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COMPUTERIZATION OF EXAMINATION SYSTEM FOR F.G GIRLS HIGH SCHOOL NO. 3 WAH CANTT

BY

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GOD SAYS IN THE HOLY QURAN

In the unceasing process of creation inherent in the spheres above and the earth below causing continuously the visible interchanges of night and day lie the causative unwritten lows discernable by the people who use the faculties of their head and heart, such people while standing, sitting and reclining reuses it at through such reflection their inborn faith in ALLAH the creator of the universe acknowledge pray : "O" our provident lord, nothing in this universe you have created without correlated purpose you are the perfect, save us from the sizzling fire.

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FINAL APPROVAL

It is certified that I have need the thesis submitted by Mrs. Samina Abid and it is my judgment that this thesis is of sufficient standard to warrant it acceptance by the Q.A.U Islamabad for the post Graduate Diploma in computer sciences.

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Dedicated to my Sons

Project Brief

Project Title:	Computerization of school examination system.
Objective:	To computerize the examination system of F.G.G.H.S.No. 3 Wah Cantt for quick database management.
Offered by:	F.G.G.H.S.No. 3 Wah Cantt
Under taken by:	Mrs. Samina Abid
Supervised by:	Mr. Subhan (Q.A.U Islamabad)
Starting month:	March' 2002
Completion month:	May'2002
Developing Environment:	Oracle V. 7.3 / Developer 2000.
Operating System:	Window 98
System Used:	Pentium III (1000 MHZ)

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ABSTRACT

The basic purpose of this work is to convert the present manual examination system being used by F.G. Girls High School No. 3 Wah Cantt, into a computerized one. It is envisaged to attain efficient and accurate results through a menu driven system that keeps the record of the students. This system will lead to speedy compilation of results of individual sessional exams and annual exam.

The developed software provides the facility for on line retrieval of information in the form of queries and reports required by the administration.

The developed system is flexible, comprehensive and user friendly.

PREFACE

This study was initiated to facilitate the data processing in the examinations section of F.G Girls High School No. 3 Wah Cantt. It is extremely difficult to handle large amount of data manually and get valuable results from the present examination system. Through computerization such sort of problems can be solved and more reliable results can be obtained.

This project consists on   chapters.

Chapter No. 01:

This chapter describes the introduction to the F.G. Girls High School No. 3 Wah Cantt.

Chapter No. 02:

This chapter describes the definition of the project.

Chapter No. 03:

This chapter describes the existing examination system.

Chapter No. 04:

This chapter describes the errors and draw backs of existing system.

Chapter No. 05:

This chapter describers the proposed system and its objective. Describes the designing phase and advantages of the proposed system.

Chapter No. 06:

This chapter describes the system design.

Chapter No. 07:

This chapter describes about the user guide.

ACKNOWLEDGEMENT

First of all, we express our humble thanks to almighty Allah for enabling us to complete this project report.

"God helps those who help themselves"

it is wise saying and has always proved true. When I started my project, it seemed difficult to me but will of almighty, Allah, I have finished up my project work and I am able to present this dissertation in a compiled form.

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Last but not least, heartfelt thanks to my mother-in-law and father-in-law without their cooperation and prayers this work would have never been materialized.

(Mrs. Samina Abid)

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CHAPTER # 1

An introduction to the F.G.Girl High School No. 3 Wah Cantt.

Wah Cantt is an industrial region and their native are concerning with the POF in every way. There as the people of Wah Cantt have other facilities whereas education facilities are given to their children. At first because of less population the number of student were low and one school is enough for both boys and girls. When the population is increased then the number of students also increased. So they feel that there is the need for further school that why present school will opened in the background of this need.

Present school is situated on the back of central Jamia Mosque and around this school low income worker lived on 17th Feb' 1955. Cantt Board Model primary school no. 3 come in to being their were 11 teacher including the head mistress Mrs. Jamila Ch. In that period the total Number of student was 455.

April 1970 school will be promoted as the middle school in first June 1975 federal government take this institute as the other educational institution and change the school name and give it name F.G. Girl High school No.3.

With the passage of time number of students sections also increases i.e 22, and number of teachers are also increased i.e 28 and were trained. Students number were going to reached 1200. with the next coming years the number of student will have increased because of the heavy increasing number in population so further section will be introduced. On 1978 school stood the middle standard than the heavy pressure of the people and also the parent also feel the need or demand of this period.

Director F.G.E.I   Islamabad promoted this school become the F.G. girl High school No. 3 this incident was happened in 1st June 1977. on 18 Jan'1977 member federal board visited the school and observed it and encourage the school discipline and studies. In 1979 our first 10th class gave the

examine under the federal board in general group and result was declared 87%. On the appeal of parent the girls science classes will be introduced in 1980. these classes introduced under the order of director F.G.E.I C/G Rawalpindi. With the increase of number of student school building need to extend further room will be build so thirty four rooms will made to fulfill this need to over come this problem.

This school has achieved many first second and third prizes and cash award in different departments i.e Qirat Naat, Essay writing story writing speeches arts and painting in all Pakistan competition. Due to science teacher efforts on the region level science exhibition will be held students of this school made the model and win prizes and cash prizes. Students also win the 1st and 2nd prize in the examine of scholar-ships .

The list of different heads in different period are as follow:

Name:	Period
Mrs Jamila Ch.	07-02-1955 to 31-08-1960
Miss Salma Razi	01-09-1960 to 13-04-1975
Mrs Sughra Ashghar	14-04-1975 to 02-01-1989
Miss Zubaida	03-01-1989 to 21-03-1990
Mrs Perveen Rana	22-03-1990 to 19-06-1993
Miss Sabiha Sultana	19-06-1993 to 23-04-1996
Miss Zubaida Khatoon	24-04-1996 to 07-12-1997
Miss Perveen Akhtar	08-12-1997 to 22-04-1999
Mrs Tasneem Kousar	23-04-1999 to date

CHAPTER # 2

INTRODUCTION

2.1 BACK GROUND

Use of faster and reliable and efficient tools to enhance productivity has always been one of the main objectives of Human history the development of computer technology and its in corporation in to human society has initiated a new technological revolution in modern history. The bottom line is that the computer technology is going to take over every conceivable aspect of life. It has already taken over hospitals military communication offices etc.

Yet there is along way to go to fully exploited extensive use of modern technology the automatic tools in national development is one of the prime difference between the developed and under developed economics of the world today. No country can achieve it development goals without utilizing these technological tools which have enabled develop

countries to improve their products optimize manpower productivity and devises plan on a scientific basis with a realistic and accurate parameters. Al this has been made possible through very extensive use of computer. This marvels of modern science is back bone of each developed countries economy and under developed are working hard to achieve mostly over it.

