANTAGES OF DATABASES:

Advantages to databases are described as follows:

ACCESSIBLE:

Databases are accessible to any program with a legitimate need for them, regardless of where the data are physically located. Data are accessible to any program regardless of the language in which the Program is written (assuming the database system supports the language, used)

DUPLICATION IS NOT ALLOWED:

Data are not duplicated in different locations.

NO NEED TO WRITE THE FILE:

Programmers need not write and debug extensive file descriptions in order to Work with data. Because of these characteristics of databases, organizations are willing to pay the Considerable costs of creating and maintaining a database-A business that uses a database rather Than files can save time and money and can exploit its data more efficiently since they are Easier to get at.

2.8 DISADVANTAGES OF DATABASES:

There are some disadvantages to databases:

EASILY ABUSED:

With data more readily accessible, they can be more easily abused.

EXPENSIVE HARDWARE AND SOFTWARE:

Databases require expensive hardware and software.

NEED OF SPECIALIZED PERSON AND TRAINING:

Specialized personnel may have to be hired to set up and administer the database, and existing personnel will have to be trained to use it properly. In addition people may resist a new system merely because it is new, or because they dislike the idea of giving up control of their "Personal" files. Finally, creating a database is a complicated and lengthy process.

2.9 CURRENT SETUP:

Currently organization has very limited computer facilities. They have only about 4 to 5 computers, which are used by their management department. There is no computerized system to keep the records of the students and schools and colleges in Federal Area etc.

They have recently purchased licensed ORACLE but they have no computerized system for that. They have placed the order for the purchase of new computers, which are compatible to the systems, and they are also willing to computerize their records.

2.9.1 PROBLEMS FACED DUE TO THE CURRENT SYSTEM

- ❖ In Directorate of Education management staff has to maintain a large number of Registers for the information.
- ❖ A quick response to the Director staff management is not possible.

- ❖ Maintaining information about every institute in Federal Area & information of student enrollment is a difficult task.
- ❖ Sometimes wrong entries in the registers create problems for the management staff.
- ❖ Entries in the registers manually are a time consuming task.

2.9.2 PROJECT OBJECTIVES

Designing any computer based system is essential to meet the objective, which the computer based system should fulfill the drawbacks of the existing system in an efficient, effective and easy to use, keeping in mind the demands of the existing system. Not only to help the management but is also helpful for ministry of education.

The proposed system is a management system to meet the following objectives:

General objectives

- ❖ More efficiency.
- ❖ Stationery expenses of the organization will decrease.
- ❖ Quick response against the questions of the management
- ❖ Accurate Information will be retrieved.
- ❖ One person can work at the place of three persons.

Specific objectives

- ❖ Time saving while inserting, retrieving, modifying and updating the records.
- ❖ Security will be provided.
- ❖ Fewer chances of errors.
- ❖ Less chances of data loss.
- ❖ Record of the staff will be maintained which will help in the management of human resources.

To design the framework for the complete computerization of the organization.



CHAPTER # 3



**Preliminary Investigation
And Existing System**

3.1 OVERVIEW

The preliminary investigation often called the feasibility study or system survey is the initial investigation, (a brief study of the problem). It consists of the groundwork necessary to determine if the system/project should be pursued.

Information system provides the facility by maintaining the records. Based on this information, which is kept organization sets, its future strategies and decision taking is according to the situation. Different kinds of reports etc. are also prepared on the basis of the information provided by Information system of Schools And Colleges of the organization.

TRUE NATURE OF THE PROBLEM

Begin by determining the true nature of the problem. Sometimes what appears to be the problem turns out to be, on a closer look, only a symptom.

During the survey phase meetings with the management staff & concerned department were conducted. After these meetings the management staff showed their interest to build the computerized system for information.

3.2 MAIN FEATURES OF EXISTING SYSTEM

At present, the organization keeps the information about the students and institutes of Islamabad in the loosely bound files. The system is manual and more prone to error. All the information about an Educational Institutes of Federal Area is manually entered in his personal file. This information includes enrollment of the student in Educational Institutes of Federal Area. However, record of all the above-mentioned aspects is not kept centrally.

The main problem of the existing system remains the efficient access of information. The existing system takes time to access data of a particular Institutes. Whenever the administrator of the director of organization requires some information of a particular Institute, he has to wait for that information, because of the scattered records. So he has to face difficulties in retrieving required information.

Such queries cannot be easily satisfied in the existing system. Tills query demands clerical expertise and lot of hard labor and it is also a time consuming query, which is not efficient method. The organization has an ever-growing enrollment of students and Educational Institutes of Islamabad the existing system gets more and more complex with this increase. Destruction or misplacement of files is experienced more often than not. Special racks/Elmira are required to safely store these records which cause prone to damage by pests and dimak.This manual system not only takes more paper space but the access time also increases. Due to more access time the administrator cannot take any quick decision.

The security of valuable information about the Enrollment of students and Educational Institutes in Federal Area cannot be guaranteed in the existing system. The information is kept in files, so, any mishap to it may result in die loss of valuable data. The above-mentioned problems are only due to the manual system.

3.3 DATA GATHERING

Data gathering is expensive and requires a lot of legwork and time. There is no standard procedure for gathering data because each system is unique. There are certain sources that are commonly used:

- ❖ Written documents.
- ❖ Interviews
- ❖ Questionnaires.
- ❖ Observation.
- ❖ Sampling.

WRITTEN DOCUMENTS:

The written documents that we used include manuals, reports, forms, test request etc and other kind of such materials that we found in the organization related to the problem. Some times it happens that you find so many written documents and sometimes nothing. When dealing with large amount of written material you require judgment to filter

The appropriate material for your project.

INTERVIEWS:

This method of data gathering has advantages as well as disadvantages. Interviews can be flexible as the interviewer can change the direction of the questions. You can probe with open-end questions that people would refuse at answering on paper.

Some respondents yield more information in an interview than they would if they had to commit themselves in writing. You can also observe the respondents voice inflection and body motions. Interviews can be expensive and time consuming. In order to gather data for our system interviewed the staff and other personnel of the Organization for a better understanding of problem.

3.4 DATA ANALYSIS

Gathering of data produces alarming amount of paper and so there is a need to get it organized. This is the second activity of the phase i.e. data analysis, in which we determined what to do with the data that we gathered. There are a variety of tools available to analyze the data such as charts, diagrams. The reasons for data analysis are related to the basic function of the system analysis phase to show how the current system works and to determine the system requirements.

3.5 LIMITATIONS

Since the organization is using an information system which is being managed on files so the staff related to this has to carry out a large amount of work i.e. calculations, maintenance, searching, and reports. The major drawbacks present in the current system are as follows:

- ❖ Existing system is quite slow and cumbersome.
- ❖ It is quite difficult and time consuming to find the errors occurred, as one has to search all the records.

- ❖ No ready references and information about educational Institutes and enrollment of students etc. are available. For this sort of information, the staff has to search different places, which is inconvenient to them.
- ❖ Protection of data about different things e.g. students enrollment in classes etc is not guaranteed.
- ❖ The existing system is not capable of bearing the load of a large amount of data.
- ❖ There is no integrity and consistency because records are duplicated.
- ❖ Great care is required to keep all the records updated at all the times.
- ❖ Proper updating is not present in currently adopted Information System.
- ❖ Information is stored in a manner that requires a large volume of stationery.
- ❖ Preparation of various reports, tough task because organization's staff has to do huge amount of data manipulation.



CHAPTER # 4



Proposed System

4.1 INTRODUCTION

Every new system, whether manual or computerized, that replaces the previous system, brings out some changes. These changes may be in procedures or in documents. The system introduces new terms, designs new documents and at times redesigns the existing ones. The existing procedures are, therefore, modified and new procedures are introduced. In this case the manual system of whole record keeping of the Directorate of Education is proposed system to be changed into a computerized system.

The organization does not have computer-based system, due to some administrative reasons; it is not practical to design a short term project to computerized overall existing manual system as one major project. The organization cannot accept an over all change in its procedures all at once. It needs time to define its problems. The administration should, therefore. Divide the total system into sub-systems.

The proposed system has been designed after thorough evaluating the manual procedure. It is a computerized system in which electronic data processing methods are used for making the system more efficient, economical and error free. New techniques and procedures have been adopted in the proposed system. These will meet all the requirements of the administration. It is so designed as to achieve the objectives within the resources of the user.

The proposed system is mainly related to the record keeping and retrieval of data and maintenance of the records. As the existing manual system is cumbersome, inaccurate and inefficient, the requisite information has to be dug out with labor consuming a lot of precious time. The computerized system is, therefore, developed which is quite comprehensive and covers every aspect of the objectives in detail.

4.2 STUDY REPORT:

The proposed system is the outcome of the study, which was carried out by frequently visiting and interviewing the concerned staff for understanding their routine work. The objectives of the system were defined and the purpose of this study was to convert the present manual system to a computerized one, which is more robust and flexible. During this stage, procedures currently used for record keeping system and their

problems particularly in procuring /retrieval of information. Attempt has been made to take into account all aspects of the old system. The present as well as future requirements are also taken into consideration. It is expected that the proposed system solution will be acceptable to the authorities.

4.3 OBJECTIVES OF SYSTEM

The proposed system should meet the objective of the project, which is to develop a computerized system for the organization that will manage the information concerning the employees.

It will also update the information about Educational Institutes in Islamabad and student enrollment in every Institute either Urban or Rural Areas.

Before starting the work on project, we held meeting with the management staff of Organization. The nature of system and its working procedure was discussed in detail to fulfill the objectives of the project.

What will be the requirements to meet the goals and how much it will be efficient well as economical? It is concluded that the computerization of this system will be beneficial for the management and will provide updated information. Proposed solution of their problems is a centralized database system. There must be a database maintained that helps them to fulfill the professional requirements.

Whenever a system is designed, it has some goals and objectives, which are expected to be fulfilled by the system. The system, which we have designed, has the following Objectives.

- ❖ The system should be user friendly and easy to *maintain*.
- ❖ The system should fulfill all requirements of information system of schools and colleges of Islamabad.
- ❖ It should provide accuracy up to, maximum possible level while manipulating data.
- ❖ The system will provide up-to-date information so that user feels comfortable and confident about system performance.
- ❖ Retrieval of information will be fast.

- ❖ Data consistency should be guaranteed by the system that will be helpful in generating effective
- ❖ Reports and queues in future.
- ❖ It should be of reduced cost and greater capacity.
- ❖ There should be no redundant data.
- ❖ System should be efficient.

The most important thing that should be there while designing a system is the fulfillment of requirements of users. If we consider the user demand at each step before proceeding to next step then the new system will be accurate and Successful.

4.4 ADVANTAGES OF PROPOSED SYSTEM

The computerization of a system which is used daily is a common trend adopted by the world. Information systems are also computerized in many organizations. In a computer-based system the user need only to enter the data needed for the computer to prepare the desired output. 'The computerization of information system has great advantages over manual system that is being used by the organization of our study. Some of them are as follows

4.4.1 QUICK AND EFFICIENT DATA PROCESSING

The primary advantage of the computer is its incredible speed. The time needed by the computer to post a transaction or determine an accounts balance is few million of a second. Large businesses may engage in tens of thousands of transactions per day. In processing such a large volume of data, computers can save vast amount of time in each step of the accounting process, including recording of transactions, preparing different kinds of reports so that they can reviewed by time management.

4.4.2 UP-TO-DATE RECORD

The speed with which data may be processed by a computer enables businesses to

keep records enrollment of student in different educational Institutes etc continually up-to-date.

4.4.3 ADDITIONAL INFORMATION WITH NO ADDITIONAL COST

We can manipulate the stored information according to our desire and also we can show this information in many formats to different people in form of reports that will be produced by the system. Time and cost considerations often make the preparation of different supplementary information impractical in an existing system and we cannot make multiple types of outputs using same data. The computerized system has no such limit.

4.4.4 INSTANT FEED BACK OF OPERATIONS

In online real-time computer systems, the person executing transaction may have a terminal, which is in direct communication with the main computer. Thus the person has immediate access to information useful in executing the current transaction.

4.4.5 MAIN THEME OF SYSTEM

In the business world, each organization has its own structure with its own policies for scheduling different activities, working and information system. Although there exists structure differences but still there exist some common standards and factors.

- ❖ Reports generation with specific standard format.
- ❖ Reports and queries for different information retrievals in business life of Organization.

The proposed information system is designed while keeping the standard factors for an organization information system in mind .The system has full capability to serve the organization because of Features such as reports,, queries etc and dunning letters.

4.4.6 FEATURES OF PROPOSED SYSTEM

Computerization means to change the manual system to a computer-based system. Since the existing system is paper file based so a computerized system is proposed. This system is initiated and designed by analyzing existing information system Of Schools And Colleges of Islamabad and general needs of organization related to information systems. Ideally this system avoids the drawbacks and limitations of existing system and fulfills all the requirements that are desired. Major features of the system are as follows:

- ❖ The system is user friendly and efficient because of its (GUI)
- ❖ The system ensures the valid data inputs and proper storage of data with consistency.
- ❖ The information retrieval is much efficient and fast.
- ❖ Multiple types of reports and queries are provided in the system, to get information about different things.
- ❖ The system can bear the load of huge volume of data related to transactions.
- ❖ There will be no duplication of records. Data integrity and consistency is ensured in the system.
- ❖ The tables are kept up-to-date continually which enhances the performance of the system.
- ❖ The data input is once and is manipulated effectively by the system at different places for maintaining proper records.

The cost of operation of this system in an organization is far less than the cost of operation of currently existing system.



