SCHOOL INFORMATION SYSTEM

DATABASE

PROJECT REPORT

BY:

TAHIR MEHMOOD MALIK

COMPUTER CENTER

QUAID-E-AZAM UNIVERSITY

ISLAMABAD

JULY 2003.

FINAL APPROVAL

It is certified that we have read the report submitted by Tahir Mehmood Malik it is our judgment that this report is sufficient standard to warrant its acceptance by the Quaid-e-Azam University Islamabad, for the award of Post Graduate Diploma In Computer Science.

COMMITTEE

1- EXTERNAL EXAMINER: _____

2- SUPERVISOR:
Mr. Abdul Subhan
Computer Center
Quaid-e-Azam University
Islamabad _____

3- DIRECTOR:
Mr. Nazin ud Deen
Computer Center
Quaid-e-Azam University
Islamabad _____

DEDICATION

DEDICATED TO OUR RESPECTABLE
PARENTS
AND
TEACHERS

ACKNOWLEDGEMENT

First of all I am very grateful to Almighty ALLAH, who help me to complete this project successfully. I am highly obliged to my beloved supervisor Mr.ABDUL SUBHAN, who has provided his invaluable time and take keen interest throughout project and supported morally during my entire academic carrier in computer.

I am also thankful to my family members who always gave me courage and share my problems. I am also very thankful to my friends KHALID MEHMOOD , SHAKEEL AHMAD,QURBAN ALI AND SAFEER AKHTER that gave me their guidelines and helped me.

PREFACE

This project report is concerned with introduction, analysis, design and implementation of computerized setup of a school system. This system has eight chapters.

First chapter is about the background of the school. Second chapter consists of introduction to the system.

Third chapter is about the detailed study of existing system. fourth chapter tells us problems of existing system. It also explains the scope objective and alternatives.

Fifth chapter tells the feature of new system. Sixth chapter is about feasibility study of the system. Seventh chapter is about design of new system.

Eighth chapter is about implementation, user interfaces and some design of reports.

TITLE
SCHOOL INFORMATION SYSTEM
ABSTRACT

This report relates to the school information system of F.G PUBLIC SCHOOL, WAH CANTT. The aim was to study the whole present system running, finding out the problems and handling those problems with effective way. The system was designed to accommodate both users and the persons relating to them more efficiently and user friendly. For this purpose oracle was used as application software for database to keep the record of the students, teachers, and expenditures etc. the report gives complete understanding of the system with interfaces to facilitate users to implement it and use it in the manner.

INDEX

BACKGROUND
&
INTRODUCTION

1-BACKGROUND:

F. G public school WAH cantt is a welknown school. It was found in 1973 when WAH cantt was established in the same year. It is under command of regional commanding officer of WAH region. It is facilitating over 2050 students in this industrial area to provide quality education with devotion and hard work. There are 50 teachers in all and number of other staff is 10. The school is known for discipline and quality education. A principal heads the school system. The student's record and employee's record is presently in the form of paper files and registers. If we want to retrieve data for a particular student or employee, it's very difficult to find out in time and correct due to manual mistakes and less paper life period. There was a need for a comprehensive and easy system that is either reliable or secure to manage the database efficiently.

2-INTRODUCTION:

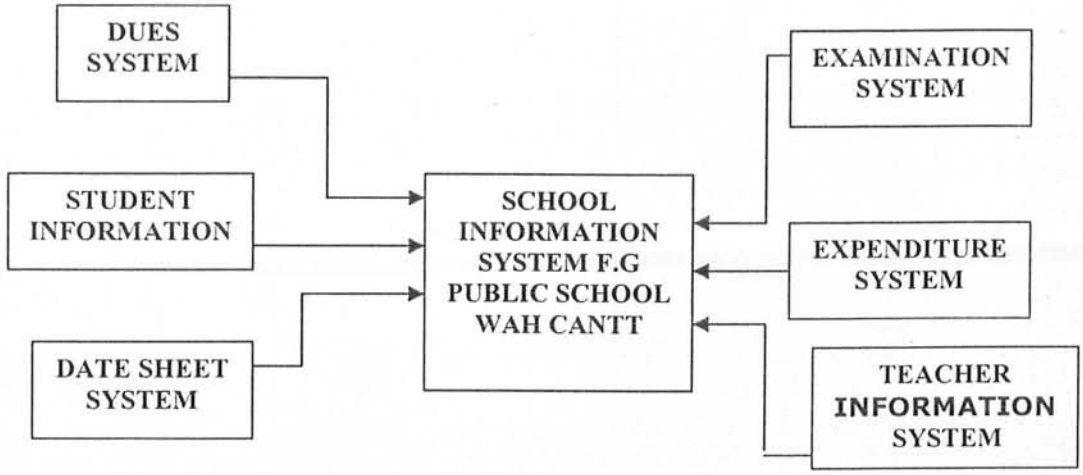
This project has been started to keep the registration system of the students in our school updated and free of all kinds of problems. We are preparing a computerized system for registration where every new student is registered with complete bio data and can be traced by using his registration no, His name or by the class in which he is studying at the moment. This system will decrease the unnecessary burden for the clerical staff; teachers and the administration as well as it will increase the efficiency of the system.

The advantages to use the computerized information systems are:

1- Secure (due to password locking)
2- Reliable (can handle records for years)
3- Efficient (less time to retrieve records)
4- Easy to use (with user friendly environment)

The school information system is divided in to sub sections that are mentioned below.

1- Student information
2- Teacher information
3- Dues information
4- Expenditure system
5- Date sheet



2.1-Student information system:

This system is responsible for keeping record of the students currently enrolled in the school. The record provides the information about name, enrollment no, father's name, age, form B number, date of birth, place of birth, class, section, extra activities, sports, father's occupation. This system is effective for both new students and existing students. The reason behind this is that the number of students is comparatively less than that of school situated in a big congested city.

2.1.1-Result:

This is further a subsection in student's information system. The result is compiled separately for each student and it is a headache in present system while doing it manually and delivering it out in time. The present result system provides very easy data entry and retrieval and will help to provide up to date records every time entered. The attributes of the result section are student's name, father's name, registration number, class code, and section code, roll number, term code (first, mid, finals), subject code, marks obtained and total marks.

2.2- Teacher information system:

This sub system is responsible for keeping record of the teachers currently teaching in the school. Teacher's name, NIC number, service number, address, domicile, father's name, type (employee type), qualification and age are the key attributes of this data base system. This section covers both employees and teachers record. As the number of other staff is very much less and can be accommodate in this section.

2.3- Dues system:

This section gives the information relating to dues paid by the students every month. The dues are divided into 2 parts, fee and funds. Fund is kept with the school whereas the fee is submitted to government account later on. Fee has following attributes: student's name, registration number, class, section, type of fee and fee. Fund has the same attributes like fee except of fee, the field is related to fund and type of fund.

2.4- Expenditure system:

The expenditure is used for the general payments other then student's fee and funds. There are two types of expenditures.

1- Regular expenditures:

Used for monthly utility bills and other regular expenses.

2- Irregular expenditures:

Used for maintenance of building and other expenses with are not regular.

The attributes of this system for regular expenditure are type of expenditure, amount, due date, payment date, billing month, bill no, bill code (defines the type of bill like electricity, natural gas etc) and for irregular expenditures the attributes are maintenance number, code, item code, month code, payment date and receipt number.