F.G.Girl High School No. 3 Wah Cantt is an old institution that can not ignore these challenges we have gear ourselves to achieve mastery over this technology in order to enter the 21st century as a proud and develop nation.

2.2 INTRODUCTION OF F.G HIGH SCHOOL NO. 3 WAH CANTT.

School provides ample opportunities to student to discover themselves realized their potential and prepares for the challenger of life. Older then any

other school in Pakistan and in 47 years of its existence. The school has approximately 2000 students on its rolls and teaching faculty of 16 members it admit students at first class to 10th class level, at the 9th class level school provide instruction in the faculty of art and science in 5 diverse discipline i.e Bio, Chemistry, Physics, Islamic Studies and H.E.CO

2.3 PROJECT DESCRIPTION

This description describes the design of computerized examination system for the F.G.Girl High School No. 3 Wah Cantt. The basic purpose of this work is to convert the present manual examination system in to computerized system it is envisaged through a menu drive system. It will improve result compilation and also provide quick response with reports and queries. This study has been conducted keeping in view various problems face by the students and school staff because of the huge amount of data handling and due to the increasing numbers of candidates for admission

to the school every years. In view of the fact that computer has rendered immense help and made tremendous contribution in every field a computerized examination system is designed. Implementation of this system will reduced the manual operation and provide accurate result and efficient data handling. Presently the system is functioning manually and is time consuming. Department and office are therefore unable to keep record of examination system. In order to remove these difficulties and hurdles the objective of this work are:

- ➢ To study the problems which are faced by the school staff .
- ➢ To find out the draw backs in existing system.
- ➢ To propose steps in order to overcome the problems and difficulties.
- ➢ To design an efficient examination system.

Here the purpose of computerization is together analyses and document the data need to make an

informed intelligent decision regarding to a system practically.

2.4 NEED OF COMPUTERIZATION

We have seen the fantastic change and development in technology for the past 45 years with the passage of time technology is developing and new things are coming in to the market. Computer is an example of the same technological revolution. The advancement in technology has change the concept of the people and every one demand for fast process, it is not only use in the field of science but also in the commercial field. It is being utilized affectively by archaeologist, physicist engineers, doctors and teacher etc. in the past ages every organization had manual process which were slow rough and un systematically because they had no well designed system computer has brought revolution in the structure of these organization perform the work of years in days and concurred the world by it artificial intelligence. The main reason of computerization of F.G. high school No. 3 Wah Cantt

examination system is that it has a steadily and time consuming procedure of examination there are many complication in the present system. The examination process is rough complex and unsystematic the various procedures namely result compilation and detail marks certificates etc, are performed manually this keeps the teacher staff busy through out the year and also becomes the reason for wastage of previous time of the students. An other reason in the school is expending number of classes due to the large number of students the examination section conducts various examination i.e first terms 2nd terms and annual examination. So it is very difficult for the school to control the data of such huge number of candidates of various classes and future it will be impossible to control such huge amount of data manually therefore the school needs a well designed computer based system.

2.5 OBJECTIVES

Keeping in view all the aspects and taking care of future requirement it has been decided to analyze the present system of examination and design a new computerized system for the F.G.High School No. 3 to reduce the time make the process fast and efficient considering the future needs software and hardware for the new system are also to be proposed.

The main objectives are given below:

➢ Analyzing the existing examination system to point out the problems faced in the existing system and elimination the un-necessary information.

➢ Designing the new computerized system and conversion of old system in to new system.

➢ Implementation of new system how can the existing staff be used and what types of hardware and software are required for new system.

2.6 LIMITATION OF STUDY

F.G.Girl High School No. 3 is a large organization it is not possible to design a computerized examination system for whole school within a project period. The school administration will also not allow a massive change in their system at once. They wanted through study of various examination procedures so as dig out the problems find its solution and overcome the complications and troubles in the present system. It was decided to design computerized system for the 1st class to 10 class examination system.

The purpose is design a smooth fast efficient and operate-able system for examination. Further piece by piece implementation of each examination system could finally result the well organized computerized system for the whole school. It is prototyping technique which is modern technique and used through out the world. Moreover piece by piece implementation has the advantages that failure of one sub system will not cause the failure of the whole system of the school.

CHAPTER # 3

P R E S E N T   S Y S T E M

3.1 INTRODUCTION

The school has unified examination system for a the classes. Examination committee arrange school examination three time in a year i.e August, December and March. These examination for all the classes i.e 1st to ninth class. For judging the performance of students to promote to next class students who show poor performance in March examination(annual examination) and could not qualified are remained in the same class.

3.2 ACADEMIC SYSTEM FOR 1ST TO FIFTH CLASS (Primary section)

The duration of study for 1st to fifth class is one year. Annual examination is held at the end of the year.

3.2.1 COURSES OF STUDY

Subject followed by these classes are:

Subject	Max. Marks
a) Urdu	100
b) English	100
c) Maths	100
d) Science	50
e) Social Studies	50
f) Islamiat	50

3.3 ACADEMIC SYSTEM FOR MIDDLE SECTION (6 to 8 CLASS)

The duration of middle studies for middle section is one year. Annual examination is held at the end of the year.

3.3.1 COURSES OF STUDY

Subject followed by this sections are:

Subject	Max. Marks
a) Urdu	150
b) English	150
c) Maths	100
d) G.Science	100
e) Social Studies	100
f) Islamiat	60
g) Home Economics	100
h) Nazera Quran	40

3.4 ACADEMIC SYSTEM FOR HIGHER SECTION

The duration of study for each section is one year. Annual examination is held at the end of the year.

3.4.1 COURSES OF STUDY

There are two groups students should select any one from the following:

1. Science Group   2. Arts Group

1. Science Group

Subject followed by this group are:

Subject	Max.Marks
a) Biology	100
b) Chemistry	100
c) Physics	100

2. Arts Group

Subject followed by this group are:

Subject	Max. Mark
a) General Science	100
b) Islamic Study	100
c) Home Economic	100

3. Compulsory Subject:

Following subjects will be compulsory and the student will be required to study these:

Subject	Max. Marks
a) Urdu	150
b) English	150
c) Maths	100
d) Islamiat	75
e) Pak. Studies	75

3.5 EXAMINATION COMMITTEE

Head Mistress of school appoints an examination committee compose of the following numbers:

i)   A   Controller of Examination
ii) A   Deputy Controller
iii) Four Asstt. Controllers
iv) Two   Clerks

3.6 EXAMINATION SECTION

All the examination process is carried out through examination section. It also keep the records of each student performance while studying.