CHAPTER # 5



System Analysis

5.1 DATA ANALYSIS & PROBLEM

From the interviews and written documents following facts and problems were found:

- ❖ At present there is no particular database and all the work is done manually. So it is very tedious and difficult to handle the current situation (i.e. time consumption) and also the accuracy is not guaranteed.
- ❖ Problems in information have always been there, sometimes mishaps lead to the disaster of the records e.g. if the register having all the entries of the current month or year is destroyed or lost, it really causes a big problem for the management staff.
- ❖ A large number of registers have to be maintained for the purpose of holding information. All the information and data are being stored in the paper files and registers which are liable to destruction or loss, so the present system is not adequate and also causes wastage of stationary and manpower.
- ❖ There is no way to give a quick response to the management in terms of different Queries for a better decision-making.
- ❖ All the record is present in different registers so accessing, updating and deleting any particular record for a particular month is very difficult and time consuming.

5.2 PROPOSED SOLUTIONS

From the analysis of the data, it was obvious that the main problem was in information of student enrollment in different Educational Institutes. Alternate solutions were given to the management.

- ❖ A computerized system consisting of only a single personal computer, which has the software like Oracle and Developer etc.

- ❖ To meet the future requirements, online hospital management system will be the best solution for the hospital.

Therefore keeping in view the above problems, and demerits of the existing information system, the computerized Information System of Schools And Colleges is being developed.

5.3 SYSTEM REQUIREMENTS

WORKING OF THE SYSTEM:

Proposed system is very user friendly and it fulfills the requirements for complete information system. The systems operation is so simple and it provides effective control on different components. It provides following features that made it so easy to operate.

- ❖ A very good GUI with menus and sub-menus with self-explanatory options.
- ❖ Proper identification numbers are used.
- ❖ The system interface is so easy to understand and with little training a person can easily operate it successfully.
- ❖ The checks on inputs of data are implemented effectively to ensure the proper data input.
- ❖ Many general reports and queries can be generated easily.

5.3.1 FUNCTIONAL REQUIREMENTS

5.3.1.1 SOFTWARE REQUIREMENTS

The S&C system is an Information System so it is essential to develop the system in that software which is easily available and provides enough facility to user. The windows environment is considered as the suitable software platform and Oracle Developer 6I is selected as the tool for development of underlying S&C system. The

reasons for these selections are discussed below.

WINDOWS ENVIRONMENT:

The windows environment maintains the visual interface of a windows program. It keeps track of which code is running and what resources that code need. Windows allow multiple applications to run simultaneously and allot a piece of memory to each application. Each running application appears in one or more windows on the screen, with the active application in front.

In addition to managing memory, the windows operating system manages task switching between running application. In most of the cases the foreground application uses more of the CPU time, however the system and other applications can also run in the background when the foreground application is not busy. The multitasking provided by the windows is not preemptive, that is it does not interrupt a running application to run any application.

DEVELOPMENT TOOLS:

Selection of suitable software for, the development is very difficult task. User requirements and project objectives are kept in mind while selecting software. After analyzing the underlying system and main objectives of proposed system, the Oracle 8i developer 6i was selected as the tool for the development of S&C system

Oracle's advantage is having versions of its mainstay, the Oracle database, for almost all hardware/software platforms available on the market, from the stand alone PC to the mainframe. The Oracle, Developer 6i is selected because database model used for the proposed system is relational database model and Oracle, Developer 6i is pure relational, because it supports multiple database tables and can perform selections, projections and joins on those tables. The selection of Oracle, Developer 6i has been made keeping in view its powerful menu development features and handling of data in more than one window at a

time. Oracle also provides the facility to use the relational database management techniques with which we can handle data more efficiently. Also Oracle Developer 6i is the most powerful RDBMS tool available in the Present time.

The Oracle relational database management system is the Oracle core product. It includes the Oracle Server and several tools intended to assist the users in the maintenance, monitoring, and actual use of the data. The Oracle data dictionary is one of the most important components of the Server. It consists of a set of tables and views that provide a read-only reference to the database,

Oracle, Developer 6i can handle large databases efficiently. All the facilities of Windows Operating System are also there. The Form Designer with powerful Layout Editor and other designing tools is also there, by which the desired font, position, style, color etc can be produced by selecting or clicking mouse to the available option.

5.3.1.2 HARD WARE AND OPERATING SYSTEM REQUIREMENTS

Each computer system has a specific hardware configuration. This hardware configuration should have enough capability to run software on the computer. Our system has also some basic needs or requirements for hardware and operating system.

- ❖ IBM PC with 128 MB RAM , a network card and a hard disk with at least 10 GB of memory.
- ❖ Color SVGA monitor.
- ❖ Printer.
- ❖ Windows version NT/2000 (Professional) or any later version.

No other special kind of hardware is needed to run this software. Any system, which supports the database software, will have the ability to run this application. There should be one system, which should behave like a server and remaining work as a client i.e. it will be client/server architecture.

5.3.1.3 INTERFACES REQUIREMENTS INTERFACE DESIGN:

Frustration and anxiety are part of daily life for many users of computerized information systems. They struggle to learn command language or menu selection systems that are supposed to help them do their job. User interface design has as much to do with the study of people as it does with technology issues. There are few of the many questions that must be asked and answered as part of the user interface design.

1. Who is the user?
2. How does the user learn to interact with a new computer based system?
3. How does the user interpret information produced by the system?
4. What will the user expect of the system?

User participation is very important at every stage of the development process, particularly for the design of the user interface. The term user in this case, refers not only to the primary or operational user but also to all other users who require the results of the operation for their processes. The bottom line is that for application modeling, the user's screen is an important element.

The design of user interface draws heavily on the experience of the designer. Three categories are suggested:

- ❖ General interaction
- ❖ Information Display
- ❖ Data Entry

GENERAL INTERACTION:

Guidelines for general interaction often cross the boundary into information display, data entry, and overall system control. The following guidelines focus on general interaction:

- ❖ Use a consistent format for menu selection and data display
- ❖ Provide the user with visual auditory feedback to ensure that two-way

communication is established.

- ❖ Permit easy reversal of most actions.
- ❖ Provide help facilities.
- ❖ Categorize activities by function and organize screen geography accordingly.

INFORMATION DISPLAY:

If information presented is incomplete, ambiguous, or unintelligible, the application will fail to satisfy the needs of a user. The following guidelines focus on information display:

- Display only that information that is relevant to the current context
- Use consistent labels, standard abbreviations, and predictable colors.
- Allow the user to maintain visual context.
- Producer meaningful error messages

DATA INPUT:

Much of the user's time is spent picking commands, typing data, and otherwise providing system input. In many applications, the keyboard remains the primary input medium. The following guidelines focus on data input:

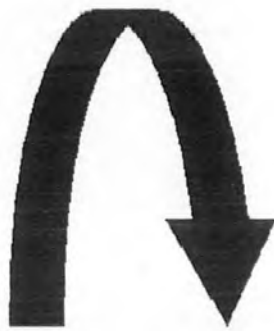
- ❖ Minimize the number of input actions required of the user
- ❖ Maintain consistency between information display and data input
- ❖ Allow the user to customize input
- ❖ Interaction should be flexible but also tuned to the user's preferred mode of input.
- ❖ Deactivate commands that are inappropriate in the context of a action.
- ❖ Provide help to assist with all input actions.

5.3.2 NON-FUNCTIONAL REQUIREMENT

This system will work according to the rules and regulations of Information System Of Schools And Colleges and its performance will be faster and reliable as compared to the manual management system.



CHAPTER # 6



System Design

6.1 SYSTEM DESIGN

A basic assumption behind the systems analysis life cycle approach is that systems will eventually become obsolete and have to be replaced. In the database environment there is reason to question this assumption. The database can be designed in such a way that it can evolve, changing to meet future information needs of the organization. System design is the most challenging among all phases of the system's life cycle and also has the highest priority. The software engineers mostly emphasize on this phase. The more your design is precise and agrees with what is required, the more reliable and efficient the resulting system is expected to behave. Any (hulls or flaws ignored during this phase not only becomes problematic in the long run (i.e. implementation phase) but also reduces the efficiency and reliability of the resulting software to a remarkable extent.

More concentration is required on logical and physical design. Logical design is basically concerned with notifying all inputs and outputs. System design presents specific information for the designing of the **output, input** and database. Economy, reliability, responsiveness, and modularity are those aspects that should be considered in design phase. After studying the existing system, analyst should plan and design a new system that should meet the needs of the users.

Our Schools and Colleges Information System is basically a system, which is designed for converting manual information system to a computerized information system. The input and output design is according to the standard and the requirements of the company e.g. reports which are one of the main outputs of our system are generated in a standard format and style which is needed by the organization. This evolution is possible with the following characteristics:

- The model faithfully mirrors the operations of the organization.
- It is flexible enough to allow changes as new information needs arise.
- It is independent of physical implementation.

Proper database design is not just a question of getting the data structures right:

Data Integrity is a key ingredient also. The system design phase we define rather design the new system. System design phase is further divided into two sub-phases:

- ❖ Preliminary design phase
- ❖ Detailed Design phase

In case of a preliminary design new system concepts are established whereas in case of Detailed design the exact design specifications are determined.

6.1.1 PRELIMINARY DESIGN

In the preliminary design stage we develop a general system designs with the help and coordination of the user. Then among those design we choose the best design. System flow charts are also developed in the preliminary design phase. Identify hardware, software, and management needs. Also different estimates are revised. While working under preliminary design stage it should also be considered that how the input data will be gathered and what will be the requirements of the organization regarding reports.

6.1.2 DETAIL DESIGN

In the phase of detail design the fact of system is considered in detail. The detail design activities are as follows:

- Technical design is developed,
- Designing output forms and screens,
- Planning input data forms and procedures,
- Drawing system flowcharts, planning file access methods and records Formats
- Planning database interfaces, planning data communications interfaces.

- Designing system security control, and considering human factors.
- Plan program modules, algorithms, files, databases,
- Revise estimates.

There is an assumption that every system has a life cycle, a period of time during which the system is designed, is created, is used, and is then replaced by a new system. A typical life cycle extends over several years.

6.2 DESIGN APPROACH

Design method strategies and methodologies are tools for a designer. Since designing anew system is, as a matter of fact a creative work and as much, it is very difficult and described in detail. It follows that a good designer may employ a design standard but keep on reviewing its effectiveness constantly, and looking for future improvements. The common design methods are:

- ❖ Top-down design
- ❖ Bottom-up-design
- ❖ Parallel Approach
- ❖ Critical-first design, and
- ❖ Structured design approach.

6.2.1 TOP-DOWN DESIGN

Top-down design is based on the idea that there are various level of decision making required, varying from those concerning goals of project and the overall system boundary, down to the detail level of allocating data to disk and layout of printed reports. Progressively analyzing high-level functions and breaking them down into more detail is referred to as functional decomposition; whereas stepwise refinement refers to gradually increased precision of a statement. Both of these terms may be consider as specific varieties of top down development method.

6.2.2 BOTTOM-UP-DESIGN

Bottom-up-design starts with the basic units of the system, and from these units the design builds up to higher level. A system created in this way could be started with the design of input documents and output layouts, eventually making a point arriving a point where management system has been built.

This method has a longer history than others. Some authors' claim it as better rated than the top design approach. The bottom up design also tends to produce systems with complex interlace between models, because they were not designed be interlaced in the first place. The parallel approach attempts to minimize the disadvantages of bottom up and top-down design.

6.2.3 THE PARALLEL APPROACH

Information systems are developed and operated independently. As both evolve and efforts are made to use as much information that can be accessed from operational systems, as input to the management information systems. At the same time, management system is developed to utilize the information available in the operational information system that has been built. When this approach is followed consequently two types of system are will coverage and eventually become an information management system.

6.2.4 CRITICAL FIRST DESIGN

Critical-first design is a method of system's design, which emphasizes the identification of most critical component within a system. In potential problems, areas can be identified at early stage and it is possible to try to solve these problems before going on to future design work.

6.2.5 STRUCTURED DESIGN APPROACH

Structure analysis and design is a refinement of top down method. All principles

of top down remain valid in structured design. But the structured design adds other guidelines to systemize the design process further, and measure the quality of the design. Designing programs and system is a decision making process which involves technical decisions. The structured design enables to make these changes in a systemic way.

6.2.6 ADOPT APPROACH

The structure design approach is viewed as a top-down approach in addition to new documentation technique that is why we have adopted this approach. Main features of the structure design are:

6.2.7 THE STRUCTURE METHODOLOGY

The structure methodology is based on building a logical model of the system, i.e. identifying major packages, decomposing them, and iterating till desired level is reached. Top-down methods often result in stepwise refinement starting from an abstract design at each step the design is refined to a more concrete until we reach a level where no more information is possible and the design can be implemented independently. Pure-top down or pure-bottom approaches are often not practical .To ensure successfulness of the bottom-tip approach. We must have a good notation of the top; while in the top down approach one must have some idea about the feasibility of the components specified during design. This speculation is important to predict results, as and when they arrive.

6.3 DATABASE SYSTEM

Database systems are so widely used today that they can he found in organizations of all sizes, ranging from large government agencies to small businesses and homes. Everyday activities often bring you into contact with databases. A database system is basically nothing more than a computerized record keeping system; that is, it is a computerized system whose overall purpose is to maintain information and to make it

available whenever required. A database is a shared collection of inter-related data designed to meet the varied information needs of an organization. Database must be shared which means that all qualified users in the organization have access to the same data for use in a variety of activities. Also there should not be duplicate copies of the same data instead all the data must be present at the same place so as to reduce redundancy.