2.5- Date sheet:

The date sheet is essential part of the school system and it is very difficult to manage it, although it has been used very often in an academic year. It has the following attributes: paper number, class code, subject code, date code, day code and room number.

DETAILED STUDY OF EXISTING SYSTEM

3- Detailed study of existing system:

The existing system is manually all over. From admission to result every thing is in the form of files and folders placed in cupboards.

3.1-Registration and admission process:

When a new applicant for a certain class arrives, the application form is given to him and filled forms are filed in a separate folder. Then test is conducted and new students are selected after checking the test papers, the successful candidates are informed and the new students are assigned the registration number and class, section. The data is kept in another record folder. This folder has the admission forms of all students currently studying in the school. In future if the staff require the record of any student, the record is found from that folder.

3.2- dues structure:

There is another folder that contains the dues record. The record is in the form of receipts and fee cards. The student gives the fee card and fee to the staff member, and staff member enters the record in the folder of that class for which the student belongs. A receipt is issued to the student and another duplicate receipt is kept in the record of the fees of the respective month. The record is entered in the fee card and returned to the student with student's copy of the receipt. If a student doesn't submit the fee in the time span of first 10 days of the month, the fine is charged and after 20 the admission is canceled. The readmission process runs and student pays the fine and readmitted in the respective class.

3.3- Timetable system:

The daily timetable is managed with the approval of principal and clashes between the teachers and classes are avoided by careful discussions. The record is kept in a separate folder with the description of all the classes and teachers. The timetable is divided in to periods and each period is 45 minutes each. 30 minutes break is managed after 5 periods. Name of every class with timetable containing 8 periods in week days and 5 periods at the weekend. Sunday is considered as off every week. The copies of time table are displayed at notice board and staff room for convenience of the teachers and students. The changes made are also displayed through an office order signed by principal and the record is kept in the respective folder. Another record is also kept in the same folder that is date sheet. Before 2 weeks of the exams, the date sheet is compiled by the vice principal and approved by the principal. Then the schedule for the papers is displayed on the notice board and a copy of date sheet of each class is delivered to the class teacher. Class teacher gives this schedule to the students by noting them down on their notebooks.
The date sheet for every class is saved in the folder and viewed if necessary.

3.4- Result process:

The papers are collected by the invigilators or teachers and submitted to the exam section headed by a controller at the day of paper. The papers are kept in lockers and then after delivered to the respective subject teacher. The teacher checks out the papers and make a list of the total marks and marks obtained of each student of the respective subject. The list and papers are submitted to the exam section again. And exam section makes the result cards and enters this data manually in the lists. These lists are kept in the folder. And viewed when the new classes starts and the passed students are allowed to register in new class. This database is also viewed on the

time of fee submission at the start of academic year to check whether the student has been passed or failed.

3.5- Staff record:

As this is a federal government school, there is no need to keep the record of the registration and employment process. The record of the teachers and other staff is kept in a separate folder. This record is generally used for salary issuance or in case of transfer of a certain teacher or staff member. When a new staff member is posted in the school, his service number and date of appointment with joining date is kept in the folder maintained by clerical staff. This record is again used when a teacher leaves the school and appointed to another school.

3.5- Expenditure system:

The expenditures are managed again manually. A folder is allocated for expenditures. All regular, irregular expenditures are kept in this folder. The collected bills are stapled in the folder and other expenditures containing receipts are also kept in the folder. A list is made for the expenditures during a month and sent to regional office for approval of dues.

PROBLEM WITH EXISTING SYSTEM

4- Problems with existing system:

There are many problems in the current system. The main problem is the time consumption of a record to be searched out from so many files and folders placed in the same room. This results in less efficiency and trouble for staff during searching of the records. The problems in the form of list are:

1- The overall process is manual so it is creating a lot of problems with great time consumption.

2- The students who have left the school cannot get the proper timely adequate response for their required process from the system.

3- Present students when pass a certain class, their record is not updated as it is manual system.

4- There is no guarantee for this manual record to be kept for years.

Under these circumstances, we have generalized the problems in terms of categories and scope.

1- The system is not efficient, as it is not fulfilling the requirements of all the people related to it directly or indirectly.

2- It is not updated because if a student got admission in class-1, the present registration process is unable to update each student's information.

3- The system is not free of errors.

4- It certainly not satisfies the requirements of officials that are using it yet.

4.1- Scope of the project:

1- To minimize the errors.

2- To create a new database for school information system.

3- To train the staff for new system.

4- A reliable secure system with check n balance.

5- To update system database after every session.

6- To satisfy end user.

4.2- Objectives of proposed system:

Main objectives of our new system are:

1- To keep records of each student correct and up to date.

2- Correct registration of records in a sequence for board examination.

3- To minimize the risks of loss of information and the cheating in providing the records.

4- To minimize the unnecessary burden over the teaching and clerical staff.

5- To maximize the efficiency in public dealing and student's beneficial.

4.3 Alternatives:

After studying the problem, following suggestions are considered to solve out problem.

1- In order to keep the record correct and free of mistakes, one of the staff members should engaged all the time to keep every information regarding the records and provide information when and where required.

2- In the present system, student's age and present class is not mentioned in registration. So the other alternative is that we should computerize all the records and new entries should be made only when a student enters or leaves the school.

3- Our third alternative is that the computer should know all updated information about a particular student from the time of registration to his admission and then to leave the school. Changes should be made in records at the end of each academic session.

4.4- Selected alternative:

Our first alternative is manual handling of records that is not efficient. The second alternative is not updated and efficient although it is simple. It doesn't provide complete information about a student. The third alternative needs changes about age and class of student after each academic session and this makes it more efficient and up to date. This alternative can be used up to high-level classes. So the third alternative is better to adopt. It is also with in out resources.

FEATURES OF THE NEW SYSTEM

5-Features of the new system:

5.1- Menu based system:

Our proposed system will be menu based. A main menu will guide the user through the system containing buttons for selecting the specific section. Every sub section has a menu too for other forms related to it.

5.2- Input specifications:

The use of keys is average. Selecting an option and then filling the data through keyboard will fill most of the entries.

5.3- Output specifications:

Reports are used to print the selected data on paper and queries to be displayed on the screen.

5.4- Queries:

Queries are the standard that retrieves the data on the screen and manipulate it when required. One major purpose of establishing a database is to retrieve information quickly and efficiently.

5.5- User Interface:

To make user interface easy and beautiful, options are used for the user to select an option and fill in the record in the respective form.

5.6- Flexibility:

The system will be flexible enough to implement in any other school or make minor changes with the passage of time to enhance the functionality.

FEASABILITY STUDY

6- Feasibility study:

After studying the whole system's functionality and proposing a new suitable system, our analyst team has conducted a feasibility study and made a report to check or uncheck the alternative's requirements that is proposed for new system.

There were 3 types of feasibility study conducted:

1- Operational feasibility
2- Technical feasibility
3- Economical feasibility

6.1- Operational feasibility:

As our new system is a replacement for the previous one, so it shouldn't have those problems that were present in our previous system. The current system is really a headache for the administration. Our proposed system will be:

1- Efficient:

Because the whole process will be computerized and all the information will be present in the form of records in databases in a software (developer 2000/ oracle). This is the systematic way to represent the records. There will take minutes or seconds to retrieve or manipulate a record of a student and provide him his required information.

2- Updated:

After completing every session, the records of students such as age and class will be updated by the system. So it will provide an updated record all the time.