3.7 EXAMINATION PROCESS

The examination process is described as:

3.7.1 Admission for 1st to 10th class.

Admission to 1st to 10th class shall be made according to the schedule and the list of selected candidates shall be displayed on the school notice board. Admission to the above mentioned classes granted strictly in accordance with the policy and direction of the GSO I Wah Cantt and rules formed by the school head mistress.

3.7.2 KEEPING STUDENTS RECORD.

Admission forms of admitted students alongwith allotted school admission numbers are received by the examination section to prepare register called examination record register, this register a used to maintain education record of each student and student personal record containing students names father names class Roll No. Date of birth present address permanent address and previous academic record. It served as a source of reference for all relevant information related to the progress of student life.

3.7.3 REGISTRATION PROCESS.

Examination section sent list of bio-data of 9th class students for registration in federal board. These list is contained the information about the students names father names class Roll No. Date of birth present address permanent address and previous academic record. These list sent to the federal board for registration of each student after duly signed by the school head mistress, examination section keep a duplicate of it in a register called registration register.

3.7.4 <u>TIME SCHEDULE</u>.

Academic year shall normally begin in April and shell be of 12 months duration. 8 months for teaching and the remaining 4 months for examination and holidays.

A promotion/annual examination after 1st academic year will normally be held in march.

Before annual examination to sessional test 1st term and 2nd term are conducted by the school in august and December.

3.7.5 SCHOOL EXAMINATION.

Examination section conducts school examination three time a year.

3.7.5.1 CONDUCTING EXAMINATION

✓ The examination section makes arrangement or conducting the school examination. The examination section deliver the question paper along with answer script and attendance sheets available to the teacher at center before the examination start. On the termination of examination time answer script are collected back from the students. And handed over the same to the examination section along with the attendance sheets.

3.7.5.2 EVALUATION

✓ Subject teacher has the responsibilities to evaluate the answer script and to prepare award list. Award list with marked script and class attendance list are sent to the examination section.

3.7.5.3 RESULT SHEET OF EACH CLASS

✓ From the attendance and award list of each subject result sheet are prepared those students who get less then 33% marks are declared fail in relevant subject and these obtain marks are under lined with red pen.

3.7.5.4 RESULT COMPILATION

✓ When result sheet are prepared then result is discussed with head mistress of the school for declaration of fail/pass students. Students are fail/pass under certain condition i.e those students who get above 33% marks in each subjects are declared pass. If students get 25% marks in 2 subjects and remaining subject are cleared then those students are promoted to next class. Those students who get less than 25% marks in 2 subjects then those students are fails or remained in the same class.

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3.8 BOARD ANNUA EXAMINATION FOR 10TH CLASS.

3.8.1 Admission process for 10th class.

Board send admission forms for 10th class annual board examination to the examination section of the school. Examination section deliver these forms among the students who qualify send up test, good performance in previous school test and have not less than 75% attendance. After some days students submit filled admission forms back to examination section these forms send to the board for annual examination after duly signed by the school head mistress.

3.8.2 **ROLL NO. SLIPS**.

Board send a list of candidates containing (student registration number allotted roll no name of students and subject in which to be appeared) of each group and roll no slip of each student along with date sheet to the examination section of the school examination section delivered roll slip among the students after

necessary school clearance and date sheet displayed on the school notice board.

3.8.3 RESULT CARDS & CHARACTER CERTIFICATES.

After the annual result declaration board send a gazette and marks sheets of each student. Examination section deliver the marks sheets and issue character certificates to the students after taking a signature on a register. The examination section keep the record of students (pass/final to a register called students record register).

CHAPTER NO. 04

ERRORS AND DRAW BACKS OF PRESENT SYSTEM

4.1 ERRORS OF PRESENT SYSTEM

The manual subsystem associated with the operations tend to error prove the logical error that creep into manual system are.

✓ Mis-spellings

✓ Transposition of letters.

✓ Incorrect arithmetic's.

✓ Transposition of numbers.

✓ Incomplete operations

✓ Use of incorrect numbers, codes, letters or words.

✓ Use of incorrect documents.

4.2 DRAW BACKS AND LIMITATION OF PRESENT SYSTEM.

The major draw backs and imitations in the present manual system are as follows:

4.2.1 ✓ LACK OF ACCURACY

In the present system huge amount of data calculations are made manually and the result compiled by them can not be considered accurate and fool proof. "To err is human" is a well known proverb which true in such cases in particular.

4.2.2 ✓ SLOW DATA PROCESSING.

All the data handling such as sorting searching retrieving, matching deleting are performed manually. As the number of students in the school is increasing record keeping data is becoming difficult to handle due to huge amount of data and number of activities to be performed therein delay is invariably caused in carrying out these operations. These operations on the data can be performed by computer with high speed and accuracy.

4.2.3 ✓ SECRACY

In the manual system a number of personas are involved in the compilation of results and for most of the time even sensitive information is exposed on the

papers it is very likely that some un authorized person might get access to secret information.

4.2.4 ✓ TIME FACTOR.

In view of the fact that the number of class and strength of the students of the school is increasing with passage of time, their examination and record keeping data is become difficult to handle. Numbers of problems are encountered during compilation of results reports generation etc. further the data is stored on the paper files and to maintained handle search and update these files or quiet number some.

4.2.5 ✓ DATA REDUNDENCY

The present system has a high level of redundancy of information. The only source of input for the examination and student record keeping system is the result cards which includes a number of columns that are not required for every sections subsequently. However such redundancy of information can be minimized by designing better input cards and a better coding scheme.

4.2.6 ✓ LARGE SPACE OCCUPYING

As the record is kept in the registers therefore a lot of space is occupied. There are lot of registers of record that a particulars record can not be found easily. This necessary wastage of stationary and space was to be reduce in computerized system to the great extent.

4.2.7 ✓ INTEGRITY

In the present system data was opened to every one who has access to fie. Anyone of them can retrieve information about the students. But proposed system has to provide the integrity of data by limiting access only to authorize process.

It has been observed that sow processing of result creates several problems for the administrations. However, a computerized approach to the examination system may produce quick results and access to any information may be made in seconds. It will be a great assistance to the school in making timely decision for switching over the modern age method of using computers.

Chapter No. 05

PROPOSED SYSTEM

5.1 INTRODUCTION.

Every new system whether manual or computerized, that replaces the previous system, beings about 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 one. The present procedures are therefore modified and new procedures are introduced. The proposed system has been designed after making a comprehensive study of the existing manual system of examination in F.G.G.H.S No. 3 Wah Cantt.

This new system is designed keeping in mind the demands and requirements of the organization.

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The proposed system is computerized system in which electronic data processing methods are used to make system more efficient more economical and error free. The proposed system is mainly related to the redesigning of computerized compilation of results, record keeping retrieval of student data and understand the problems and needs of the school administration, procedures currently used by the school administration for examination system was studied for the retrieval of information.