6.4 LOGICAL DATABASE MODEL

A database model is collection of conceptual tools for describing data, data relationships, data semantics, and consistency constraints. There are four major logical database models in use today:

- ❖ Hierarchical model,
- ❖ Network model,
- ❖ Relational model,
- ❖ Object oriented model.

6.4.1 HIERARCHICAL MODEL

The hierarchical database model was the first important logical database model and is still in use today in some legacy systems, primarily on mainframe computers. In the hierarchical model records are arranged in a top-down structure that resembles an upside-down tree. The term parent and child are often used in describing a hierarchical model. The hierarchical model is similar to network data model in the sense that records and links represent data and relationships among data, respectively. It differs from network model in that the records are organized as collections of trees rather than arbitrary graphs.

6.4.2 NETWORK MODEL

The network model was developed to overcome the limited scope of the

hierarchical model, in reality; the distinctions between these two models are minimal today due to enhancements of each of the models. Data in network model are represented by collection of records and relationships among data are represented by links, which can be viewed as pointers.

6.4.3 RELATIONAL MODEL

The relational model uses the theory of relations from mathematics and adapts it for use in database theory. The results of this theoretical development are then applied to practical considerations of implementation. The relational model, data are represented in the form of tables with rows and columns.

6.4.4 OBJECT-ORIENTED MODEL

In the object-oriented database model, data attributes and methods that operate on those attributes are encapsulated in structures called objects. Objects may contain complex data types such as structures, voice, or video. The object-oriented database model represents a new paradigm for storing and manipulating data, since objects may be generalized to form more complex objects, and may be reused in any applications.

6.5 PHYSICAL DATABASE MODEL

Physical design is the last stage of the database design process. The major objective of physical database design is to implement the database as a set of stored records, files, indexes, and other data structures that will provide adequate performance and ensure database integrity, security, and recoverability. In the physical design phase following five components are considered:

- Data volume and usage analysis
- Data distribution strategy
- File organizations
- Indexes
- Integrity Constraints.

6.6 NORMALIZATION

The purpose of normalization is to produce a stable and well-structured set of relations that is a faithful model of the operations of the enterprise. Normalization requires that we have a clear grasp of the semantics of the application. A relation is said to be in a particular normal form if it satisfies a certain prescribed set of conditions. Normalization is the analysis of functional dependencies between attributes (or data items). The purpose of normalization is to reduce complex user views to a set of small, stable data structures. Experience clearly shows that the normalized data structures are more flexible, stable, and easier to maintain than un-normalized structures. Normalization is often accomplished in stages, each of which corresponds to a normal form. A normal form is a state of relation that can be determined by applying simple rules regarding dependencies (or relationships between attributes) to that relation.

6.6.1 NORMALIZATION PROCESS

The basic steps in the normalization process are as follows:

First Normal Form: Any repeating groups have been removed, so there is a single value at the intersection of each row and column of the table.

Second Normal Form: Any partial functional dependencies have been removed.

Third Normal Form: Any transitive dependencies have been removed.

Boyce—Code Normal Form: Any remaining anomalies that result from functional

dependencies have been removed.

Fourth Normal Form: Any multi-valued dependencies have been removed.

Fifth Normal Form: Any remaining anomalies have been removed.

6.7 FILE DESIGNING AND ORGANIZATION

The tasks of storing and retrieving records in a database are handled by the database management system and the operating system access methods. User is unaware of the methods used to locate and store data. However, the designer of the database management system, the database administrator and, in some systems, applications programmers need to be familiar with the physical design and organization of the database. File designing is considered to be the most important phase of efficient computerized system. Database files should be designed in such a fashion that the output of queries and reports is produced with less time delay.

6.8 SYSTEM DESIGN OF SCHOOLS AND COLLEGES INFORMATION SYSTEM

The S&C (Schools And Colleges information system) system design is divided into following three parts for convenience and easy understanding of system design.

- ❖ **Inputs.**
- ❖ **Outputs.**
- ❖ **Database.**

6.8.1 INPUTS

“Man is the master of computer”, this quotation is very accurate because computer can process the information with incredible speed and accuracy but cannot think and

produce initial information itself. The input design specifies the manner in which the user enters the data in the system for processing. It is the information that is required from the user for processing by the system. A well-input design ensures the reliability of the system because all the processing of the system is based upon the user inputs. Required output cannot be produced until and unless adequate information about the data objects is not input. Input design is related to the design of well-formatted information, which is received from the user.

Four main objectives are considered for the input design of the system, which is mentioned below:

- Controlling the amount of input required.
- Avoiding the delay in processing
- Controlling the Data entry errors
- Keeping the process simply and easy.

In the data entry system, checks for the accuracy of the data have been provided. While planning the data input procedures, major emphasis is placed on accuracy.

The computerized systems need **input** that is processed further to get the required results. Human beings are responsible for proper data input but to some extent through a good input design the computer can ensure validity of data input.

Input is the information that is required from the user for producing required results after processing that information. Input design is related to design of receiving valid information from user in a good and proper manner that reduces the chance of error. The input design of S&C information system ensures the proper & valid input of data. The S&C Information System input design includes

- Identification numbers.
- Input forms.
- Validation checks.

Because of the above-mentioned thing in input design the Schools and Colleges information system is capable of producing accurate results and outputs that are required from the system.

❖ **IDENTIFICATION NUMBERS:**

To ensure proper data input that has no redundancy; the identification numbers are used in Schools and Colleges Information system. The identification numbers are digital codes used for identification of different things like different Schools, Colleges or Their Locations and Levels etc. the identification control is enhanced through these identification numbers e.g. We can identify different institutes with same name through their identification number.

❖ **INPUT FORMS:**

The S&C information system is much dependent on proper data input. We have used different forms for ensuring clean, clear and accurate input to information system. These forms provide very easy interface and method for data input from user. User can toggle between different fields in the form and can correct any entry he wants. Because of different explanatory messages on each field the user can easily understand about required data in the field. The validation checks are also helpful for valid data input. The following forms are designed in S&C information system.

- **USER LOGON**
- **USER MANAGER**
- **CHANGE PASSWORD**
- **NUMBER OF STUDENTS ENROLLMENT IN CLASSES.**
- **EDUCATIONAL INSTITUTES SECTORWISE**
- **EDUCATIONAL INSTITUTES AREAWISE**
- **EDUCATIONAL INSTITUTES BY DIFFERENT LEVELS**
- **EDUCATIONAL INSTITUTES BY DIFFERENT LOCATION**
- **EDUCATIONAL INSTITUTES BY DIFFERENT TYPE,**

❖ **VALIDATION CHECKS:**

In S&C information system for ensuring the accuracy and efficiency during data input process some checks are implemented for proper and valid data input. Some of the checks imposed are as follows:

- The checks for proper primary key input, avoiding duplication of records and correct mandatory fields are implemented.
- Data entry validation checks like range checks, numerical data in numeric field and proper identification number entry etc are imposed.
- Checks for proper selection of codes, reports of Educational Institutes etc are implemented.
- Generation of proper Ids is ensured by checks on available data.

6.8.2 OUTPUTS

Normally the people using some computer-based system are not much concerned with the design and internal working of the system. The end users are mostly concerned with the output of system, which may be in the form of reports, queries and some other sort of information, which may be required from it. The output design is very important in computer systems and constitutes an important part of system. The information produced by the system is called output. Output can be in different format such as printed reports, displayed queries etc. output designing is the most essential part in system designing. The performance of output depends upon correct input design because when data entry is correct the output will be according to the requirements. The reports required by the organization plays an important role in the system designing process. The reports should be able to justify its efficiency and reliability. In simple words, output is the final product of the system.

As we have described that in an Schools and Colleges information system, we have to produce output such as reports, queries, receipts etc. according to a specific format, which is accepted by the organization S&C information system is an information system

and during the design of its output We had this point in mind. The system has following outputs.

Reports

Search Forms

The table structure and database is designed in such a way that it can produce the outputs very easily. Now we will discuss each of the above outputs of S&C information system in detail.

1. REPORTS:

The reports are of main interest of organization or end users. The user is not much concerned with the internal functioning of system but much curious about the outputs of the system. The S&C information system contains some important and specific reports. These are general reports, which are mostly desired by the end user or organization. The user can customize the report by making selection from different available options on first report screen e.g. user can select the report from list of result which the information is required. Reports are used to retrieve data from database according to the formats specified by the Institutes. The samples of these reports are attached in the appendices. Some basic reports provided by the system are as follows.

1. Total Number of Schools And Colleges in Islamabad with Phone Number
2. Report of Institutes by Different Levels
3. Reports of Institutes by Area and Sector wise etc

Data Design

Data design transforms the information domain model created during analysis.

In this phase we design our database on the basis of our Data Flow diagrams and identify the main components of the software.



CHAPTER # 7



SYSTEM DEVELOPMENT

7.1 INTRODUCTION TO SYSTEM DEVELOPMENT

The development phase of the project starts after the design. During this phase a design in the form of shapes and texts is converted into working software. The software is developed in such a way so that it can meet the requirements and specification of the users. The implementation phase of any system is concerned with the tools used in the development work and the components used to implement the system. This chapter explains all the steps taken for the development of the software.

7.1.1 APPLICATION ARCHITECTURE

This system is implemented as a Database-application. Application in the form of Data base Management system. Oracle 8i is used as backend database and ASP at front end.

7.2 TOOLS SELECTION

One of the complex decisions in system implementation is to determine which particular software is capable of meeting the system requirements. After considering a number of database tools available these days, Oracle 8i has selected as database.

Microsoft Windows 2000 Professional is used as operating system. It provides the facility to run this software is easily available to us.

7.2.1 DATABASE SELECTION

7.2.2 Oracle 8i

Oracle 8i is the first object –capable database developed by oracle. It extends the data modeling capabilities of oracle 7 to support a new object relational database model. Oracle 8i provides a new engine that brings object oriented programming, complex data types, complex business objects, and full compatibilities with the relational world.

It includes several features for improved performance and functionality of online transaction (OLTP) applications, such as better sharing of runtime data structures, larger buffer caches, and deferrable constraints. Operating within the Network Computing Architecture (NCA) framework, Oracle 8i supports client –server and Web –based applications that are distributed and multi tiered.

Oracle 8i can scale tens of thousands of concurrent users, support up to 512 pctabytes, and can handle any type of data, including text, spatial, image, sound, video, and time series as well as traditional structured data.

Oracle 7 is a relational database management system while **Oracle 8i** is an object relational database management. That is the main difference between Oracle 7 and Oracle 8i. Due to this main property we use **Oracle 8i** as a database in our project.

AN OBJECT

- Is a person, place, or thing
- Knows things about itself and performs actions
- Has an identity

Using an Object Model

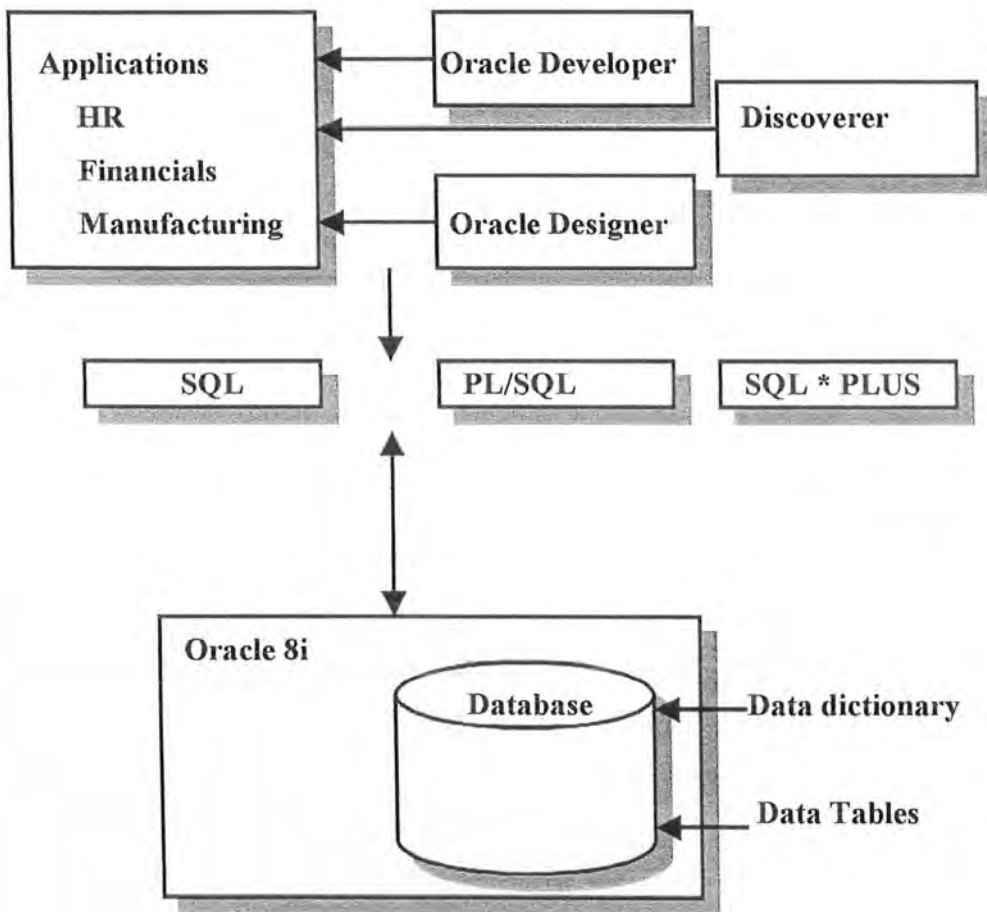
- Objects model a problem to solve
- The model is stated in term of the interactions between objects
- Object model closely resemble the real world

Characteristics of Object Systems

- Present information in object form
- Classify objects into object types
- Inherit attributes and code