3- Correct and error free:

The manual system is not accurate and bug free but our proposed system is computerized and it has fewer chances of errors.

4- Satisfaction:

The staff will be satisfied due to easy access of records and their manipulation. And they will concentrate more on their work.

5- Secure:

The clerical staff will have a user id and password to enter and access the system. Also there will be a direct link to principal's computer, which will have the original records. So the new system will be secure.

6.2- Technical feasibility:

In technical feasibility study, we work out the technical perspectives of the new system. The present system has no technical side. We conducted this study and divided it into 2 categories.

1- Software requirements
2- Hardware requirements

6.2.1- Software requirements:

In terms of third alternative chosen, we have suggested the following software components.

1- Developer 2000/ oracle.
(For keeping records and office use)
2- Windows 2000 or Windows XP professional.

Now after selecting the adequate software we have to make a database for keeping records. As we are concerned to student's record, teacher's, expenditures, date sheet, timetable, and dues records. The attributes of new database are explained in introduction section of this report.

Now question arises why we have chosen the oracle for our new system?

6.2.2 Features of oracle:

Oracle 7 is RDBMS (Relational database management systems). It provides a lot of features that are not present in other database soft wares.

a) Security:

Oracle allows controlled access to the database. It protects data and files related to it from unauthorized access. The database is divided in to files and table spaces. The user is unaware to the backend processing and in depth processing of data blocks.

b) Portability:

Oracle can run on any hardware machines. It is not vendor specific. But the software is available separately for every operating system available in the market. For example, for windows and for Linux, the oracle is different due to difference in the structure of both operation systems. So we have chosen the version specific for windows.

c) Built in functionality:

Oracle provides the built in functionality with a great variety. By selecting any 2 options, user can make any of the database fields and corresponding information will be appeared on the screen like average, sum, multiply etc. single as well as multi user environment

which allows user to share existing programs and data frequently and efficiently.

6.2.3 What is RDBMS?

The oracle 7 is RDBMS system. The relational database management system is a high performance database management system. Specially designed for online help, transaction, processing, and database application. The data is mostly manipulated in SQL language, which is considered to be the heart of the rdbms. Its popularity is due to its ease of use, flexibility and capability. The SQL language is divided in to 4 categories.

a) Queries:

Queries are statements that retrieve the information on screen.

b) DML (Data Manipulation language):

Used for insert, delete and update statements.

c) DDL (Data Definition Language):

Which are defined, maintain and drop statements database objects, which are no longer needed including tables.

d) DCL (Data Control Language):

Used for access to the database as well as data.

6.2.4- Hardware requirements:

To perform all the automated actions, we need some hardware. We have suggested.

1- Pentium-4 (1 machine)
With 2.1 GHz Intel processor
256 MB Ram
60 GB Hard drive

2- HP Laser jet colored printer (1)

The above hard ware is available in the market and we don't need to import it from abroad.

6.3- Economical feasibility study:

With reference to our technical requirements we need some cost to implement and to run our new system. We have conducted 3 types of analysis in this feasibility study:

1- Cost benefit analysis
2- Break-even analysis
3- Pay back analysis

6.3.1- Cost benefits analysis:

In this analysis we analyzed the correct expenditure on right way to implement and what will its after effects on the system. For example: why we choose a printer for school office? Because this will make system efficient by providing the documents to students which they desire to get from the school registration office. So the work will be done very easily.

6.3.2- Break-even analysis:

In this analysis we analyzed, whether development cost of new system is greater, equal to or less then operational cost of older system. The answer is, it is greater then the operational cost of older one. As the current replaceable system is manual so it is only costing the stationary charges plus cupboards, files and folders etc.
But new system will be a computerized system that will cost much then current system.

6.3.3- Payback analysis:

The result of this analysis shows that as this is a government school, so there is no concept of reward in terms of money after implementing the new system. But in the long run, the school will get fame due to its better administration process and good system out put.

After analyzing the above economical issues we divide the cost in to 2 parts.

a)- Development cost of new system
(One time)
b)- Operational cost of new system
(Per month)

a)- Development cost:

The development cost is for once only and it will help to build the new system. The cost involved to purchase the equipment from the market is

Cost:

Item name:	Price:
Pentium 4	Rs 38,000 each
HP Laser jet printer	Rs 15,000
Windows XP or 2000 Plus office XP	Rs 1000
Installation charges	Rs 5,000
Training	Rs 10,000
Total	Rs 107,000

b)- Operational cost:

This cost will be used to run the new system. The necessities are energy in the form of light. So its cost is negligible. Other cost is involved for printing material like papers and cartridge for printer. It is also negligible and will be adjusted in the current system's stationary charges.

Other perspectives:

We also look at the things that can increase the efficiency and productivity of the system. In this regard we proposed friendly environment for work in office and there should be a shelter for students and general public out side the registration office. In the office, students and other irrelevant persons will not be allowed to enter and check the records by them selves. There will be some rules and regulations made for easy access of records. The fresh air and fresh colorful environment with flowers, bright lights, easy chairs etc will be provided to the staff to increase the productivity of the system. These psychological and physiological effects will make the system more efficient.

DESIGN OF THE NEW SYSTEM

7- DESIGN OF THE NEW SYSTEM:

Designing a system is just like to invent a new thing for the end user that is looking for easy to use and efficient processing of the new system. Our main goal was to think from an eye of the user, what he wants in his office and in which manner it would be easy for him to enter and retrieve the data. Planning a new system is very important in terms of present requirements and future prospects. The school information system has been planned in such a way to facilitate every one relate to it. Designing needs charts, figures and details to build a building without flaws and errors. This results in more structured and planned system which will be helpful for the users.

Following techniques are used for designing

1- input design
2- output design
3- database design

7.1- Input design:

Input is the information that is required from the user for further processing by the system. Input design is more important for any computerized system because there is a lot of information to be entered. correct input design gives convenience to the user in entering data and restricting incorrect information to form input design very carefully.

Input design can be made efficient by following steps.

7.1.1- Input Forms:

Forms are the most commonly used dialogues for data entry. Various input forms have been assigned for correct information in to the database. Data can be retrieved, displayed and manipulated using the same form. The forms should be user friendly

7.1.2- Code Design:

the data input to a computer eventually has to be retrieved to reduce redundancy and make data entry pneumonic coding scheme has been adopted. This is not only preserves the disk space but also decrease the probability for entering incorrect data.

7.1.3- Fixed lists:

While designing the forms, it is kept in mind that user would have to enter minimum number of entries for this purpose, list of all possible value are provided in most entries, user can select any value form the list.

7.1.4- Validation checks:

To assist the user to enter the correct values, different types of validation checks are implemented. Due to this, user can not proceed further until he enters the correct information.

7.2- Output design:

The user is more concerned with the result and screen format, rather then the design and working of the system. So the input is in the form of forms and output is in the form of reports and queries.

There are 2 types of output design:

1- Screen output (Queries)
2- Printed output (Reports)

7.2.1- Screen output (Queries):

Queries are the statements that retrieve information in any combination or order. In screen output, the output is displayed on the screen in the response of a query. User enters a query based on certain input criteria and its output is displayed. This output should be precise, appropriate and effective.

7.2.2- Printed output (Reports):

Report is also a form of query, the only thing that is different is that it is in the printed form. The reports of proposed system are designed; they are simple, meaningful and informative.

Following reports are produced by the system.

- List of topics included in the system
- List of topic and only questions included in the system.