The computerized system is, therefore developed which is quite comprehensive and covers every aspect of the objectives in detail.

5.2 OBJECTIIVES OF THE PROPOSED SYSTEM.

Before designing any computer based system, it is essential and helpful to establish the objectives that the computer based system should satisfy. Following are objectives of the proposed system.

5.2.1   EFFICIENCY.

Efficiency is the degree to which we minimize utilization of resources for achieving an objective. A system will not be termed efficient if it achieves unwanted results at low costs.

5.2.2   DATA SECURITY.

Security refers to protection from deliberate or accidental loss or destruction of important data. The data required for decision making is highly confidential and valuable, therefore, reliability of the proposed system is secured by giving a regular and guaranteed service to the user.

5.2.3   ACCURACY

The system will provide accurate and error free information's. It will ensure efficient accurate record keeping for examination and test.

5.2.4 <u>USER FRIENDLINESS</u>

It is simple enough and emphasizes is on capability of the proposed system to provide a smooth flow of information from one step to the other, there by avoiding needless back tracking and duplication.

5.2.5 <u>CODES</u>

Codes will be assigned to reduce the storage and number of typing strokes used to input data codes are assigned keeping in mind the maximum range of value and type of information to eliminate any error. Codes will be small and easy.

5.2.6 <u>FLEXIBILITY</u>.

The new proposed system will be much more flexible in creation and modification of transaction.

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5.3   LANGUAGE SELECTION.

- You can work as a single user as well as multi-user, it supports both.

- You can work in DOS environment as well as in windows environment.

- A database file can be related to more than one database fields. An other words more than one relation can be established out of a database file.

- Designing menu is easy.

- Data can be stored in an array and from that array it can be transferred to the current record in an active database file.

- It is specially designed as a commercial language.

- It has the ability to handle large amount of inputs and outputs.

- Its processing is fast.

- It provides the facility of using 254 alternate keys in indexed requital.

5.4 HARDWARE REQUIREMENTS.

The minimum hardware and operating system requirement for this system are as follows:

- 486 mmx or Pentium – I or above
- 32 mb ram.

5.5 THREE PHASES OF PROPOSED SYSTEM.

From the detail study of the present system to the implementation of the proposed system, the whole procedure was conducted on the following basis:

1. Study phase.
2. Design phase.
3. Development phase

5.5.1 STUDY PHASE.

The detail study of the present system was conducted on the following steps.

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a. Problem definition.

b. Objectives

c. Select and recommend most feasible system.

d. Write study phase report.

5.5.2 THE DESIGN PHASE.

Design phase was conducted on the following steps.

a. Identification of the procedures to be performed.

b. Design of input, output and files.

c. Write design phase report.

5.5.3 DEVELOPMENT PHASE

Development of designed system was conducted as:

a. Development of computer program.

b. Testing of computer programs with dummy data.

c. Testing of computer programs with actual data.

5.6. ADVANTAGES OF THE PROPOSED SYSTEM.

The proposed computerized system have more advantages over the manual system. Some of the advantages are mentioned.

5.6.1 PROCESSING SPEED.

The use of automated method will speed up the flow of work in examination system. The examination staff will be able to answer more question within the limited time which was not possible even in months in the manual system. Decision will be faster than the manual data processing. Immediate access to records and automated analysis will speed the decision process. Fast access to files, records and means that system will

process in faster rate and information will move, through the department faster.

5.6.2   <u>WORK CONTROL</u>.

Work load personal transaction statistics and records can be automated. Further increase in work load will not require the proportional increase in the staff. Fewer manual task will translate into a need for fewer personal to handle increasing number of transaction and few manual operations will required to execute functions. The position of the individual with respect to system will change. Individual have few clerical work to perform. Task will proceed with more directness and less delay from the start upto the conclusion of the system function.

5.6.3 <u>TIME FACTOR</u>

The time factor plays an important role in the efficiency of any system. As the present system is manually operated, so its speed of processing is considerably slow. The controller of examination has to consult different registers for searching a particular record, which are voluminous and tedious. To overcome these problems the proposed system provides the facility of more timely information in a few minutes. So it is not necessary in the proposed system to search a result or result card in the different registers and files, just enter the admission No of a student to search any specified record.

5.6.4 <u>STORAGE MEDIA.</u>

Considering the storage media is another important factor. Several registers are maintained for the purpose of handling data and a lot of information which waste a lot of

paper. The information about students and result of different examination are stored in different registers. The proposed system provides a student result in one place i.e on diskette. So it is not necessary to maintain a log of registers to store of such type of records.

5.6.5 ACCURACY.

An the present system all the procedures are operating manually and dealing with the large amount of data certainly procedures error in the system.

5.6.6 SECURITY.

An the present system, the data is held manually so it is very much insecure since they do not use to keep the backup of the recorded data. An case of damage there is no way of recovery of the lost data. The proposed system gives the facility of backup

of the data stored. An any condition of the data is lost, the lost data can be recovered from its backup copy. Also the proposed system is more secure then the present system. The information on papers is easily accessible to any unauthorized person, but in the proposed system such type of information is available from only authorized person.

5.6.7 <u>EDITING AND TYPING</u>.

The editing procedure in the manual system is done by hands or sometimes typewriters are used for this purpose, which is also a cumber some task. In the proposed system computer is used to edit or change and exiting record time and again, which is not possible in the manual system.

5.6.8 <u>FINANCIAL ADVANTAGES</u>.

In the properly planned system unit operating cost is normally reduced. When a function is automated, the large number of transaction the lower the unit cost of automation is proposed examination system.

CHAPTER # 6
SYSTEM DESIGN
6.1 INTRODUCTION

system designing in the most important of all phases in a system life cycle system design presents specific information for the designing of the input forms , output forms, codes and table structure.

6.2 RDBMS

A DBMS (Data base management systems) is basically a computerized record keeping system, that is it is a computerized system whose overall purpose in to maintain information and to maintain that information and to make that information available an demand.

A relational database in a database that is perceived by its user as a collection of tables (and nothing but tables) the software that manages the relational database is known as relational database (RDBMS).

6.3   <u>DEVELOPER/2000</u>

After considering a number of relational database management systems available these days, developer/2000 was selected the product from ORACLE Corporation that makes it easy to build database applications it handles most of the issues elegantly and well using the features of ORACLE 7

Developer /2000 provide a number of sophisticated tools for the development of applications. Some of these tools are given as:

6.3.1   <u>ORACLE SQL *LUS.</u>

Oracle SQL * PLUS is an interface through which SQL commands many by entered and executed . We can use SQL PLUS program in conjunctions with SQL database language and its procedural language extension PL/SQL. The SQL database language allows us to store and retrieve data in ORACLE. SQL*PLUS SQL and PL/SQL command languages are powerful enough to serve the needs of users with some database experience. Yet straight forward enough users for new users who are just learning to work with ORACLE.