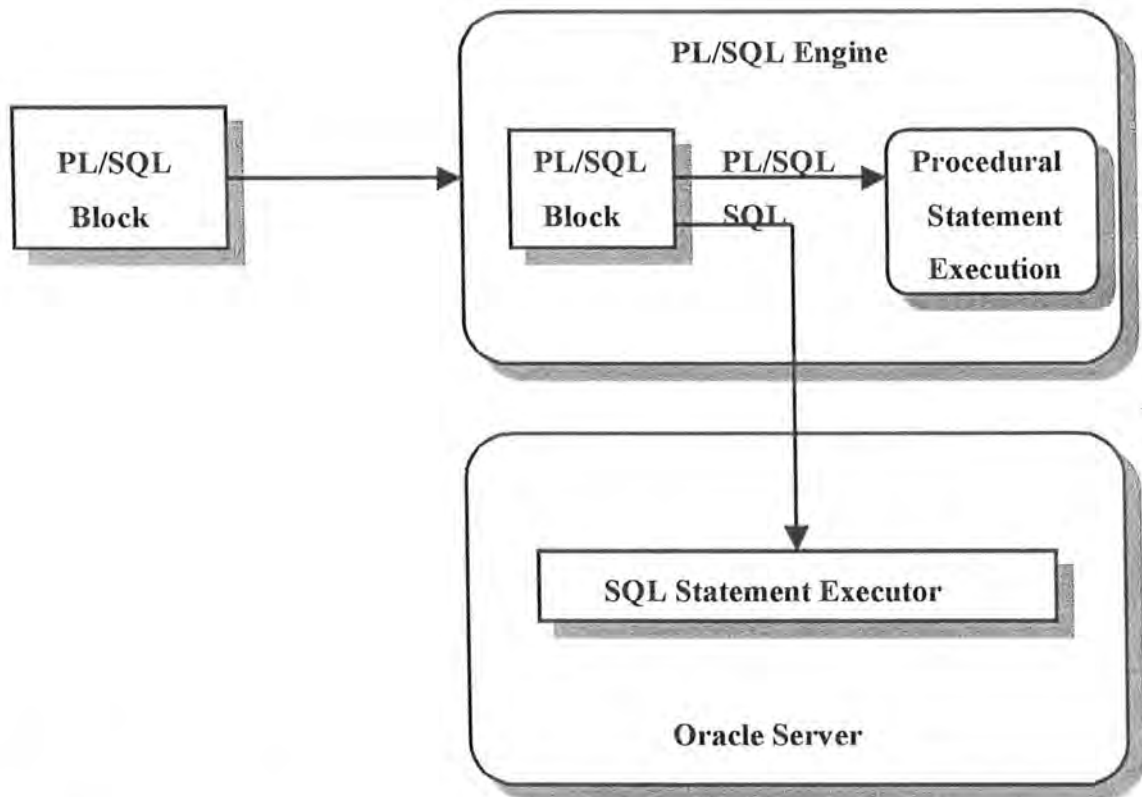
- Hide data, code, and attributes
- Interact with other objects
- Recognize different objects without analysis
- Interpret the same commands in different ways

Oracle complete Solution



About PL/SQL

- PL/SQL is an extension to SQL with design features of programming languages
- Data manipulations and query statements of SQL are included within procedural units of code.



7.2.3 ACTIVE SERVER PAGES

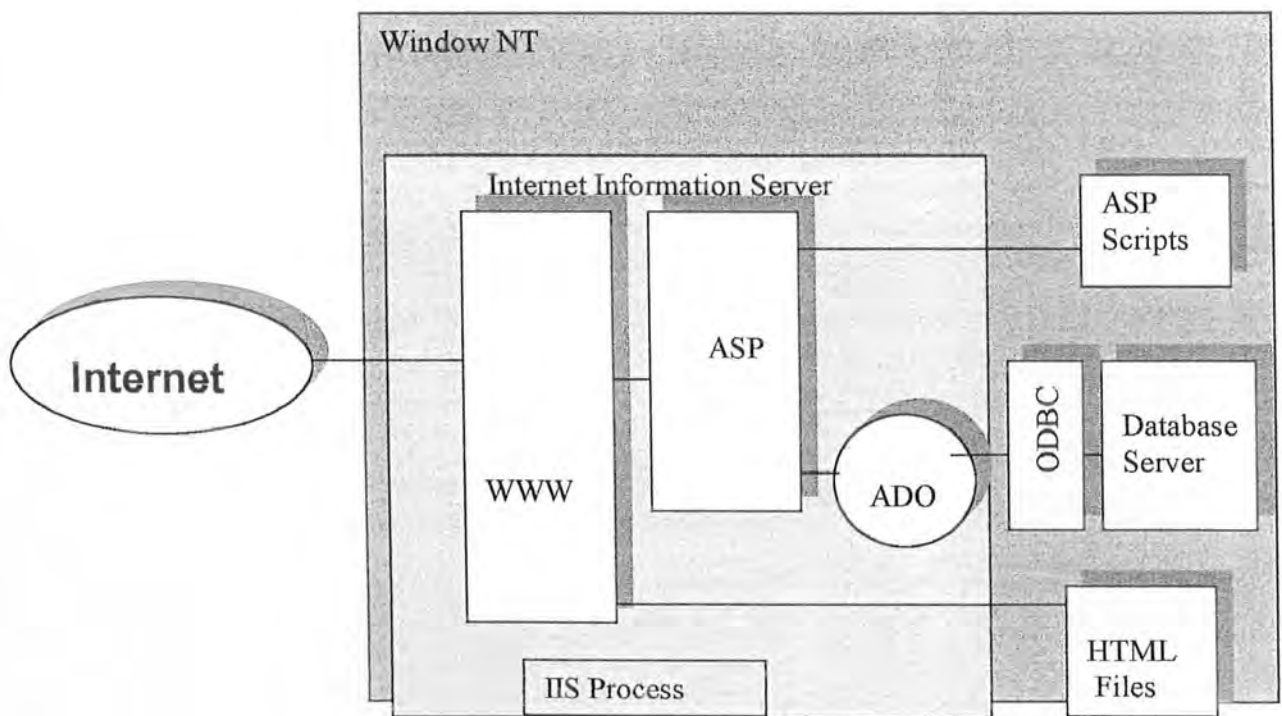
INTRODUCTION

ASP stands for Active Server Pages. ASP is a server side technology, which is used to display dynamic content on the WEB pages. ASP is becoming popular day by day as the favorite server side technology. ASP in itself isn't a language actually; instead it uses VBScript or JScript to display dynamic content. ASP is more of a technology used

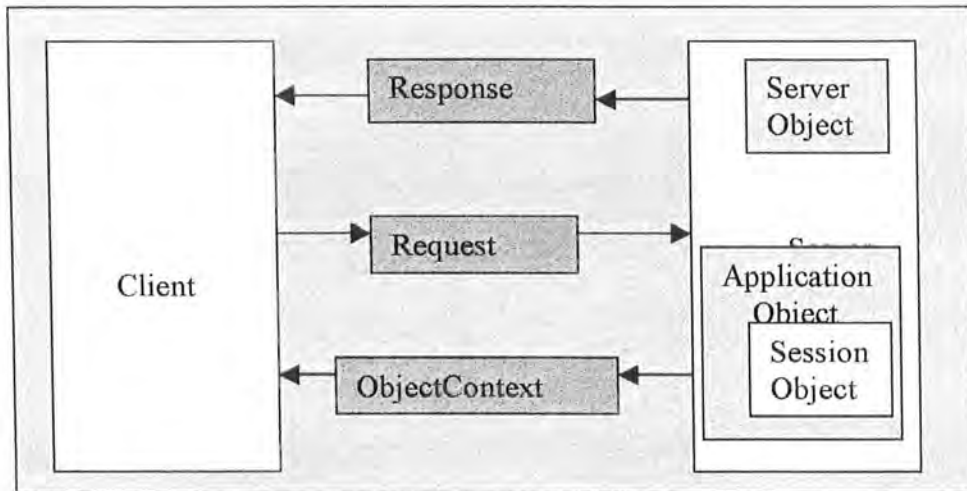
by VBScript / JScript on the server side. General understanding of html is also required for ASP.

ASP was officially announced by Microsoft on July 16,1996. A beta version was released in November 1996, and Asp version 1.0 was shipped on December 12, 1996. It gained much wider recognition when it was bundled with version 3.0 of Microsoft's Internet Information serve (IIS) web server suite in March 1997; and it has been gaining popularity since then.

Active Server Pages Works



The Active Server Pages Object Model



Database access and ASP

In real world, the driving force behind the development of dynamic web sites to link the pages with a database of some kind.

Under Windows NT and Internet Information server (IIS), this has generally been accomplished with an existing technology called the Internet Database Connector (IDC), but this always some limitations. Even though it gained more features in each release of IIS, there was always something that was difficult, or even impossible, using just IDC. The result was that often go back to a real programming language of some kind, and work with the Common Gateway Interface (CGI) or Internet Server Application Programming Interface (ISAPI) directly.

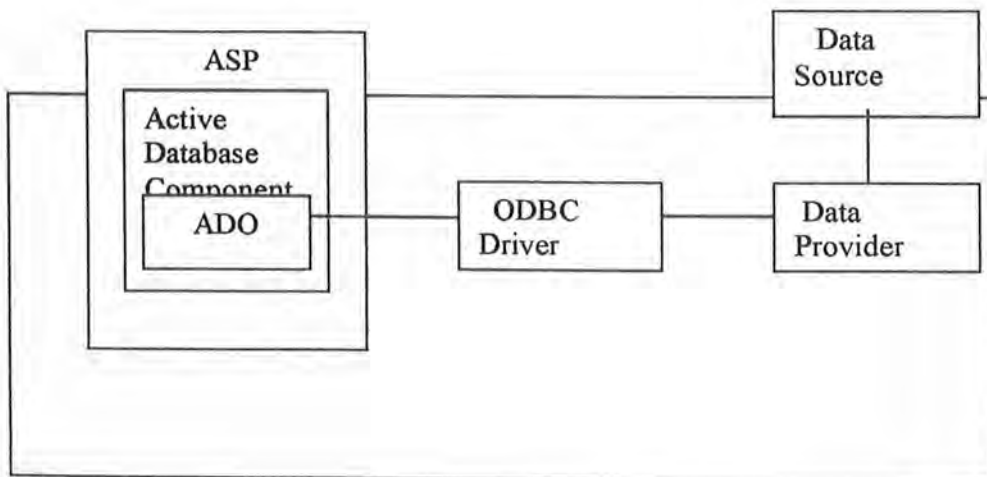
So Active Server Pages ends these entire problems. It's supplied with a component called the Data Access Component. This provides us with a whole hierarchy of objects-collectively known as the ActiveX Data Objects (ADO) which is the missing link between web pages and almost any kind of stored data

ActiveX Data Objects Overview

The ActiveX Data Objects (ADO) is really a connection mechanism that provides access to data of all types. The most common use is with data stored in a relational database, accessed from a client application. In the context of Active Server Pages, this allows us to write code in a scripting language such as VBScript or JScript that can interact with a database. With the flexibility already available in the form of ASP, ADO allows us to create client-server applications that run over the Internet, and are not specific to any make of client browser.

ADO provides an easy-to-use interface to OLE DB, which provides the underlying access to data. ADO is implemented with minimal network traffic in key scenarios, and a minimal number of layers between the front end and data source—all to provide a lightweight, high-performance interface. ADO is easy to use because it uses a familiar metaphor—the COM automation interface, available from all leading Rapid Application Development (RAD) tools, database tools, and languages on the market today.

The Working Of ADO with ASP



JavaScript

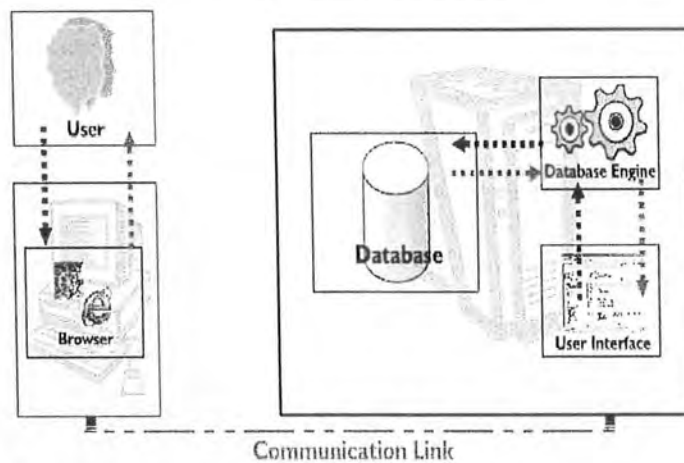
For client side scripting and input validation checks JavaScript is used. JavaScript runs on any internet browser. It is easy to use and more powerful than other available client side scripting technologies.

Steps in proposed system implementation:

- Database setup by creating tables in Oracle 8i
- Prototype development of the proposed system using Front Page 2000.
- Configuration of Web Server (Internet Information Server 5.0)
- Database connectivity from ASP Pages with the web server through ADO.
- Server side scripting using MS Front Page 2000.
- Executing different script pages of the application using Internet Explorer.
- Finding and removing the errors in the interface and functionality of different web pages.
- Client side scripting and input data validation checks using JavaScript.
- Inserting some sample data in the application.
- Finalizing the interface. Making all pages for giving consistent look and feel.

Here is the figure of web base system, how it works on Network.