7.3- Data base design:

Logical data base design is related to the table spaces and a user-defined table that is then stored in the data files physically later by the oracle software by itself. But the initial design is not referred to the tables, it relates to the entities and attributes with their relationships.

7.3.1- ERDs:

The ERD (entity relationship diagram) is used for this purpose. It shows the main entities and their relationships by considering their attributes.

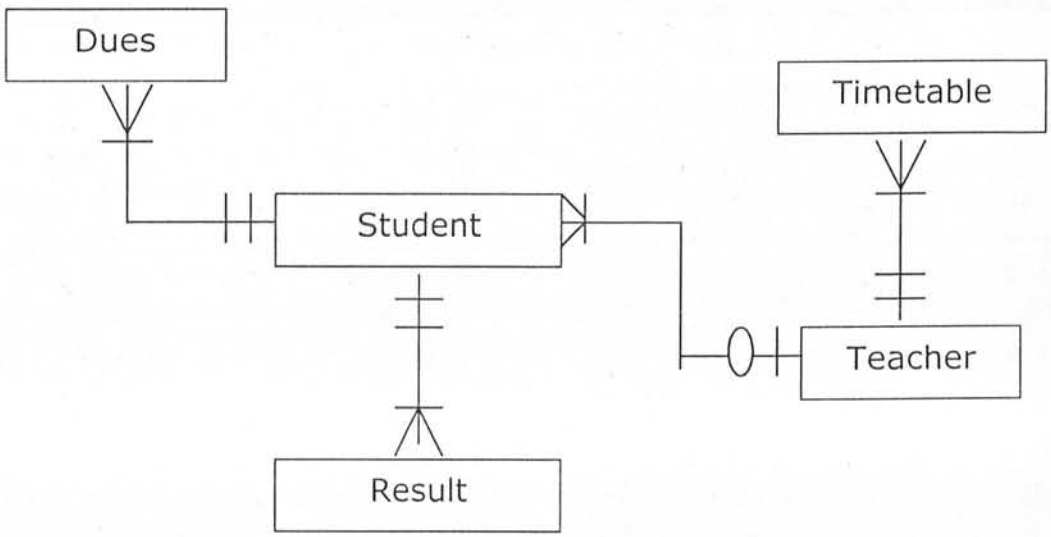
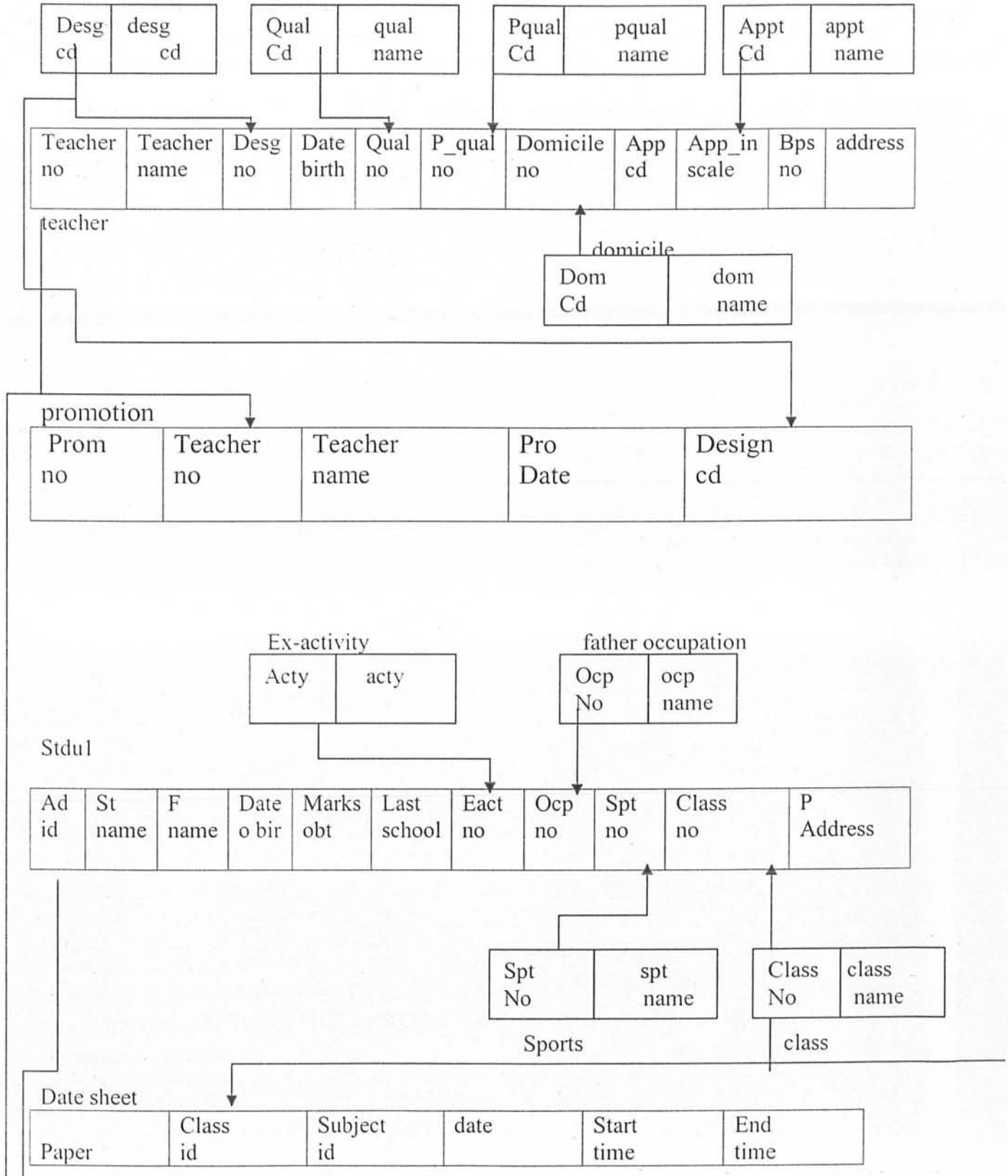
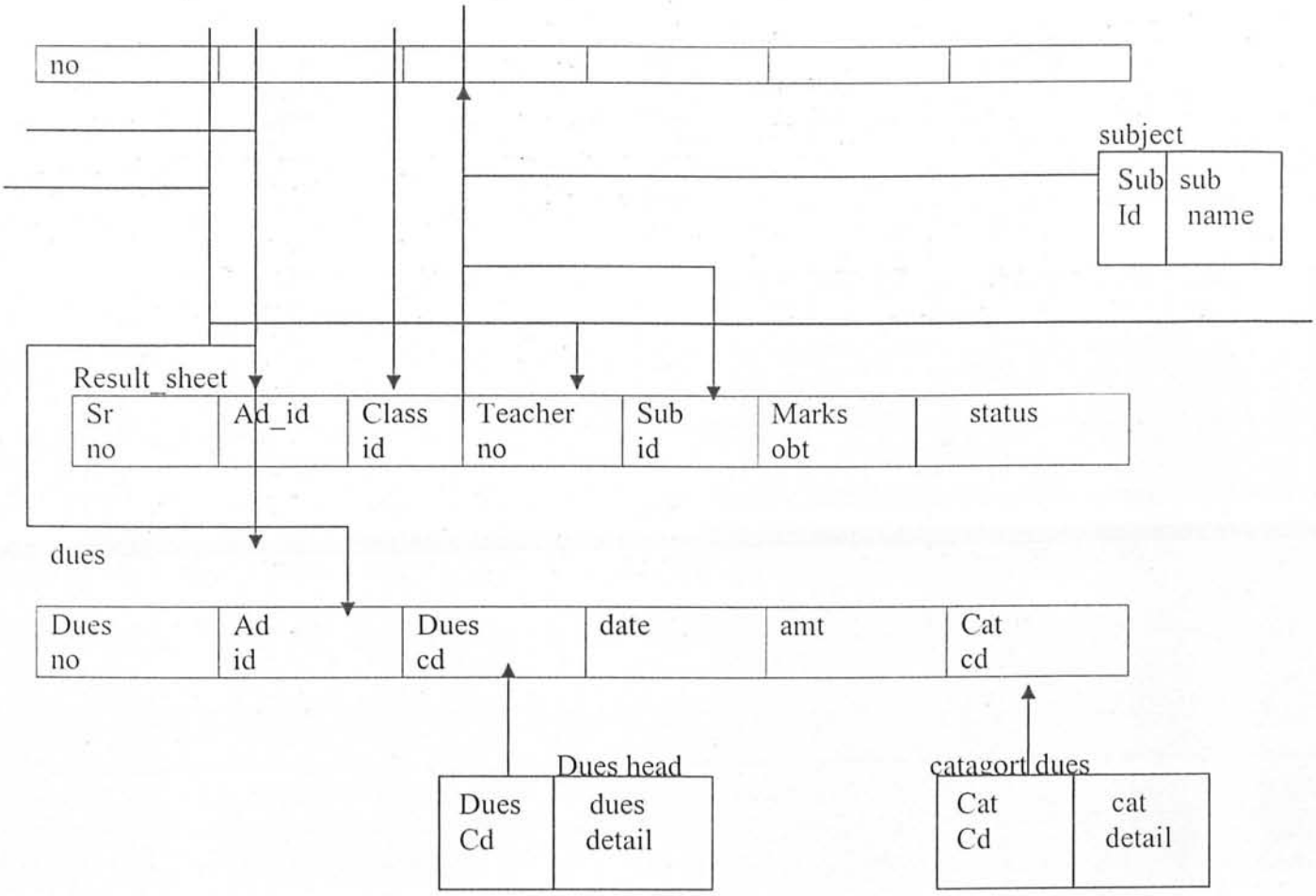