6.3.2   ORACLE * FORMS

The form component of Dveloper/2000 is the environment component in which you develop not surprisingly form modules. It also provides the development frame work for de3veloping menu and PL/SQL library modules. These forms provide fast and easy data entry. Updating, deletion and queries to an ORACLE data base.

6.3.3   ORACLE *REPORTS.

The report component of Developer/2000 is used to create different reports in a variety of styles. The report designer also includes libraries and data object. It can be used to produce a report derived from a single oracle table with column headings , columns of database information system and totals as desired .

6.4   SYSTEM DEBVELOPMENT

Each system comprises of one or more components relation to one specific branch of system a description of system components are given below:

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6.4.1 EDITORS

Developer/2000 provides editors which are

- Layout editor
- PL/SQL editor
- Object Navigator

6.4.1.1 Layout Editor

It is used for creating, formatting and arranging interface items and boilerplate graphics. It provides us with complete set of drawing and editing tools. It provides quack excess to frequently used commands.

6.4.1.2 PL/SQL Editor.

It is used to write triggers , progr4am units , procedures etc.

6.4.1.3 Object Navigator.

It is used to display editors. It provides work area for creativy and modifying from objects.

6.4.2 FORMS.

A form application represents data in an on line format consisting of a series. Of fields laid out in one or more windows. They also provide a good way of execute and changing that information. You can type data into the4 form field or change that is in them, depending upon what the form designer lets you do.

There is a particular kind of form called a master detail form that divides the form into a master record and several detail records

Once a form has been designed, data entry operators need not to know the SQL commands.

6.4.3 CANVAS.

a canvas is the surface on which you paint objects like text items, push buttons and check bones etc.

The window is the frame or boarder which forms a view part for the user. The user may not see all of the canvas at any one time, only as much as the window on the Canvas allows him to this view is some time referred to as the canvas view.

6.4.4 BLOCKS

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Block is the intermediate. Building unit for forms. Your can think of a block is two days as a collection of items or as a collection of records, each of which has the some structure of items .

Block usually corresponds to one table in the database. A form may have one or more blocks. A block contains a group of related fields . That are used to store some specific informations.

6.4.5   BASE TABLE.

a database table which is associated to a block, is called the base table for that block this block contains all or some of the fields defined in that particular base table.

6.4.6   FIELD.

A black item is the primary building unit of the form represent columns or data entry areas and describe own the data should be displayed and validated and how an operator should interact with the data which it is entered . At the most basic level , field serves as container for data within a form a field in always owned by or associated with a block. Each block normally owns one or more fields.

6.4.7   MASTER DETAILS RELATIONSHIP.

⇩

A form may contain more than one block. These forms may have independent status or they may have master detail relationship . a block is called master block if there exists one or multiple records in detail blocks. There is primary to foreign key relationship between blocks.

6.4.8   TRIGGER

A trigger is a block of PL/SQL code you write to customize your application . You use trigger to respond run time events with appropriate processing . Triggers are set of processing commands Triggers can be impose at field level, block level and form level.

6.5   SYSTEM DESIGN.

The system design phase can be classified into two categories:

- Logical Database Design
- Physical Database Design

6.5.1   Logical Database Design

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This phase simplifies the approach to design large relational database by reducing the number of data dependies that need to be analyzed. Logical database design consists of

- **Output Design.**
- **Input Design.**

6.5.1.1 Output Design.

The output design constitutes an important past of the system. The output may either be in soft form (displayed on screen) or in hard form (Print out).

6.5.1.2 Input Design.

In put design in the main source of interaction between the user of the system and developer .

6.5.2 Physical Database Design.

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A database design in the physical design matured from the logical design . It is based upon the relationship among the data rather them the convenience of the storage structure .

6.6 TABLE DESIGN.

The system contains table in given below:

TABLE 1 ADMISSION

NAME	DESCRIPTION	CONSTRAINTS	DATA TYPE
Adm_no	Adm_no	PK	Number
Stu_id	Stu_id	FK	Number
Adm_date	Adm_date		Date
Adm_class	Adm_class		Varchar2(10)

TABLE 2 ENROLLMENT

NAME	DESCRIPTION	CONSTRAINTS	DATA TYPE
Enrollment_id	Enrollment_id	PK	Number
RollNo	RollNo		Number
Class_id	Class_id	FK	Number
Stu_id	Stu_id	FK	Number
Section	Section		Varchar2(10)

TABLE 3   SUBJECT

NAME	DESCRIPTION	CONSTRAINTS	DATA TYPE
Sub_id	Sub_id	PK	Number
Sub-Name	Sub-Name		Varchar2(10)
Tot_Marks	Tot_Marks		Number

TABLE 4   STUDENT

NAME	DESCRIPTION	CONSTRAINTS	DATA TYPE
Sub_id	Sub_id	PK	Number
Name	Name		Varchar2(15)
F_name	F_name		Varchar2(15)
Ph_No	Ph_No		Number
Addr	Addr		Varchar2(20)
D_o_b	D_o_b		Date
Gender	Gender		Char(1)
Provience	Provience		Varchar2(10)

TABLE 5 CLASS

NAME	DESCRIPTION	CONSTRAINTS	DATA TYPE
Result_id	Result_id	PK	Number
Enrollment_id	Enrollment_id	FK	Number
Term	Term		Varchar2(10)
Sub_id	Sub_id		Number
Marks_obtained	Marks_obtained		Number

TABLE 6 RESULT

NAME	DESCRIPTION	CONSTRAINTS	DATA TYPE
Class_id	Class_id	PK	Number
Class_name	Class_name		Varchar2(10)
Class_level	Class_level		Varchar2(10)