Web Based Systems



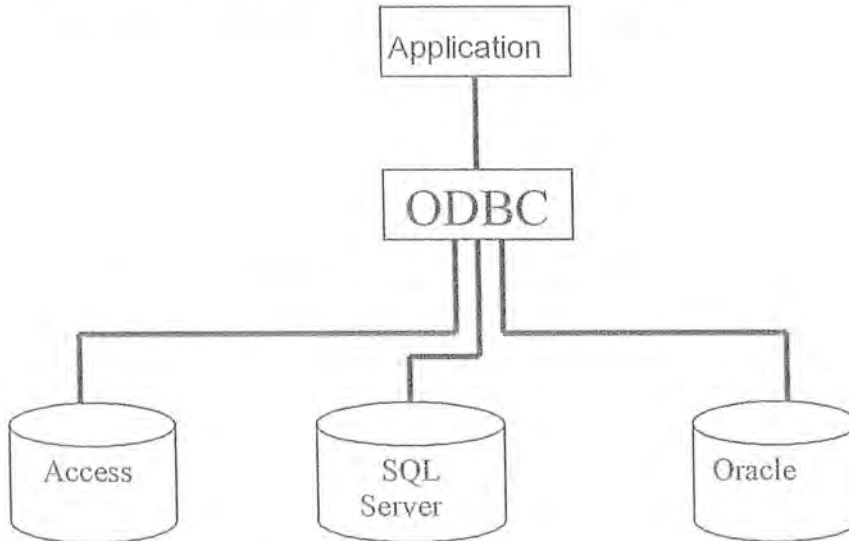
- Typical of many Web based services including online catalogues
- Although "graphical", the user is still required to learn the interface that has been implemented on the system being searched
- Searching multiple disparate sources involves connecting separately to each system

Connectivity Of Databases With ASP Page

The term Databases is used for the storage structure in the form of tables, records, keys and so on. Databases may be in the type of Microsoft Access or Oracle. Web Pages like ASP provide the facility to access the Databases of any type .

Open Database Connectivity (ODBC)

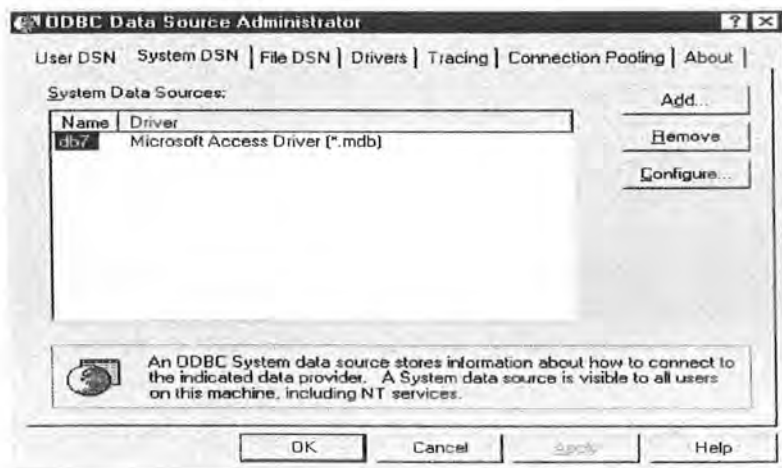
Open database connectivity (ODBC) is a standard for accessing data. ODBC allows you to access the information stored in databases.



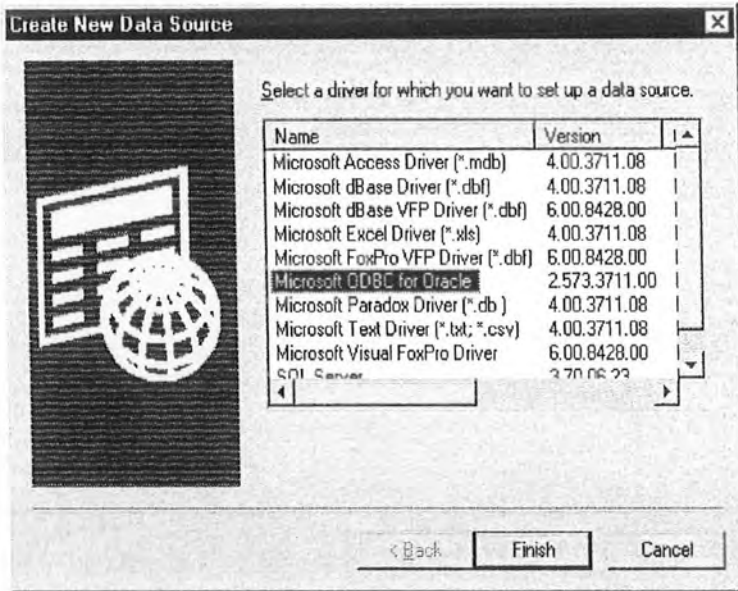
Connecting Oracle To The ASP Through ODBC

The creation of DSN through ODBC for ORACLE is same as for the 'Microsoft Access Data. Steps are as follows:

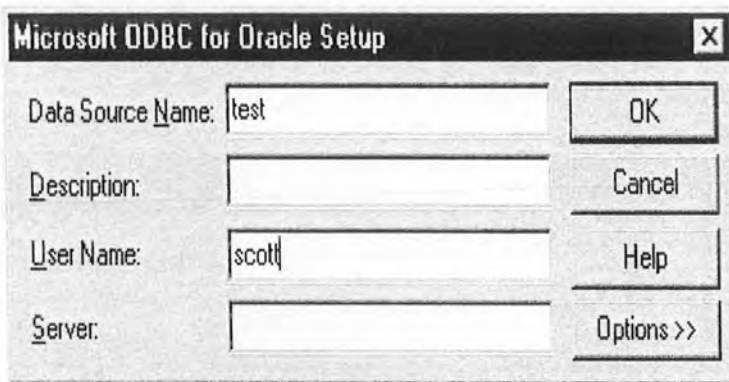
- Open the ODBC control panel. Then click on the System DSN tab.



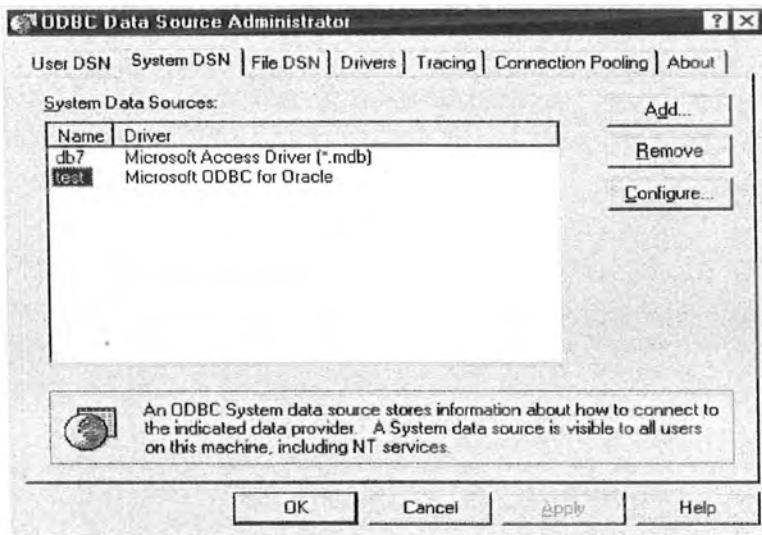
- Click Add. Select Microsoft ODBC for oracle and click Finish.



- Write the DSN name for Oracle and the user name. Click ok.



- The system data source is created as shown in the window below.



Source Code To Access The Oracle Database:

```
<%  
set objconn= server.createobject("ADODB.connection")  
objconn.open "dsn=oracleDSN;uid=scott;pwd=tiger;"  
set objrs=objconn.execute("select * from testing")  
  
%>
```

7.2.4 DEVELOPER 6i

It provides facilities to retrieve data from the oracle database in different shapes such as forms and reports. Developer also facilitates to insert, update, and delete data without going in the database.

ORACLE FORMS

Oracle Forms Builder provides a powerful 'Graphic User Interface' to design forms. All objects, properties, triggers can be selected by simply clicking on an appropriate icon. Forms Builder, Oracle's GUI based forms creation tool comprises of the following Components:

- Forms Builder
- Forms compiler
- Forms Runtime

ORACLE REPORTS

Oracle Reports enables creation of a variety of reports, such as a tabular report, form report, master/detail reports, nested matrix reports and mailing labels.

7.2.5 WEB SITE

What Is World Wide Web

The World Wide Web is merely a way of looking at the Internet. Instead of being a portion of the Internet, it is the whole package, just from a different perspective. The area on which merchants can conduct business on the Internet is called the World Wide Web. If we imagine the Internet to be a city, the World Wide Web is a Zone For Commercial activity.

Web Site

Merchants can post sales Literature, Product information, Coupons, Sales incentives, Press releases, Brochures, Ads, and promotional materials and take orders in their own space on the web, that is called a Web Site.

Creating a Web Site

Two main steps are involved in creating a Web site:

- Getting a Domain, or Web Presence
- It's easy with Microsoft FrontPage 2002

Getting a domain, or Web presence

Before we post a Web site to the World Wide Web, we need a unique address for the site. This address is our domain name. Microsoft's domain name, for example, is microsoft.com, and the uniform resource locator (URL) for Microsoft's home page is

<http://www.microsoft.com/window/>

Some Internet service providers set aside portions of their hard-disk space for subscribers' Web pages that require no domain registration. Check with your service provider to see if this is an option; it might be included in our monthly access fee.

Use Of Microsoft FrontPage2000 In Creation Of Web Page:

Several Microsoft products such as Microsoft FrontPage2000 make it easy for us to create our own Web site without any knowledge of HTML coding.

With the FrontPage 2000 Web site creation and management tool, we can easily create and manage professional-looking Web sites, using content—words, pictures, and more—that we already have in other applications.

Microsoft FrontPage version 2000 provides the best value in its category. It has integrated features for Web site creation, Web site management, instant team Web sites with the Share Point Team Services team Web solution, e-commerce, and graphics editing built right in.

FrontPage is easy to get started with. Built-in templates and wizards allow us to create a web site in only a matter of minutes, and then customize it to make it our own graphics, Photo Gallery, back grounds, image maps, Themes, fonts, and formatting.

Broadly Available and Broadly Used

Microsoft FrontPage is so popular that we can easily find a wide range of Web sites, books, training classes, Web professionals and users groups to help us learn and use FrontPage. We can also choose from hundreds of Web site hosting companies that support creating and editing Web sites directly against their servers, and select from a variety of third-party add-ins that extend the functionality of FrontPage even further.

Save Time

Use of FrontPage save the time as FrontPage looks and works like Microsoft Office, and HTML experts can produce code faster using FrontPage menus and buttons.



CHAPTER # 8



**Testing And
Implementation**

8.1 INTRODUCTION

System testing, implementation and evaluation are the final phase in the system development life cycle, after the development of the software. In this chapter the information system Of schools and colleges testing, various method of system implementation and conversion techniques used for the developed system are discussed.

According to the Pressman (1998), “implementation is the phase of getting the designed system in operation which include the testing of the system by choosing one of the Many conversion methods available. It is carefully planned work and requires special attention of the system designer who has to choose and monitor the method of testing or Conversion”.

The purpose of the implementation phase is to smoothly convert from the old system to the new system. There are several options available for conversion. To achieve the purpose of implementation and delivery phase, we must accomplish the following objectives.

- ❖ Train and Support End-User
- ❖ Evaluate the Project and System

❖ Make Smooth transition to new Methods and Procedures Possible Implementation of project involves the following activities planning and scheduling of the implementation process. Organizational planning and personal administration, Final system designed and testing, Establishment of standard of performance and control procedures and conversion from old to new system.

8.2 HOW TO COMPLETE THE DELIVERY PHASE

Now we can discuss the specific tasks, documentation, and skills that make up the delivery phase.

8.2.1 INSTALL FILES AND DATABASES

To place the system into operation, files and databases are required to load fully. Therefore, the first task we'll survey is installation of files and databases. For computer files that are being converted to computer file structures or databases, the basic method is still complex. A special program must be written to read the old file and write to the new file, using the new structure. Then, if new files were added to any of the records, additional programs must be written to initialize those fields. Database size and estimated time required to perform the task is also required to calculate.

8.2.2 TRAIN END-USERS TO USE THE NEW SYSTEM

A task more typically performed by the system analyst is to train end-users to use the new system. There are at least two fundamental training requirements (1) training manuals and (2) the training itself. Training can be performing one-on-one. However, group training is generally preferred.

8.3 SYSTEM TESTING

Testing and validation of results is very important to make the system acceptable. Even if the system is developed using current algorithms, its reliability remains doubtful. The system cannot be handed over to the user until its accuracy is proved mathematically and by hand. System testing is the process of executing a program with the intent of finding errors. The test data is entered into the database with intent of finding errors and determining whether the system will process it correctly or not. A lot of time is spent on schools and colleges information system testing to ensure its correct working and implementation.

Artificial test data is created solely for test purpose since it can be generated to test all combinations of formats and values. The underlying system testing is also performed by artificial data. For Information system of schools and colleges, the data related to Schools, colleges and students enrollment etc is made by us for testing purpose.

Testing of Information system is performed in following steps.

- ❖ **Unit testing**
- ❖ **Integrated Testing**
- ❖ **System Testing**

i. Unit Testing:

In unit testing different modules of Information system of schools and colleges system are tested independent of each other. For example, testing of modules related to institute entry. The purpose is to determine whether each module is working properly and to locate and correct the logical and coding errors.

ii. Integrated Testing:

After testing the system at unit level, all these units are combined in a menu driven environment and then their testing is again carried out. The main Purpose is to determine that the modules are correctly interacting and working with each other.

iii. System Testing

System testing is performed to ensure that Information System of schools and colleges is operating according to the desired specifications of the proposed Information system. The size and structure of data Fields are checked while using the actual data. The reports, queries, input forms and etc are checked critically according to the standards to the standards set by hospital management and our supervisor.