Figure 7.1 ERD OF SCHOOL INFORMATION SYSTEM

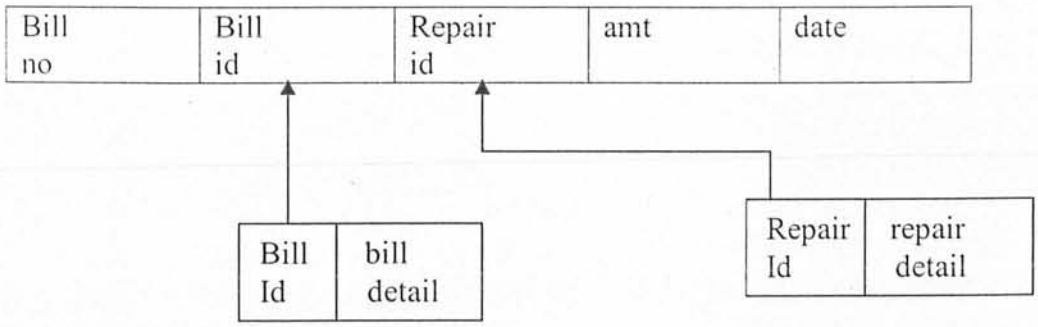
This ERD is subject to the important entities. There are many other entities that have the relationship with each other. These entities are defined on the next page.

BATCH MAN CHART


Desg cd
desg cd
Qual Cd
qual name
Pqual Cd
pqual name
Appt Cd
appt name
Teacher no
Teacher name
Desg no
Date birth
Qual no
P_qual no
Domicile no
App cd
App_in scale
Bps no
address
teacher
domicile
Dom Cd
dom name
promotion
Prom no
Teacher no
Teacher name
Pro Date
Design cd
Ex-activity
Acty
acty
father occupation
Ocp No
ocp name
Stdu1
Ad id
St name
F name
Date o bir
Marks obt
Last school
Eact no
Ocp no
Spt no
Class no
P Address
Spt No
spt name
Class No
class name
Sports
class
Date sheet
Paper
Class id
Subject id
date
Start time
End time



expenditure



7.3.2- Data tables:

After completion of ER diagram, we have to create the tables and their respective attributes. The data tables are used to store and retrieve information. Following data tables are used for the school information system. Their detail is given after the list.

1. BILLS
2. CATY_DUES
3. CLAS
4. DATE_SHEET
5. DESIGNATION
6. DOMICILED
7. DUES
8. DUES_HEAD
9. EACT
10. EXPENDITURE
11. F_OCP
12. LIST_TEACHERS
13. PROF_Q
14. PROMOTION
15. QUALIFICATION
16. REPAIR
17. RESULT_SHEET
18. SPORT
19. STUD1
20. SUBJECTS
21. TEACHER
22. TYPE_OF_APPT

7.3.2- Description of the tables:

The description of tables is given in detail in formatted form. Here is the description for each table.

TABLE BILLS

This table is used to store information about types BILLS

NAME	KEY	STATUS	DATA TYPE
BILL_ID	PRIMARY	NOT NUL	NUMBER (2)
BILL_NAME		NUL	CHAR (15)

TABLE CATY_DUES

This table is used to store information about types category of dues

NAME	KEY	STATUS	DATA TYPE
CAT_CD	PRIMARY	NOT NUL	NUMBER (2)
CAT_NAME		NUL	CHAR (15)

TABLE CLASS

This table is used to store information about class

NAME	KEY	STATUS	DATA TYPE
CLASS_NO	PRIMARY	NOT NUL	NUMBER (2)
CLASS_NAME		NUL	CHAR (12)

TABLE DATE _SHEET

This table store information about date sheet

NAME	KEY	STATUS	DATA TYPE
PAPER_NO		NUL	NUMBER (2)
CLASS_ID	FORIGN		NUMBER (2)
SUB_ID	FORIGN		NUMBER (2)
DATE_O_PAPER	FORIGN		DATE
START_TIME	FORIGN		CHAR (10)
END_TIME			CHAR (10)

TABLE DESIGNATION

This table tells us different names of designation

NAME	KEY	STATUS	DATA TYPE
DESG_CD **DESG_NAME**	PRIMARY	NOT NUL	NUMBER (2) CHAR (10)

TABLE DOMICILED

This table tells us different names domiciled

NAME	KEY	STATUS	DATA TYPE
DOM_CD **DOM_NAME**	PRIMARY	NOT NUL	NUMBER (2) CHAR (10)

TABLE EACT

This table store different activities of student

NAME	KEY	STATUS	DATA TYPE
ACTY_CD **ACTY_NAME**	PRIMARY	NOT NUL	NUMBER (2) CHAR (12)

TABLE F_ OCP

This table store different of different occupation

NAME	KEY	STATUS	DATA TYPE
OCP_NO **OCP_NAME**	PRIMARY	NOT NUL	NUMBER (2) CHAR (10)

TABLE DUES_HEAD

This table store name of different DUES paid by of student

NAME	KEY	STATUS	DATA TYPE
DUES_CD **DUES_NAME**	PRIMARY	NOT NUL	NUMBER (2) CHAR (20)