ATTRIBUTE LEVEL

Student

Stu_id   (FK)
Name
F_name
Ph_No.
Addr
D.O.B
Gender
Province

Admission

Adm_No   (FK)
Stu_id   (FK)
Adm_Class
Adm

Subject

Sub_id   (FK)
Sub_name
Tot_Marks

Class

Class_id (PK)
Class_name
Class_level

Enrollment

Enrollment_id (FK)
Roll_no
Class_id (FK)
Stu_id (FK)
Section

Result

Result_id (FK)
Enrollment_id (FK)
Term
Sub_id (FK)
Marks Obtained
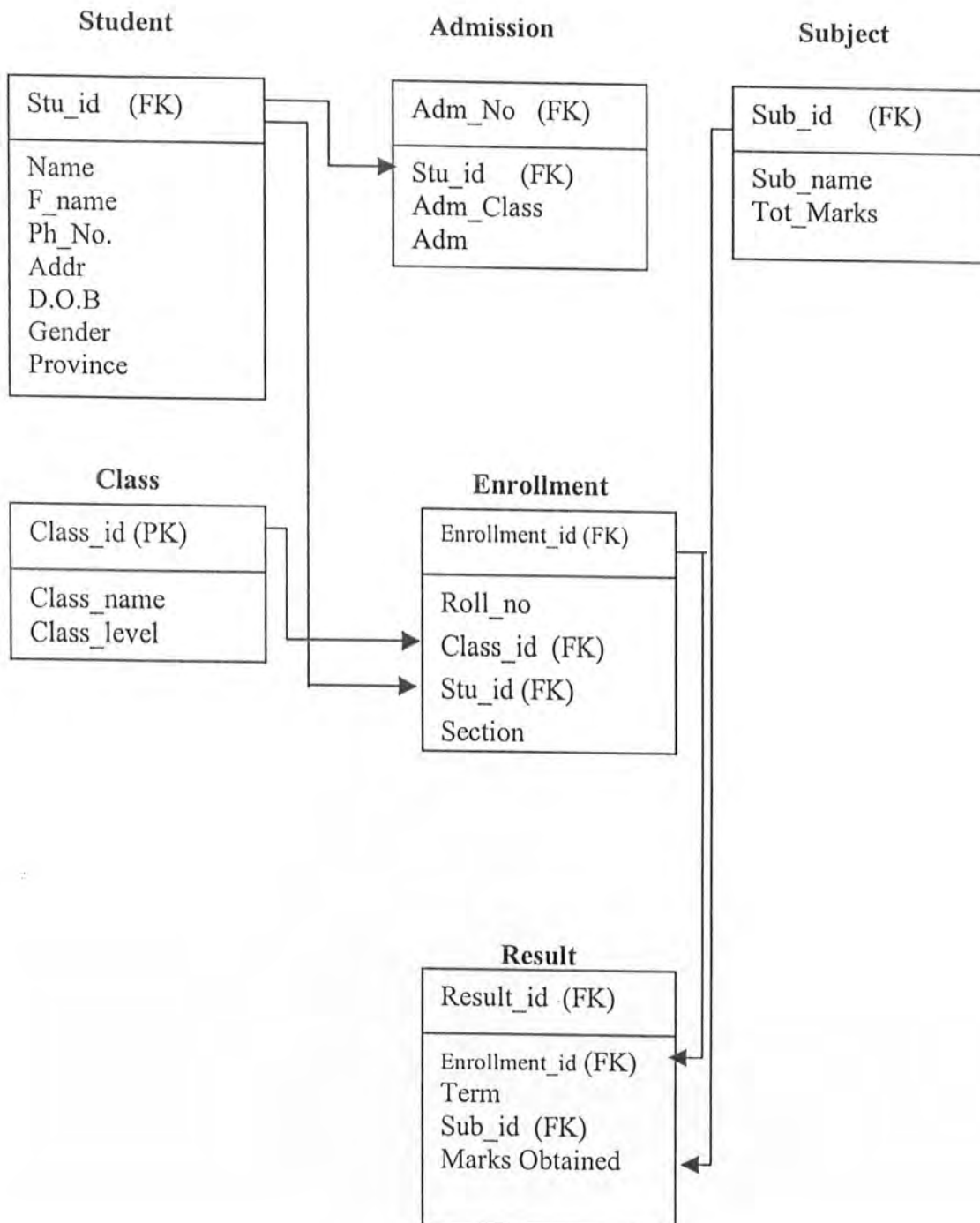
CHAPTER # 7

<u>USER GUIDE</u>

7.1 <u>INTRODUCTION</u>.

The proposed system has been designed for IBM PC and compatibles. The system is user friendly, provide help and displays appropriate massages for the user's convenience.

7.2 <u>LOGGING IN AND OUT</u>.

Since the system operates in a multi-users environment, so it requires the services of a D.B.A to perform several tasks such as:

- Creating new users.
- Giving privileges to users.
- Keeping backup of data.
- Ensuring the efficiency of the system.

Window 98 is the first step toward the system implementation. Next step is the Oracle 7.3 / Developer 2000 installation. Oracle 7 is a database engine whereas developer 2000 is its

front end development tools which consists of Oracle 5.0 and Oracle reports 2.5 and graphics.

After installing Oracle 7 / developer 2000 the database administrator (DBA) will create user and its password first of all user should start database he should mount Oracle 7 database engine by clicking start data in personal Oracle for windows 98. a message appears.

- Oracle instance started.

- Database dismounted.

- Press ok.

Here user can describe the database tables and can project on data in database tables. Then user double click the icon of named frmmenu.

So the form builder can now startup and main menu is displayed as:

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Entry	Display	Reports	exit

School

Examination

System

⇩

ENTRY.

In entry menu its sub menu contains forms options. In forms option any form can be selected and corresponded data to that form can be entered in that form. In entry menu different forms will appear e.g :

- Admission form.
- Enrollment form.
- Subject form.
- Student form.
- Result form.

DISPLAY:

By clicking on display menu the submenu will open like.

- Student list
- Admission list
- Subject list.
- Enrollment list.
- Result list.

And by clicking on each menu individual display forms will open.

REPORTS.

By clicking on report menu the submenu will open like:

- Admission report.
- Data vise admission report.
- Marks report.
- Classes report
- Subject report.
- Total students report.

And by clicking on each menu individual report will open.

7.3 **SPECIAL CONSIDERATION**.

The system has been developed in windows 98 based on ORACLE. Thus user must have a sound knowledge of this system. Every user have log – in account and password assigned to her by the system administrator. Then only she

Action Edit Query Block Record Field Window Help

SUBJECT INFORMATION

Subject Form

Sub Name [english]   Total Marks [150]

Record: 1/1

Start   project   Developer/2000 Forms Ru...   9:20 PM

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Action Edit Query Block Record Field Window Help

STUDENT INFORMATION

Student Form

Name zia   Father Name abid

Address 4 a   Phone No 544127

Gender Male   Date Of Birth 12-FEB-1997

Province punjab

Record: 1/1

Start | Developer... | Oracle SQL*... | Reports Back... | project | AA - Microsof... | 10:25 AM

⇩

Action Edit Query Block Record Field Window Help

RESULT INFORMATION

Result Form

Roll No [1]   Student name [RIZWAN]   Class [ ]   Section [ ]   Lov

Subject named [PHYSICS]   Lov   Term [1st]

Marks Obtained [87]