8.4 SYSTEM CONVERSION

After the successful completion of testing phase completion of testing phase preparation can be made to switch over to the new system. There are four different methods for performing system conversion or implementation ensuring proper working of the developed system.

8.4.1 DIRECT CONVERSIONS

In this method the old system is abandoned and the new system starts functioning, No care is taken to consider the fact that whether the system will give its performance in long run. In case of system failure, the loss of data may pose several difficulties to the management if no backup of the old system is present. This is the major draw back of this type of conversion. That is why this approach requires carefully designed implementation plan. This strategy is also called as cut and start conversion strategy.

8.4.2 PHASED CONVERSION

The phased conversion is used when it is not possible to install a new system within an organization at once i.e. it will be brought in gradually. In this type of conversion long phase periods create difficult.

8.4.3 PILOT CONVERSION

In this method system is first implemented and sonic users are allowed to work with the system instead of whole of organization to avoid heavy financial losses and chaos in case of designed system's failure.

8.4.4 PARALLEL CONVERSION

In this method both the systems i.e. existing and designed work simultaneously for a specific period of time. At the end of parallel run period, if the new system is approved on the basis of results produced, the existing system will be dropped and the designed system will continue its working onwards.

8.5 HIS CONVERSION / IMPLEMENTATION

Since the existing system, which paper based cannot be discarded at once; direct conversion will not be suitable. Hence the Schools and Colleges Information system will not be

implemented using this conversion technique. Pilot conversion is also not suitable as it works as a unit not in parts. Phased conversion is also not applicable due to similar nature as of pilot conversion. A Schools and colleges Information System cannot be implemented in phases because of time and cost factor.

The S&C information system will be implemented using Parallel conversion because it is a secure and convenient conversion technique. Also the organization will accept it easily. Although this implementation approach is more expensive and involves additional workload but the old system will be safe. The reasons of selecting this approach can detail as.

- ❖ It is normally the safest and suitable Conversion strategy.
- ❖ It minimizes the problems that may arise from system failure.
- ❖ If unfortunately the system fails, data would not be lost because the old system will be working in parallel.

It provides an opportunity to compare the results of existing system with those of the developed system.

APPENDIX
APPENDIX

APPENDIX A: DATA DICTIONARY

TABLE NAME: S_LEVEL

PURPOSE OF TABLE: TO KEEP THE INFORMATION OF INSTITUTES LEVELS

PRIMARY KEY: CODE1

TABLE STRUCTURE

COLUMN NAME	DATA TYPE	DESCRIPTION	CONSTRAINTS
CODE1	NUMBER	IDENTIFICATION NO FOR LEVELS	NOT NULL
LEVELS	VARCHAR2(35)	LEVELS OF INSTITUTES	

TABLE NAME: LOC

PURPOSE OF TABLE: TO KEEP THE INFORMATION OF INSTITUTES
LOCATION

PRIMARY KEY: CODE2

TABLE STRUCTURE

COLUMN NAME	DATA TYPE	DESCRIPTION	CONSTRAINTS
CODE2	NUMBER	IDENTIFICATION NO FOR LOCATION	NOT NULL
DESCR	VARCHAR2(20)	DESCRIPTION OF LOCATION	

TABLE NAME: S_TYPE

PURPOSE OF TABLE: TO KEEP THE INFORMATION OF EDUCATIONAL
INSTITUTES

PRIMARY KEY: CODE3

TABLE STRUCTURE

COLUMN NAME	DATA TYPE	DESCRIPTION	CONSTRAINTS
CODE3	NUMBER	IDENTIFICATION NO FOR INSTITUTE TYPE	NOT NULL
DETAIL	VARCHAR2(20)	INS TYPES (BOYS OR GIRLS)	

APPENDIX A: DATA DICTIONARY

TABLE NAME: SCHOOL
PURPOSE OF TABLE: TO KEEP THE INFORMATION OF EDUCATIONAL INSTITUTES IN FEDERAL AREA
PRIMARY KEY: CODE4

TABLE STRUCTURE

COLUMN NAME	DATA TYPE	DESCRIPTION	CONSTRAINTS
CODE4	NUMBER	IDENTIFICATION CODE FOR INSTITUTES	NOT NULL
NAME	VARCHAR2(60)	NAME OF INSTITUTES	
SEC_AREA	VARCHAR2(15)	SECTOR OR AREA OF INSTITUTES	
CODE1	NUMBER	IDENTIFICATION NO FOR LEVELS	FOREIGN KEY
CODE2	NUMBER	IDENTIFICATION NO FOR LOCATION	FOREIGN KEY
CODE3	NUMBER	IDENTIFICATION NO FOR INSTITUTE TYPE	FOREIGN KEY
PHONE_NO	VARCHAR2(20)	PHONE NUMBER OF INSTITUTES	

TABLE NAME: STUD
PURPOSE OF TABLE: TO KEEP THE INFORMATION OF STUDENTS ENROLLMENT IN DIFFERENT INSTITUTES
PRIMARY KEY: CODE5

TABLE STRUCTURE

COLUMN NAME	DATA TYPE	DESCRIPTION	CONSTRAINTS
CODE5	NUMBER	IDENTIFICATION CODE	NOT NULL
CODE4	NUMBER	IDENTIFICATION CODE FOR INSTITUTES	FOREIGN KEY
CLASS	VARCHAR2(25)	CLASSES OR SECTION	
NO_STUD	NUMBER(15)	TOTAL NUMBER OF STUDENTS	

TABLE NAME: **USER_ACCESS**

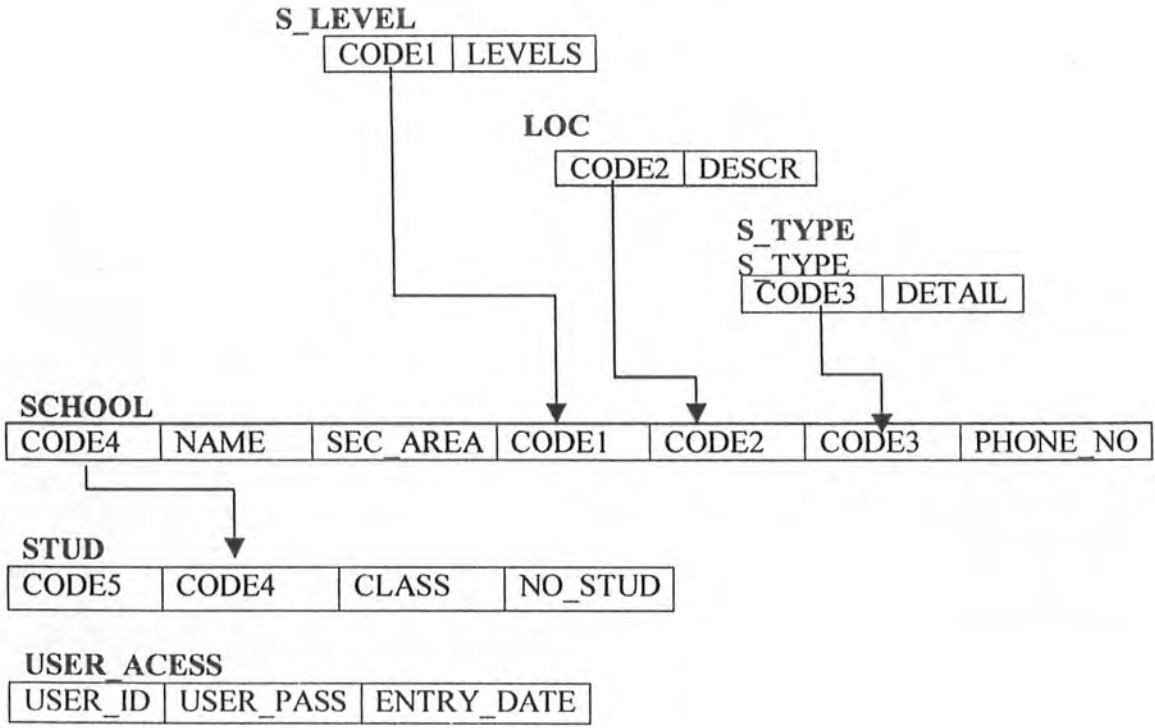
PURPOSE OF TABLE: **TO KEEP THE INFORMATION OF OPERATORS OF SYSTEM**

PRIMARY KEY: **USER_ID**

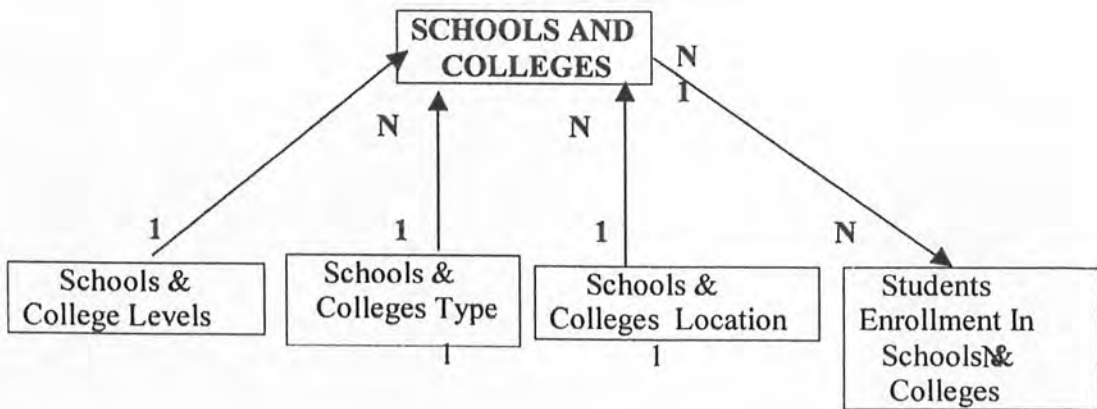
TABLE STRUCTURE

COLUMN NAME	DATA TYPE	DESCRIPTION	CONSTRAINTS
USER_ID	VARCHAR2(7)	IDENTIFICATION NO FOR USER	NOT NULL
USER_PASS	VARCHAR2(20)	PASSWORD OF THE USER	
ENTRY_DATE	DATE	DATE WHEN USER CEATED	

BACHMAN DIAGRAM



ENTITY RELATION DIAGRAM



APPENDIX C: FORMS AND REPORTS

The screenshot shows a window titled "Oracle Forms Runtime - [WINDOW1]". The menu bar includes "Action", "Edit", "Query", "Block", "Record", "Field", "Window", and "Help". The toolbar contains various navigation icons. The main area features a title box with the text "USER LOGON". Below this, there are two input fields: "User Id" and "User Password". At the bottom, there are two buttons: "ENTER" and "CANCEL". The status bar at the bottom left indicates "Record: 1/1".

The screenshot shows a window titled "Oracle Forms Runtime - [WINDOW1]". The menu bar includes "Action", "Edit", "Query", "Block", "Record", "Field", "Window", and "Help". The toolbar contains various navigation icons. The main area features a title box with the text "USER MANAGER". Below this, there are four input fields: "User Id", "User Password", "Confirm", and "Entry Date". To the right of these fields is a vertical stack of buttons: "ENTER", "NEW", "CLEAR", "SAVE", "NEXT", "PREVIOUS", and "EXIT". The status bar at the bottom left indicates "Record: 1/1".

APPENDIX C: FORMS AND REPORTS

The screenshot shows a window titled "Oracle Forms Runtime - [WINDDW1]". The menu bar includes "Action", "Edit", "Query", "Block", "Record", "Field", "Window", and "Help". The toolbar contains various navigation icons. The main content area features a title box with the text "CHANGE PASSWORD". Below this, there are four input fields labeled "User Id", "Old Password", "New Password", and "Confirm". At the bottom of the form area, there are two buttons: "UPDATE" and "CANCEL". A status bar at the very bottom indicates "Record: 1/1".

The screenshot shows a window titled "Oracle Forms Runtime - [WINDDW1]". The menu bar includes "Action", "Edit", "Query", "Block", "Record", "Field", "Window", and "Help". The toolbar contains various navigation icons. The main content area features a title box with the text "MAIN OPTIONS". Below this, there are four buttons stacked vertically: "DATA ENTRY FORMS", "MASTER DETAILED FORM", "QUERY FORMS", and "REPORTS". A status bar at the very bottom indicates "Record: 1/1".

APPENDIX C: FORMS AND REPORTS

Oracle Forms Runtime - [WINDOW] _ | 0 | X |
 Action Edit Query Block Record Field Window Help _ | 0 | X |

Selection Form Or Data Entry Form

INSTITUTES LEVELS	INSTITUTES TYPE
EDUCATIONAL INSTITUTES	INSTITUTES LOCATION
CHANGE PASSWORD	NO OF STUDENTS IN INSTITUTES

BACK TO MAIN OPTIONS

Record: 1/1

Oracle Forms Runtime - [WINDOW] _ | 0 | X |
 Action Edit Query Block Record Field Window Help _ | 0 | X |

DIFFERENT LEVELS OF EDUCATIONAL INSTITUTES

CODE FOR SCHOOL LEVEL	LEVELS
1001	PRIMARY SCHOOLS (PREP-V)
1002	MIDDLE SCHOOLS (VI-VIII)
1003	SECONDARY SCHOOLS (IX-X)
1004	HIGHER SECONDARY SCHOOLS (XI-XII)
1005	DEGREE COLLEGE (XIII-XIV)

Record: 5/5

APPENDIX C: FORMS AND REPORTS

Oracle Forms Runtime - [WINDOW] _ | 0 | x
Action Edit Query Block Record Field Window Help _ | 0 | x

Navigation icons: Home, Back, Forward, Stop, Refresh, Print, Help

TYPES OF EDUCATIONAL INSTITUTES

<i>Code for School Type</i>	<i>Type</i>
1008	Boys
1009	Girls
1010	Boys and Girls(Both)

Record: 3/3

Oracle Forms Runtime - [WINDOW] _ | 0 | x
Action Edit Query Block Record Field Window Help _ | 0 | x

Navigation icons: Home, Back, Forward, Stop, Refresh, Print, Help

LOCATION OF EDUCATIONAL INSTITUTES

<i>CODE FOR SCHOOL LOCATION</i>	<i>LOCATION</i>
1006	Urban
1007	Rural

Record: 2/2

APPENDIX C: FORMS AND REPORTS

Oracle Forms Runtime - [WINDOW1] _ | ⓧ | X
 Action Edit Query Block Record Field Window Help _ | ⓧ | X
 [Icons: Save, Print, Undo, Redo, Find, etc.] ?