TABLE DUES

This table give information about dues deposited by student

NAME	KEY	STATUS	DATA TYPE
DUE_NO			NUMBER (2)
AD_ID	FORIGN		CHAR (10)
DUES_NO	FORIGN		NUMBER (2)
DUES_CAT			NUMBSR(2)
PAYMENT_DT	FORIGN		DATE
AMOUNT			NUMBER (3)
REMARKS			CHAR (10)

TABLE EXPENDITURE

It explains expenditure of different type

NAME	KEY	STATUS	DATA TYPE
BILL_NO			NUMBER (2)
BILL_ID	FORIEGN		NUMBER (2)
REPAIR_ID	FORIEGN		NUMBER (2)
REMARKS	FORIEGN		CHAR (10)
PAYMENT_DT			DATE
AMOUNT			NUMBER (10)

TABLE PROF_Q

This table gives information of professional qualification

NAME	KEY	STATUS	DATA TYPE
QUAL_CD	PRIMARY	NOT NULL	NUMBER (2)
QUAL_NAME			CHAR (10)

TABLE PROMOTION

This table gives information of promotion of different employee

NAME	KEY	STATUS	DATA TYPE
PROM_NO			NUMBER (1)
TEACHER_NO	FORIGN		NUMBER (5)
PROM_DATE			DATE
DESG_CD	FORIGN		NUMBER (2)

TABLE QUALIFICATION

This give information of name of different qualification

NAME	KEY	STATUS	DATA TYPE
QUAL_CD	PRIMARY	NOT NUL	NUMBER (2)
QUALL_NAME			CHAR (10)

TABLE LIST_TEACHERS

This give information of name of different qualification

NAME	KEY	STATUS	DATA TYPE
TEACHER_ID	PRIMARY	NOT NUL	NUMBER (2)
TEACHER_NAME			CHAR (20)

TABLE REPAIR

This table give information about different repairments

NAME	KEY	STATUS	DATA TYPE
REPAIR_ID	PRIMARY	NOT NUL	NUMBER (2)
REPAIR_NAME			CHAR (15)

TABLE RESULT_SHEET

This table informs us about the result of different student

NAME	KEY	STATUS	DATA TYPE
SR_NO		NOT NUL	NUMBER (2)
AD_ID	FORIGN		NUMBER (10)
CLASS_ID	FORIGN		NUMBER (2)
TEACHER_ID	FORIGN		NUMBER (2)
SUB_ID			NUMBER (4)
MARKS_OBT			NUMBER (10)
STATUS			

TABLE SPORT

This table tells about different sports of student

NAME	KEY	STATUS	DATA TYPE
SPT_NO	PRIMARY	NOT NUL	NUMBER (2)
SPT_NAME			CHAR (10)

TABLE STUD1

This table stores information about student

NAME	KEY	STATUS	DATA TYPE
AD_ID	PRIMARY	NOT NUL	NUMBER (10)
ST_NAME			CHAR (15)
F_NAME			CHAR (15)
D_O_BIR			date
MARKS_OBT	FOREIGN		NUMBER (2)
LST_SCH	FOREIGN		char (15)
PREST_ADDRES	FOREIGN		char (15)
	FOREIGN		NUMBER (2)
ACTY_NO	FOREIGN		NUMBER (2)
OCP_NO	FOREIGN		NUMBER (1)
SPT_NO			
CLASS_NO	FOREIGN		NUMBER (2)

TABLE SUBJECT

This table informs us about different subjects

NAME	KEY	STATUS	DATA TYPE
SUB_ID	PRIMARY	NOT NUL	NUMBER (2)
SUB_NAME			CHAR (10)

TABLE TYPE_OF_APPT

This table informs us about different type of appointments

NAME	KEY	STATUS	DATA TYPE
APPT_CD	PRIMARY	NOT NUL	NUMBER (2)
APPT_NAME			CHAR (10)

TABLE TEACHER

This table is about the timetable

NAME	KEY	STATUS	DATA TYPE
TEACHER_NO	PRIMARY	NOT NULL	NUMBER (2)
TEACHER_NAME			CHAR (20)
DESG_NO	FORIGN		NUMBER (2)
D_O_BIR			date
QUAL_NO	FORIGN		NUMBER (2)
PQUAL_NO	FORIGN		NUMBER (2)
DOMICILED_NO	FORIGN		NUMBER (1)
APPT_CD	FORIGN		NUMBER (2)
D_O_FG			Date
D_O_INTHIS_SCH			Date
SUBJECTS			CHAR(10)
ADDRESS			CHAR(25)

IMPLEMENTATION OF DESIGNED SYSTEM

8-Implementation of designed system:

Implementation is the major issue after designing the new system. In this phase, the problems and flaws can be identified and corrected before delivering system. This system may satisfy the user as a whole but the margin must be considered while making the interfaces, and menus. It is the final phase in system development of the software. The software designer must perform certain tests and look into possibilities of the user that is converting from the existing manual system into proposed computerized system.

After implementing the system, the designer evaluates the system for further enhancement and the suggestions. In this chapter various methods of system implementation, description testing and conversion techniques are described for the developed system. Then the system is evaluated according to the standards.

8.1- System implementation:

The developed system is put into operation in this phase. Implementation is the process of bringing into operational use.
The major parts of this phase are:

1- System testing
2- System conversion

8.1.1- System testing:

Testing is the process of executing a program with explicit intention of finding errors. Testing and validation is very important to make the system acceptable. Even if the system is developed using correct algorithm, its validity remains doubtful. A test case is used which consists of set of data that the system will process in order to determine whether the system will prove it correctly or not.

There are a number of techniques used for testing

1- Unit testing
2- Integrated testing
3- System testing

Unit testing:

In unit testing, different modules of software are tested implemental to locate errors. This helps in locating the error in coding and logic that one contained in particular module. The advantage of this testing is that if a module has errors, we can easily remove them, otherwise it will become difficult to locate errors while system is implemented.

Integration testing:

In this testing, combine testing of the modules is carried out. The purpose of this testing is to determine that all the modules are correctly interacting with each other. Also to ensure that correct forms are invoked by menu options as they are developed separately.

System testing:

Finally testing is done on the system level to ensure that it is working according to user requirements and desired specifications. Using actual data checks the size and structure of the data field, the main reason here is to determine the inconsistency in the developed system.

8.1.2- System conversion:

After completing the testing phase, the major phase is conversion. There are different methods of performing system conversion.

1- Pilot conversion
2- Direct conversion
3- Parallel conversion

Pilot conversion:

In this method the system is implemented on a particular area of the subject. Thus the system is implemented in parts, the remaining parts of the subject continue to work with the old system. This approach has the advantage of sound proving ground before implementation.

Direct conversion:

In this approach the old system is immediately replaced with the new one. There are no parallel activities. This method requires careful advance planning. In case of failure of new system, the whole existing system will be collapsed. This is a major drawback in this system.

Parallel conversion:

In parallel approach, old and new systems are in parallel operation. They operate side by side. The user continues to use the old system and simultaneously learn to operate the new system when the user is careful to new system replaced the old system. This is the safest approach, because in case of failure, the user may immediately turn back to the old system without any wastage of the time and data.

8.1.3- Proposed conversion:

After a thorough analysis of different approach used for the system conversion, parallel conversion is recommended for the implementation of the developed system.
This approach is selected because

- Parallel conversion is normally the safest and suitable conversion strategy.
- It minimizes the problems that many arise from system failure.
- If unfortunately system fails, data cannot be lost because old system will also be working.