Record: 1/1

Start | project | Developer/2000 Form... | untitled - Paint | 9.24 PM

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Adm No	Adm Date	Adm Class	Name	F Name	Ph No	Addr	D O B	Gender	Province
1	22-JAN-90	5	rizwan	yonus	4470799	h no 102	20-JAN-77	M	punjab
2	22-FEB-80	4	rizwan	yonus	4470799	h no 102	20-JAN-77	M	punjab
3	20-FEB-90	6	rizwan	yonus	4470799	h no 102	20-JAN-77	M	punjab
4	12-JAN-86	4	rizwan	yonus	4470799	h no 102	20-JAN-77	M	punjab
5	20-MAR-90	6	irfan	munir	776676	h#211	24-JUL-79	M	punjab
6	11-SEP-89	5	bilal	jawai d	876786	h#121	23-JUL-79	M	punjab
7	10-APR-95	3	Misbah	Ahmed	541088	h#106 6	12-SEP-84	F	punjab
8	12-JAN-90	6	Misbah	Ahmed	541088	h#106 6	12-SEP-84	F	punjab
10			irfan	munir	776676	h#211	24-JUL-79	M	punjab
11		6th	Misbah	Ahmed	541088	h#106 6	12-SEP-84	F	punjab
12			irfan	munir	776676	h#211	24-JUL-79	M	punjab
13	14-MAY-98	9th	aamir	mahmo	22111	4 a	12-JAN-82	M	punjab
14	11-DEC-76	4	Misba h	Ahmed	541088	h#106 6	12-SEP-84	F	punjab

File   Edit   View   Help

Report Parameters

Enter values for the parameters

Date 1

Date 2
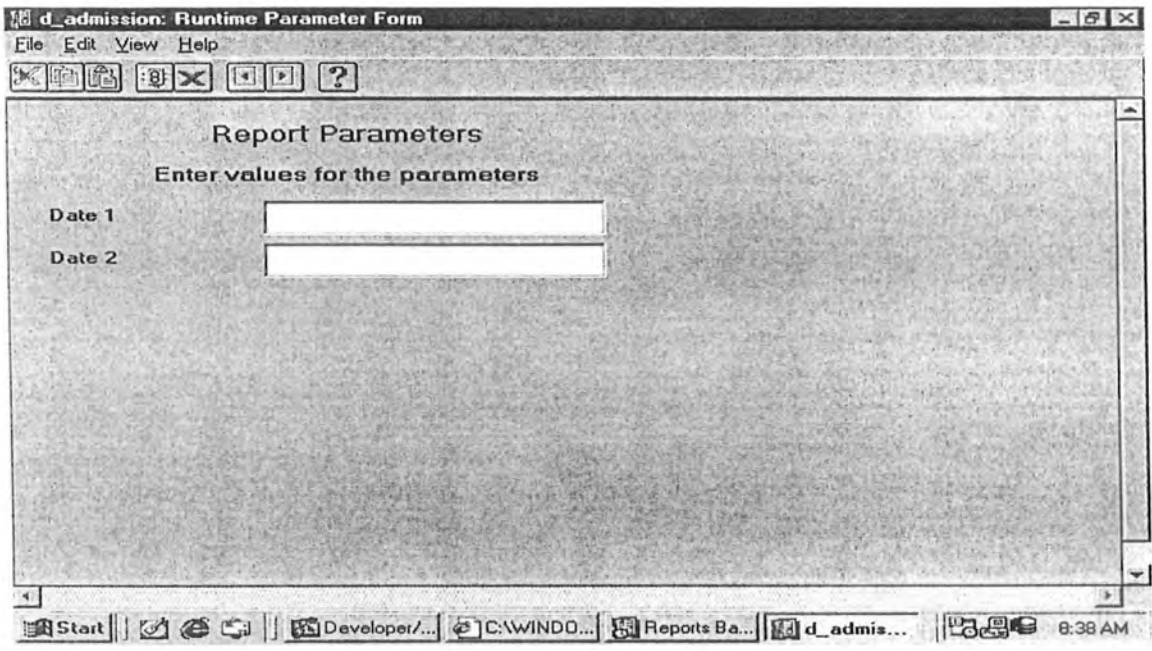
Students Report

Stu Id	Name	F Name	D O B	Gender	Province	Class Name
1	rizwan	yonus	20-JAN-77	M	punjab	2
2	irfan	munir	24-JUL-79	M	punjab	2
3	bilal	jawaid	23-JUL-79	M	punjab	2
4	Misbah	Ahmed	12-SEP-84	F	punjab	2
5	ahmed	bilal	12-FEB-79	M	punjab	2
6	jdfdsk	sdjfk	01-FEB-72	M	punjab	2
7	sdjffj	uieru	01-FEB-72	M	punjab	2
8	dsaffsadf	rerwe	12-MAR-71	M	punjab	2
9	ffsad	fsdfsda	12-JAN-65	M	werwe	2
10	zia	abid	12-FEB-81	M	punjab	2
11	aamir	mahmood	12-JAN-82	M	punjab	2
12	aamir	sajid	20-FEB-00	M	punjab	2
13	abid	aamir	20-MAR-00	M	punjab	2
14	abc	ddd	20-MAR-00	M	nwfp	2
1	rizwan	yonus	20-JAN-77	M	punjab	1
2	irfan	munir	24-JUL-79	M	punjab	1
3	bilal	jawaid	23-JUL-79	M	punjab	1
4	Misbah	Ahmed	12-SEP-84	F	punjab	1
5	ahmed	bilal	12-FEB-79	M	punjab	1
6	jdfdsk	sdjfk	01-FEB-72	M	punjab	1
7	sdjffj	uieru	01-FEB-72	M	punjab	1
8	dsaffsadf	rerwe	12-MAR-71	M	punjab	1
9	ffsad	fsdfsda	12-JAN-65	M	werwe	1
10	zia	abid	12-FEB-81	M	punjab	1
11	aamir	mahmood	12-JAN-82	M	punjab	1
12	aamir	sajid	20-FEB-00	M	punjab	1
13	abid	aamir	20-MAR-00	M	punjab	1
14	abc	ddd	20-MAR-00	M	nwfp	1
1	rizwan	yonus	20-JAN-77	M	punjab	2
2	irfan	munir	24-JUL-79	M	punjab	2
3	bilal	jawaid	23-JUL-79	M	punjab	2
4	Misbah	Ahmed	12-SEP-84	F	punjab	2
5	ahmed	bilal	12-FEB-79	M	punjab	2
6	jdfdsk	sdjfk	01-FEB-72	M	punjab	2
7	sdjffj	uieru	01-FEB-72	M	punjab	2
8	dsaffsadf	rerwe	12-MAR-71	M	punjab	2
9	ffsad	fsdfsda	12-JAN-65	M	werwe	2
10	zia	abid	12-FEB-81	M	punjab	2
11	aamir	mahmood	12-JAN-82	M	punjab	2
12	aamir	sajid	20-FEB-00	M	punjab	2
13	abid	aamir	20-MAR-00	M	punjab	2
14	abc	ddd	20-MAR-00	M	nwfp	2
1	rizwan	yonus	20-JAN-77	M	punjab	3