**LIST OF FEDERAL GOVERNMENT EDUCATIONAL
INSTITUTES OF ISLAMABAD**

<i>Code of Institutes</i>	<i>Names Of Institutes</i>	<i>Sector Area</i>	<i>Code of Institutes Level</i>	<i>Code of Institutes Location</i>	<i>Code of Institutes Type</i>	<i>Phone Number</i>
1	FG College (Men) F-10/4, Ibd	F-10	1005	1006	1008	9266324
2	FG College (Men) H-8, Ibd	H-8	1005	1006	1008	9257103
3	FG College of Comm H-8/4, Ibd	H-8	1005	1006	1008	9207186
4	FG College (Men) H-9, Ibd	H-9	1005	1006	1008	442975-442910
5	FG College (Women) F-7/2, Ibd	F-7	1005	1006	1009	9203877-9203882
6	FG Margalla College (Women) F-7/4, Ibd	F-7	1005	1006	1009	9205426-9203963
7	FG College (Women) G-10/4, Ibd	G-10	1005	1006	1009	9266388
8	Islamabad Model College for Boys, F-7/3	F-7	1005	1006	1008	9207562
9	Islamabad Model College for Boys, F-8/4	F-8	1005	1006	1008	850440
10	Islamabd Model College for Boys, F-10/3	F-10	1005	1006	1008	9266393-4

Record: 10/?

APPENDIX C: FORMS AND REPORTS

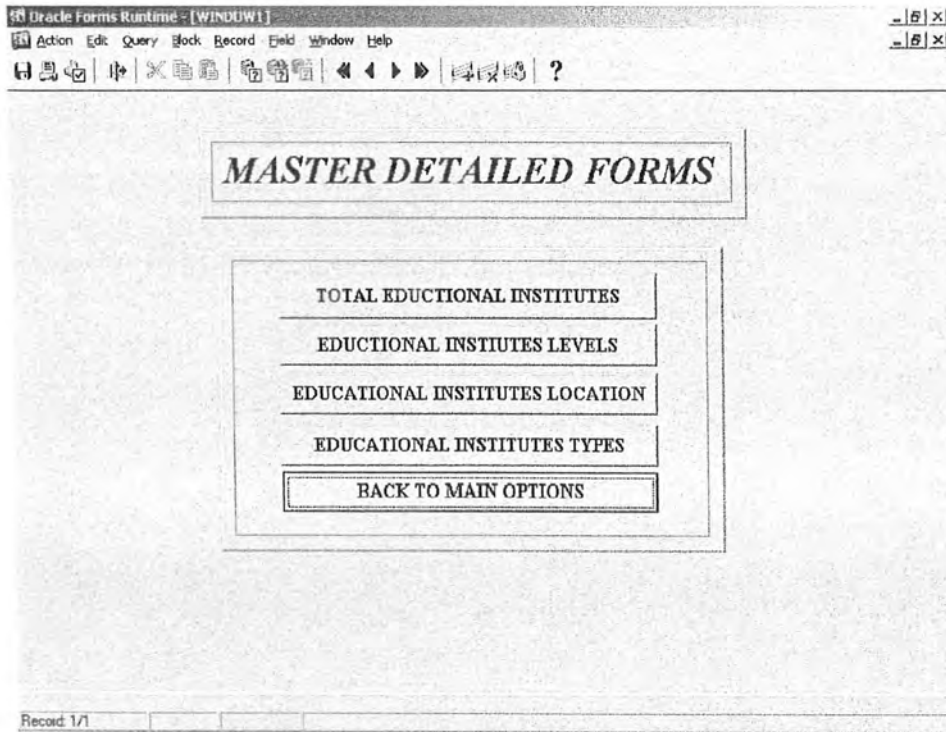
Oracle Forms Runtime - [WINDOW1] _ | ☐ | x |
 Action Edit Query Block Record Field Window Help _ | ☐ | x |

NUMBER OF STUDENTS IN DIFFERENT SECTION OR CLASSES OF INSTITUTES

Code	Code of Institutes	Class Or Section	No of Students
2001	1	PRE_MED(I)	35
2002	1	PRE_ENG(I)	120
2003	1	HUMANITIES(I)	123
2004	1	GEN_GRP(I)	146
2005	1	PRE_MED(II)	19
2006	1	PRE_ENG(II)	100
2007	1	HUMANITIES(II)	91
2008	1	GEN_GRP(II)	109
2009	1	PRE_MED(III)	0
2010	1	PRE_ENG(III)	50

Record: 10/7

APPENDIX C: FORMS AND REPORTS



APPENDIX C: FORMS AND REPORTS

Oracle Forms Runtime - [WINDOW1] _ | | X
 Action Edit Query Block Record Field Window Help _ | | X

**LIST OF EDUCATIONAL INSTITUTES OF ISLAMABAD
 BY USING DIFFERENT LEVELS**

Code	Levels
001	PRIMARY SCHOOLS (PREP-V)

Code	Sr.No	Name Of Institutes	Sector/Area	Phone_No
001	183	FG Primary School No.37, E-7/4	E-7	9208461
001	184	FG Primary School No.3, E-8	E-8	9261049-9261049
001	185	FG Primary School No.32, E-8/1	E-8	2854164
001	186	FG Primary School No.54, E-9	E-9	920055743
001	187	FG Junior Model School, F-6/1	F-6	9208258
001	188	FG Junior Model School, F-6/4	F-6	9206632
001	189	FG Primary School No.9, F-6/3	F-6	9208626
001	190	FG Junior Model School, F-7/2	F-7	2825886
001	191	FG Junior Model School, F-7/2-4	F-7	9208451
001	192	FG Primary School No.52, F-7/1	F-7	2876989

Record 1/?

Oracle Forms Runtime - [WINDOW1] _ | | X
 Action Edit Query Block Record Field Window Help _ | | X

**LIST OF EDUCATIONAL INSTITUTES OF ISLAMABAD
 BY DIFFERENT LOCATION**

Code	Location
006	Urban

Code	Sr.No	Name Of Institutes	Sector/Area	Phone_No
006	1	FG College (Men) F-10/4, Ibd	F-10	9266324
006	2	FG College (Men) H-8, Ibd	H-8	9257103
006	3	FG College of Comm H-8/4, Ibd	H-8	9207186
006	4	FG College (Men) H-9, Ibd	H-9	442975-442910
006	5	FG College (Women) F-7/2, Ibd	F-7	9203877-9203882
006	6	FG Margala College (Women) F-7/4, Ibd	F-7	9205426-9203963
006	7	FG College (Women) G-10/4, Ibd	G-10	9266388
006	8	Islamabad Model College for Boys, F-7/3	F-7	9207562
006	9	Islamabad Model College for Boys, F-8/4	F-8	950440
006	10	Islamabd Model College for Boys, F-10/3	F-10	9266393-4

Record 1/?

APPENDIX C: FORMS AND REPORTS

Oracle Forms Runtime - [WINDOW1] _ | ⊞ | ×
 Action Edit Query Block Record Field Window Help _ | ⊞ | ×

**LIST OF EDUCATIONAL INSTITUTES OF ISLAMABAD
BY DIFFERENT TYPE**

Code	Type
1008	Boys

Code	Sr.No	Name Of Institutes	Sector/Area	Phone_No
1008	1	FG College (Men) F-10/4, Ibd	F-10	9266324
1008	2	FG College (Men) H-8, Ibd	H-8	9257103
1008	3	FG College of Comm H-8/4, Ibd	H-8	9207186
1008	4	FG College (Men) H-9, Ibd	H-9	442975-442910
1008	5	Islamabad Model College for Boys, F-7/3	F-7	9207562
1008	9	Islamabad Model College for Boys, F-8/4	F-8	850440
1008	10	Islamabd Model College for Boys, F-10/3	F-10	9266393-4
1008	11	Islamabad Model College for Boys, F-11/1	F-11	9265169
1008	12	Islamabad Model College for Boys, F-11/3	F-11	9265032
1008	13	Islamabad College for Boys, G-6/3	G-6	9208006

Record 1/7

APPENDIX C: FORMS AND REPORTS

Report Builder for Windows 95 / NT - [MODULE2: Report Editor - Live Previewer]

File Edit View Insert Format Arrange Program Tools Window Help

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REPORT OF ALL EDUCATIONAL INSTITUTES IN FEDERAL AREA

Code#	Name	Sec Area	Phone No
1	FG College (Men) F-10/4, lbd	F-10	9266324
2	FG College (Men) H-8, lbd	H-8	9257103
3	FG College of Comm H-8/4, lbd	H-8	9207186
4	FG College (Men) H-9, lbd	H-9	442975-442910
5	FG College (Women) F-7/2, lbd	F-7	9203677-9203862
6	FG Margalla College (Women) F-7/4, lbd	F-7	9205426-9203963
7	FG College (Women) G-10/4, lbd	G-10	9266388
8	Islamabad Model College for Boys, F-7/3	F-7	9207562
9	Islamabad Model College for Boys, F-8/4	F-8	850440
10	Islamabd Model College for Boys, F-10/3	F-10	9266393-4
11	Islamabad Model College for Boys, F-11/1	F-11	9266169
12	Islamabad Model College for Boys, F-11/3	F-11	9266032
13	Islamabad College for Boys, G-6/3	G-6	9208006
14	Islamabad Model college for Boys, G-10/4	G-10	9260374
15	Islamabad Model college for Boys, G-11/1	G-11	9208466
16	Islamabad Model college for Boys, I-8/3	I-8	4447774
17	Islamabad Model college for Boys, I-10/1	I-10	4445159
18	Islamabad Model College for Girls, F-6/2	F-6	9202222
19	Islamabad College for Girls, F-6/2	F-6	9203774
20	Islamabad Model College for Girls, F-7/4	F-7	9203412

APPENDIX C: FORMS AND REPORTS

Report Builder for Windows 95 / NT - [MODULE2: Report Editor - Live Previewer]

File Edit View Insert Format Arrange Program Tools Window Help

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Page: 1 ?

Page

REPORT OF STUDENT ENROLLMENT IN GIRLS SECONDARY SCHOOLS, ISLAMABAD

Name	ARTS(IX)	ARTS(X)	SCIENCE(IX)	SCIENCE(X)	VI	VII
FG Girls COMP: School, F-6/1	101	41	37	40	128	101
FG Girls Model School, F-7/2	58	52	51	68	97	115
FG Girls Model School, G-10/1	126	117	96	64	127	163
FG Girls Model School, G-6/1-3	66	75	85	74	186	168
FG Girls Model School, G-6/2	101	104	87	29	132	128
FG Girls Model School, G-7/1	173	63	48	30	200	192
FG Girls Model School, G-9/3	44	29	92	74	114	140
FG Girls Model School, I-8/1	21	29	53	42	101	88
FG Girls Secondary School No.10, G-8/2	63	52	43	27	91	86
FG Girls Secondary School No.13, G-9/4	48	45	31	28	57	69
FG Girls Secondary School No.14, I-9/4	208	112	56	32	130	130
FG Girls Secondary School No.4, G-7/2	140	0	86	0	138	162
FG Girls Secondary School No.6, I-10/4	117	147	139	106	104	111
FG Girls Secondary School No.8, E-8/3	103	62	65	45	163	166
FG Girls Secondary School No.9, G-9/2	181	190	107	87	228	255
FG Girls Secondary School U.Colony, G-5	25	10	18	15	37	59
	1575	1128	1094	761	2025	2123

APPENDIX C: FORMS AND REPORTS

Report Builder for Windows 95 / NT - [MODULE2:Report Editor - Live Previewer]