- It provides the opportunity to compose the result of existing system with those of newly developed system.
- Although it is difficult to handle two system side by side. But it is the best method to judge the efficiency of designed system. Over the existing system in case of parallel conversion, old system is available as a backup, which will be useful if newly designed system fails.

8.2- User interfaces:

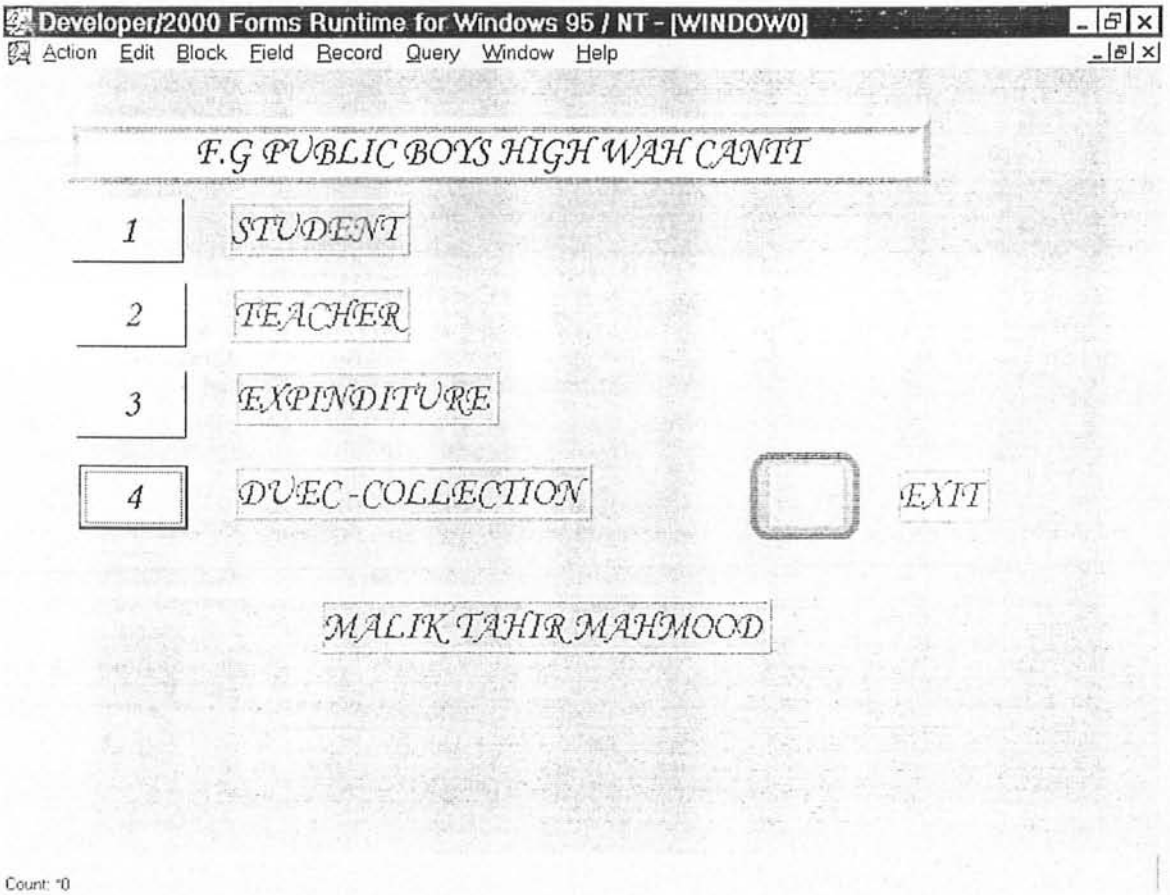
The system is menu driven and the specially designed toolbar along with the tool tips help the user to understand the interface easily. Proper error messages and small tips during the data entry are available at every phase where the user may feel difficulty. However to make the system work efficiently and without any ambiguity the user should read this carefully.

8.2.1- Initial setup:

After connecting all the devices, operating system will be installed. Then oracle software installation is next in the process. Developer/ 2000 installation is next with oracle. SQL query language is used for database creation and manipulation.

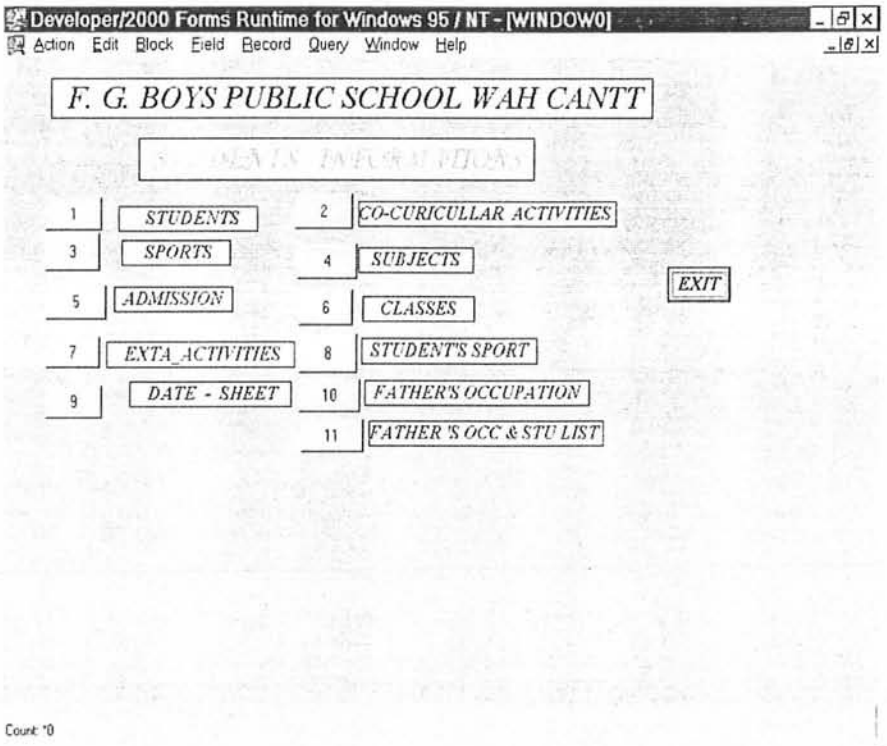
8.2.2- Starting the software:

By clicking the "main_swb" file the user will view the main menu containing 5 buttons for each subsection. The user will see the following menu:



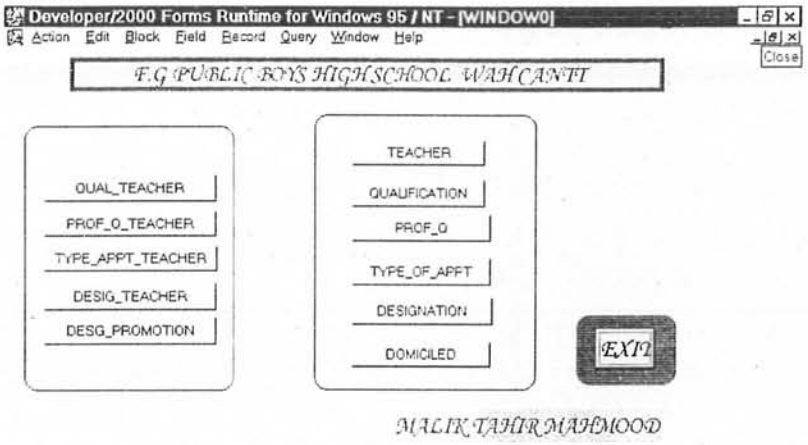
The menu has the clear options for the rest of the system that results in other menus and forms.