Subject Report

Name	D O B	Gender	Sub Id	Sub Name
rizwan	20-JAN-77	M	1	english
irfan	24-JUL-79	M	1	english
bilal	23-JUL-79	M	1	english
Misbah	12-SEP-84	F	1	english
ahmed	12-FEB-79	M	1	english
jdfdsk	01-FEB-72	M	1	english
sdjffj	01-FEB-72	M	1	english
dsaffsadf	12-MAR-71	M	1	english
ffsad	12-JAN-65	M	1	english
zia	12-FEB-81	M	1	english
aamir	12-JAN-82	M	1	english
aamir	20-FEB-00	M	1	english
abid	20-MAR-00	M	1	english
abc	20-MAR-00	M	1	english
rizwan	20-JAN-77	M	2	physics
irfan	24-JUL-79	M	2	physics
bilal	23-JUL-79	M	2	physics
Misbah	12-SEP-84	F	2	physics
ahmed	12-FEB-79	M	2	physics
jdfdsk	01-FEB-72	M	2	physics
sdjffj	01-FEB-72	M	2	physics
dsaffsadf	12-MAR-71	M	2	physics
ffsad	12-JAN-65	M	2	physics
zia	12-FEB-81	M	2	physics
aamir	12-JAN-82	M	2	physics
aamir	20-FEB-00	M	2	physics
abid	20-MAR-00	M	2	physics
abc	20-MAR-00	M	2	physics
rizwan	20-JAN-77	M	3	biology
irfan	24-JUL-79	M	3	biology
bilal	23-JUL-79	M	3	biology
Misbah	12-SEP-84	F	3	biology
ahmed	12-FEB-79	M	3	biology
jdfdsk	01-FEB-72	M	3	biology
sdjffj	01-FEB-72	M	3	biology
dsaffsadf	12-MAR-71	M	3	biology
ffsad	12-JAN-65	M	3	biology
zia	12-FEB-81	M	3	biology
aamir	12-JAN-82	M	3	biology
aamir	20-FEB-00	M	3	biology
abid	20-MAR-00	M	3	biology
abc	20-MAR-00	M	3	biology
rizwan	20-JAN-77	M	4	ddd
irfan	24-JUL-79	M	4	ddd
bilal	23-JUL-79	M	4	ddd
Misbah	12-SEP-84	F	4	ddd
ahmed	12-FEB-79	M	4	ddd

Marks Report

Class Name	Class Level	Sub Name	Tot Marks	Name	D O B	Gender
2	Primary	english	150	rizwan	20-JAN-77	M
1	Primary	english	150	rizwan	20-JAN-77	M
2	Primary	english	150	rizwan	20-JAN-77	M
3	Primary	english	150	rizwan	20-JAN-77	M
4	Primary	english	150	rizwan	20-JAN-77	M
5	Primary	english	150	rizwan	20-JAN-77	M
6	Secondary	english	150	rizwan	20-JAN-77	M
7	Secondary	english	150	rizwan	20-JAN-77	M
8	Secondary	english	150	rizwan	20-JAN-77	M
9	Matric	english	150	rizwan	20-JAN-77	M
10	Matric	english	150	rizwan	20-JAN-77	M
2	Primary	english	150	irfan	24-JUL-79	M
1	Primary	english	150	irfan	24-JUL-79	M
2	Primary	english	150	irfan	24-JUL-79	M
3	Primary	english	150	irfan	24-JUL-79	M
4	Primary	english	150	irfan	24-JUL-79	M
5	Primary	english	150	irfan	24-JUL-79	M
6	Secondary	english	150	irfan	24-JUL-79	M
7	Secondary	english	150	irfan	24-JUL-79	M
8	Secondary	english	150	irfan	24-JUL-79	M
9	Matric	english	150	irfan	24-JUL-79	M
10	Matric	english	150	irfan	24-JUL-79	M
2	Primary	english	150	bilal	23-JUL-79	M
1	Primary	english	150	bilal	23-JUL-79	M
2	Primary	english	150	bilal	23-JUL-79	M
3	Primary	english	150	bilal	23-JUL-79	M
4	Primary	english	150	bilal	23-JUL-79	M
5	Primary	english	150	bilal	23-JUL-79	M
6	Secondary	english	150	bilal	23-JUL-79	M
7	Secondary	english	150	bilal	23-JUL-79	M
8	Secondary	english	150	bilal	23-JUL-79	M
9	Matric	english	150	bilal	23-JUL-79	M
10	Matric	english	150	bilal	23-JUL-79	M
2	Primary	english	150	Misbah	12-SEP-84	F
1	Primary	english	150	Misbah	12-SEP-84	F
2	Primary	english	150	Misbah	12-SEP-84	F
3	Primary	english	150	Misbah	12-SEP-84	F
4	Primary	english	150	Misbah	12-SEP-84	F
5	Primary	english	150	Misbah	12-SEP-84	F
6	Secondary	english	150	Misbah	12-SEP-84	F
7	Secondary	english	150	Misbah	12-SEP-84	F
8	Secondary	english	150	Misbah	12-SEP-84	F
9	Matric	english	150	Misbah	12-SEP-84	F
10	Matric	english	150	Misbah	12-SEP-84	F
2	Primary	english	150	ahmed	12-FEB-79	M
1	Primary	english	150	ahmed	12-FEB-79	M
2	Primary	english	150	ahmed	12-FEB-79	M

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Ivan Bayross, commercial application development using Oracle / Developer 2000 BPB publication new Delhi.

2. Ivan Bayross, Oracle 7 the complete reference BPB publications, New Delhi.

3. Edward Whalen, Oracle performance tuning and optimization tech-media, New Delhi.

4. Oracle form 5.0 (course note), Ora-tec system (Pvt) Ltd Karachi.

5. Introduction to Oracle Sql Plus and Pl/Sql (course note) Ora-tec system (Pvt) Ltd Karachi.

6. Oracle 7 introduction to Oracle tools (SQL Plus) Ora-tec system (Pvt) Ltd Karachi.

7. Elias M Award (1997) system analysis and design, Gloria publication Pvt Ltd New Delhi.

8. C.J Date. An introduction to database systems Addison – Wesley publishing New York.

9. Scott Urman Oracle PL/SQL programming Osborne Mc Graw Hill.