File Edit View Insert Format Arrange Program Tools Window Help

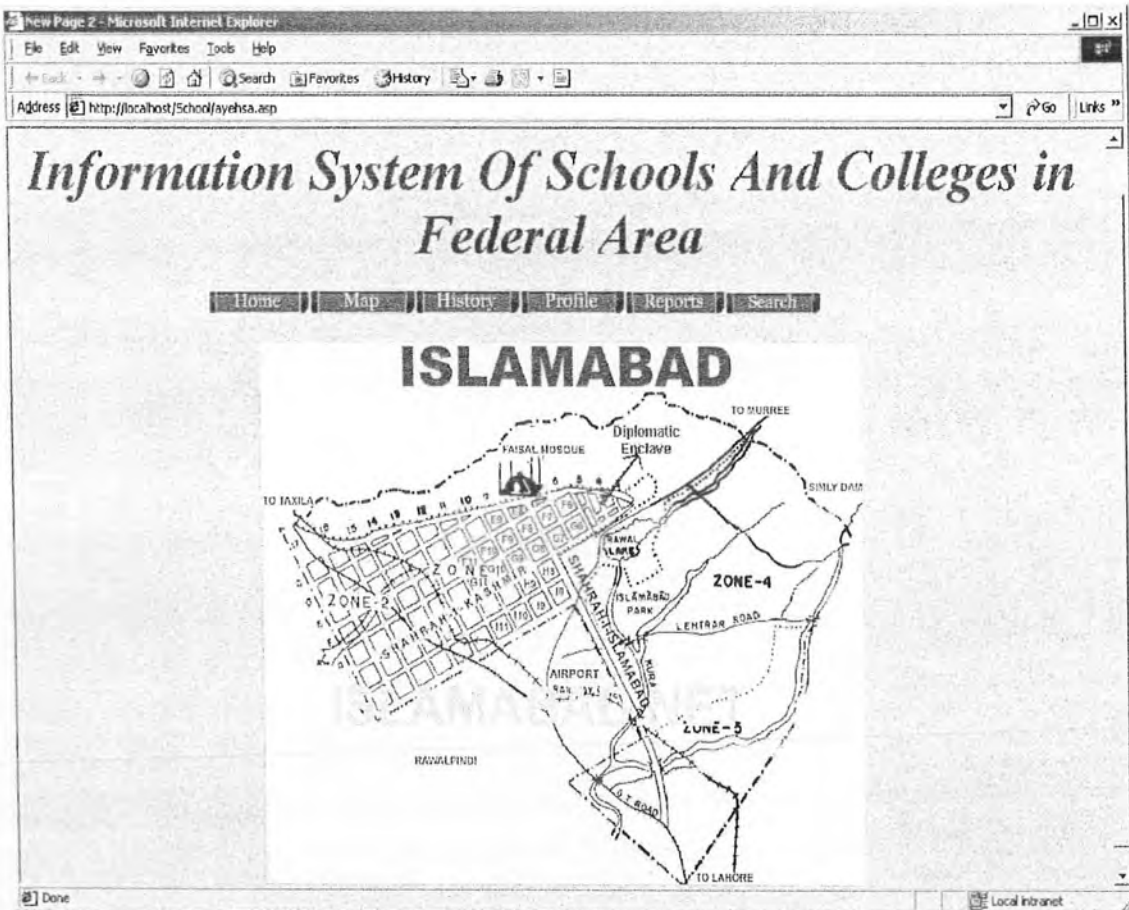
Courier New 10 B I U % 0 .0+ .0+

Page: 1 ?

**REPORT OF STUDENT ENROLLMENT
IN BOYS PRIMARY SCHOOLS , FEDERAL AREA
(BHARAKAU)**

Name	BOYS(I) No Stud	BOYS(II) No Stud	BOYS(III) No Stud	BOYS(IV) No Stud	BOYS(PREP) No Stud
FG Junior Model School, Kurri	35	33	46	51	25
FG Boys Primary School, Athal	14	28	22	24	14
FG Boys Primary School, Bhuddo	4	11	11	6	6
FG Boys Primary School, Chan Mastal (Police Lines, HQH-II)	6	11	2	13	6
FG Boys Primary School, Dhoke Jerrani	26	15	25	27	0
FG Boys Primary School, Dhoke Syedan	13	8	3	0	0
FG Boys Primary School, Dohala Syedan	5	12	7	8	21
FG Boys Primary School, Kalaran	3	7	5	1	0
FG Boys Primary School, Kot Hathial N.Abadl	20	35	45	41	17
FG Boys Primary School, Mal	3	2	0	0	1
FG Boys Primary School, Malot	12	1	14	22	0
FG Boys Primary School, Malpur	35	53	31	14	0
FG Boys Primary School, Malwar	8	12	7	8	6

MAIN PAGE



ISLAMABAD HISTORY

The decision to build Islamabad was taken in 1958 under President Ayub Khan . Karachi, the capital since Independence in 1947, and Pakistan's largest city and only port, proved unsatisfactory because of its distance from many parts of the country and because of its debilitating climate. Islamabad on the other hand, offered a healthy climate, plenty of water and a central position on the Grand Trunk Road, close to Punjab and North-West Frontier Province. That nearby Rawalpindi was the headquarters of the Pakistan army was another consideration. Finally the site had historical connections because of its proximity to nearby Taxila, for many centuries the regions main city.

A Greek firm of architects, Doxiadis Associates, drew up a master plan, triangular in shape based on a grid system with its apex towards the Margala Hills. The planners envisaged Islamabad eventually absorbing Rawalpindi entirely and stretching well to the west of the GT Road.

The city was divided into eight zones: the diplomatic enclave , the commercial district, the educational sector, the industrial area and so on , each with its own shopping area and park.

SEARCH PAGES IN ASP (ACTIVE SERVER PAGES)

SEARCH OF AN EDUCATIONAL INSTITUTES OF ISLAMABAD BY DIFFERENT LEVELS

SELECT

MIDDLE SCHOOLS (M-VIII)

NAME	PHONE_NO
FG bOYS Middle School (Tech), G-7/4	204655
FG Girls Middle School, G-8/2	9208342
FG Girls Middle School, G-7/3-2	2815882
FG Girls Middle School, G-8/4	2263760
FG Girls Middle School, I-8/1	9290022
FG Girls Middle School, I-10/4	4432370
FG Boys Middle School, Sobri	-
FG Boys Middle School, Jandala	-
FG Boys Middle School, Maira Begwal	-

APPENDIX D: SCREEN SHOTS

New Page 2 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History

Address http://localhost/School/LOC.ASP Go Links

SEARCH OF AN EDUCATIONAL INSTITUTES BY DIFFERENT LOCATION

SELECT Submit

Urban

NAME	PHONE_NO	LEVELS
FG College (Men) F-10/4, lbd	9266324	DEGREE COLLEGE (XIII-XIV)
FG College (Men) H-8, lbd	9257103	DEGREE COLLEGE (XIII-XIV)
FG College of Comm H-8/4, lbd	9207186	DEGREE COLLEGE (XIII-XIV)
FG College (Men) H-9, lbd	442975-442910	DEGREE COLLEGE (XIII-XIV)
FG College (Women) F-7/2, lbd	9203877-9203882	DEGREE COLLEGE (XIII-XIV)
FG Margalla College (Women) F-7/4, lbd	9205426-9203963	DEGREE COLLEGE (XIII-XIV)
FG College (Women) G-10/4, lbd	9266388	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-7/3	9207562	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-8/4	850440	DEGREE COLLEGE (XIII-XIV)
Islamabd Model College for Boys, F-10/3	9266393-4	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-11/1	9266169	DEGREE COLLEGE (XIII-XIV)

Done Local intranet

APPENDIX D: SCREEN SHOTS

SEARCH OF AN EDUCATIONAL INSTITUTES (BOYS AND GIRLS)

SELECT

Boys

NAME	PHONE_NO	LEVELS
FG College (Men) F-10/4, Ibd	9266324	DEGREE COLLEGE (XIII-XIV)
FG College (Men) H-8 , Ibd	9257103	DEGREE COLLEGE (XIII-XIV)
FG College of Comm H-8/4 , Ibd	9207186	DEGREE COLLEGE (XIII-XIV)
FG College (Men) H-9 , Ibd	442975-442910	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-7/3	9207562	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-8/4	850440	DEGREE COLLEGE (XIII-XIV)
Islamabd Model College for Boys, F-10/3	9266393-4	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-11/1	9266169	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-11/3	9266032	DEGREE COLLEGE (XIII-XIV)
Islamabad College for Boys, G-6/3	9208006	DEGREE COLLEGE (XIII-XIV)
Islamabad Model college for Boys, G-10/4	9260374	DEGREE COLLEGE (XIII-XIV)

APPENDIX D: SCREEN SHOTS

SEARCH OF AN EDUCATIONAL INSTITUTES OF ISLAMABAD BY AREA

SELECT Submit

Bharakau

NAME	PHONE_NO
FG Boys Higher Secondary School Bharakau	2230018
FG Boys Secondary School, Bharakau	2230155
FG Boys Secondary School, Chattar	2860072
FG Boys Secondary School, Kurri	2240565
FG Boys Secondary School, Jaba Teli	-
FG Boys Secondary School, Nurpur Shehan	2873780
FG Boys Secondary School, Pindi Begwal	-
FG Boys Secondary School, Rawal Dam	9207984

Done Local intranet

APPENDIX D: SCREEN SHOTS

SEARCH OF AN EDUCATIONAL INSTITUTES BY SECTOR

NAME	PHONE_NO	LEVELS
FG College (Women) F-7/2 , Ibd	9200877-9203882	DEGREE COLLEGE (XIII-XIV)
FG Margalla College (Women) F-7/4 , Ibd	9205426-9203963	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Boys, F-7/3	9207562	DEGREE COLLEGE (XIII-XIV)
Islamabad Model College for Girls, F-7/4	9203412	DEGREE COLLEGE (XIII-XIV)
FG Girls Model School, F-7/2	9203845	SECONDARY SCHOOLS (IX-X)
FG Junior Model School, F-7/2	2825886	PRIMARY SCHOOLS (PREP-V)
FG Junlor Model School, F-7/2-4	9208451	PRIMARY SCHOOLS (PREP-V)
FG Primary School No.52, F-7/1	2876989	PRIMARY SCHOOLS (PREP-V)
FG Primary School No.23, F-7/4	9208569	PRIMARY SCHOOLS (PREP-V)

Local intranet

REPORTS IN WEB PAGES

REPORT OF ALL EDUCATIONAL INSTITUTES IN FEDERAL ARE

Code4	Name	Sec Area	Phone No
1	FG College (Men) F-10/4, lbd	F-10	9266324
2	FG College (Men) H-8, lbd	H-8	9257103
3	FG College of Comm H-8/4, lbd	H-8	9207186
4	FG College (Men) H-9, lbd	H-9	442975-442910
5	FG College (Women) F-7/2, lbd	F-7	9203877- 9203882
6	FG Margalla College (Women) F-7/4, lbd	F-7	9205426- 9203963
7	FG College (Women) G-10/4, lbd	G-10	9266388
8	Islamabad Model College for Boys, F-7/3	F-7	9207562
9	Islamabad Model College for Boys, F-8/4	F-8	850440
10	Islamabd Model College for Boys, F-10/3	F-10	9266393-4
11	Islamabad Model College for Boys, F-11/1	F-11	9266169
12	Islamabad Model College for Boys, F-11/3	F-11	9266032
13	Islamabad College for Boys, G-6/3	G-6	9208006
14	Islamabad Model college for Boys, G-10/4	G-10	9260374
15	Islamabad Model college for Boys, G-11/1	G-11	9208456
16	Islamabad Model college for Boys, G-11/3	G-11	4417774

APPENDIX D: SCREEN SHOTS

REPORT OF STUDENT ENROLLMENT IN
GIRLS SECONDARY SCHOOLS, ISLAMABAD

Page 1

Name	ARTS (IX)	ARTS (X)	SCIENCE (IX)	SCIENCE (X)	VI	VII
G Girls COMP: School, F-6/1	101	41	37	40	128	101
G Girls Model School, F-7/2	58	52	51	68	97	115
G Girls Model School, G-10/1	126	117	96	64	127	163
G Girls Model School, G-6/1.3	66	75	85	74	188	168
G Girls Model School, G-6/2	101	104	87	29	132	128
G Girls Model School, G-7/1	173	63	48	30	200	192
G Girls Model School, G-9/3	44	29	92	74	114	140
G Girls Model School, I-8/1	21	29	53	42	101	88
G Girls Secondary School No.10, G-8/2	63	52	43	27	91	86
G Girls Secondary School No.13, G-9/4	48	45	31	28	57	69
G Girls Secondary School No.14, I-9/4	208	112	56	32	130	130
G Girls Secondary School No.4, G-7/2	140	0	86	0	138	162
G Girls Secondary School No.6, I-10/4	117	147	139	106	104	111
G Girls Secondary School No.8, E-8/3	103	62	65	45	153	156
G Girls Secondary School No.9, G-9/2	181	190	107	87	228	255
G Girls Secondary School U.Colony, G-5	25	10	18	15	37	59
	1575	1128	1094	761	2025	2123

APPENDIX D: SCREEN SHOTS

C:\Documents and Settings\Ayesha\My Documents\FORMS\REPORTS\A.HTM - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Print Copy Paste

Address C:\Documents and Settings\Ayesha\My Documents\FORMS\REPORTS\A.HTM Go Links

**REPORT OF STUDENT ENROLLMENT
IN BOYS PRIMARY SCHOOLS , FEDERAL AREA
(BHARAKAU)**

Name	BOYS(I)	BOYS(II)	BOYS(III)	BOYS(IV)	BOYS(PREP)
	No Stud	No Stud	No Stud	No Stud	No Stud
FG Junior Model School, Kurri	35	33	46	51	25
FG Boys Primary School, Athal	14	28	22	24	14
FG Boys Primary School, Bhuddo	4	11	11	6	6
FG Boys Primary School, Chan Mastal (Police Lines, HQH-II)	5	11	2	13	6
FG Boys Primary School, Dhoke Jerrani	26	15	25	27	0
FG Boys Primary School, Dhoke Syedan	13	8	3	0	0
FG Boys Primary School, Dohala Syedan	5	12	7	8	21
FG Boys Primary School, Kalaran	3	7	5	1	0
FG Boys Primary School, Kot Hathial N. Abadi	20	35	45	41	17
FG Boys Primary School, Mal	3	2	0	0	1
FG Boys Primary School, Malot	12	1	14	22	0
FG Boys Primary School, Malpur	35	53	31	14	0

Done My Computer

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