By clicking the first option of "student information", the user will see another menu which is containing menu relating to further subsections of this section. This section is used to add and delete the information about the students and to generate the reports about them.
The student information system has the following layout.

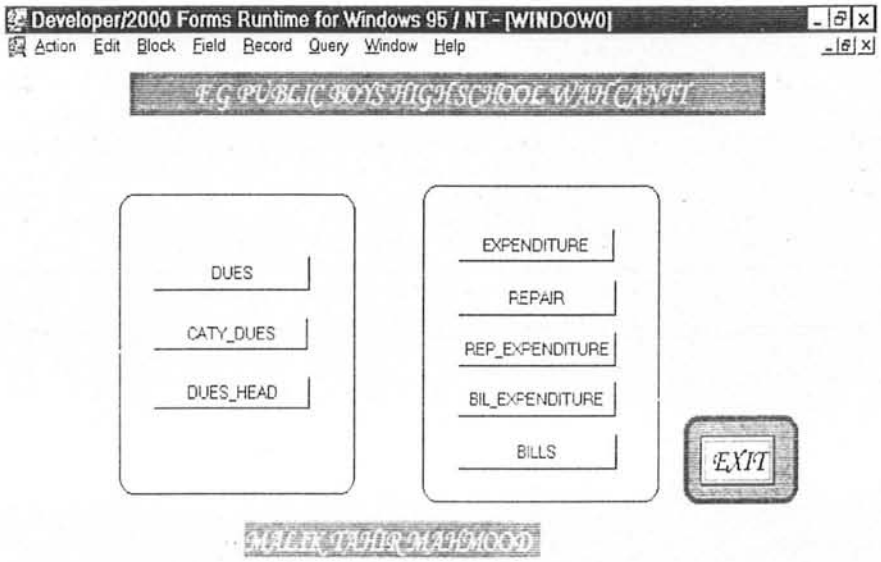


the menu contains the 12 options . Each option consists of a form and each form is designed for inserting and showing the information about the particular student.

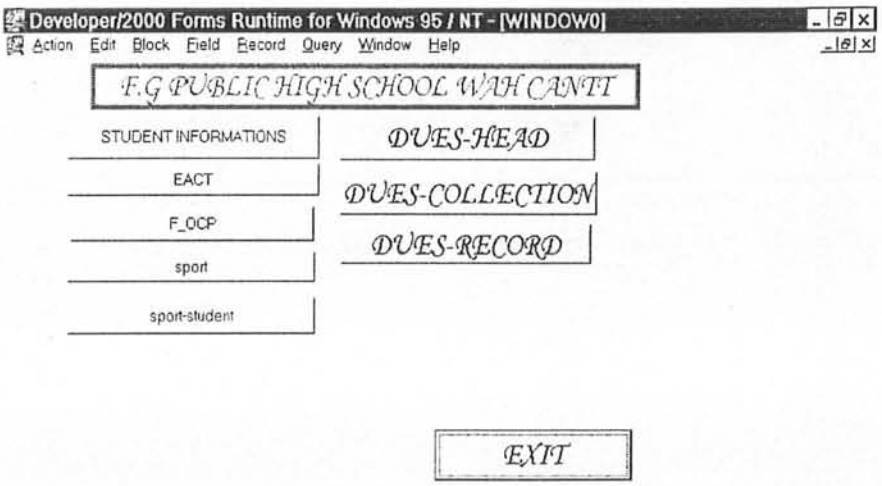
The 2nd button on the menu is about the teacher information system. The clicking on this button results in another submenu. Which has 12 button ,each button has separate information about teachers. Its lay out is as follows.



Now back on the main menu, the 3rd button is used for expenditure subsection. This has the forms and information regarding regular and irregular expenditures. which has 8 button .The layout is as follows.

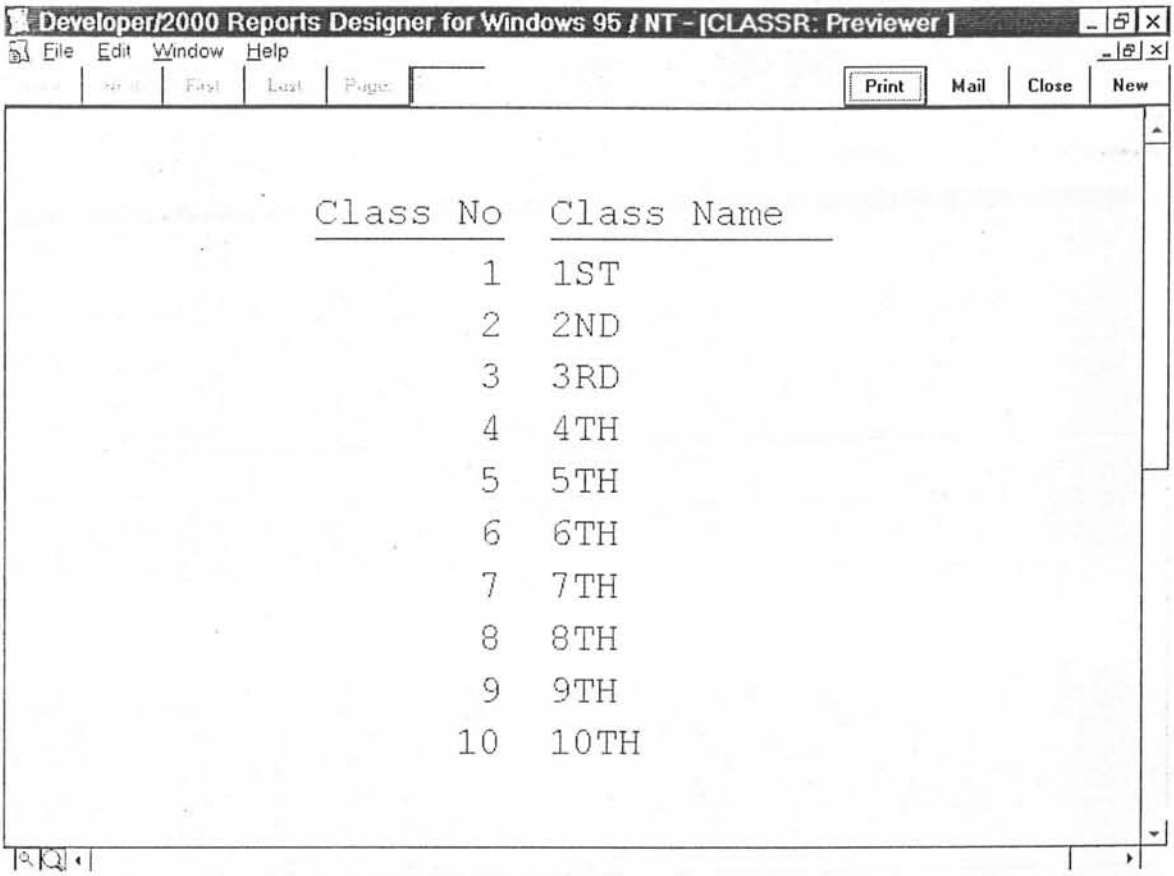


The 4th button on main menu relates to dues. It has 9 button which that have different function .This menu has following layout.



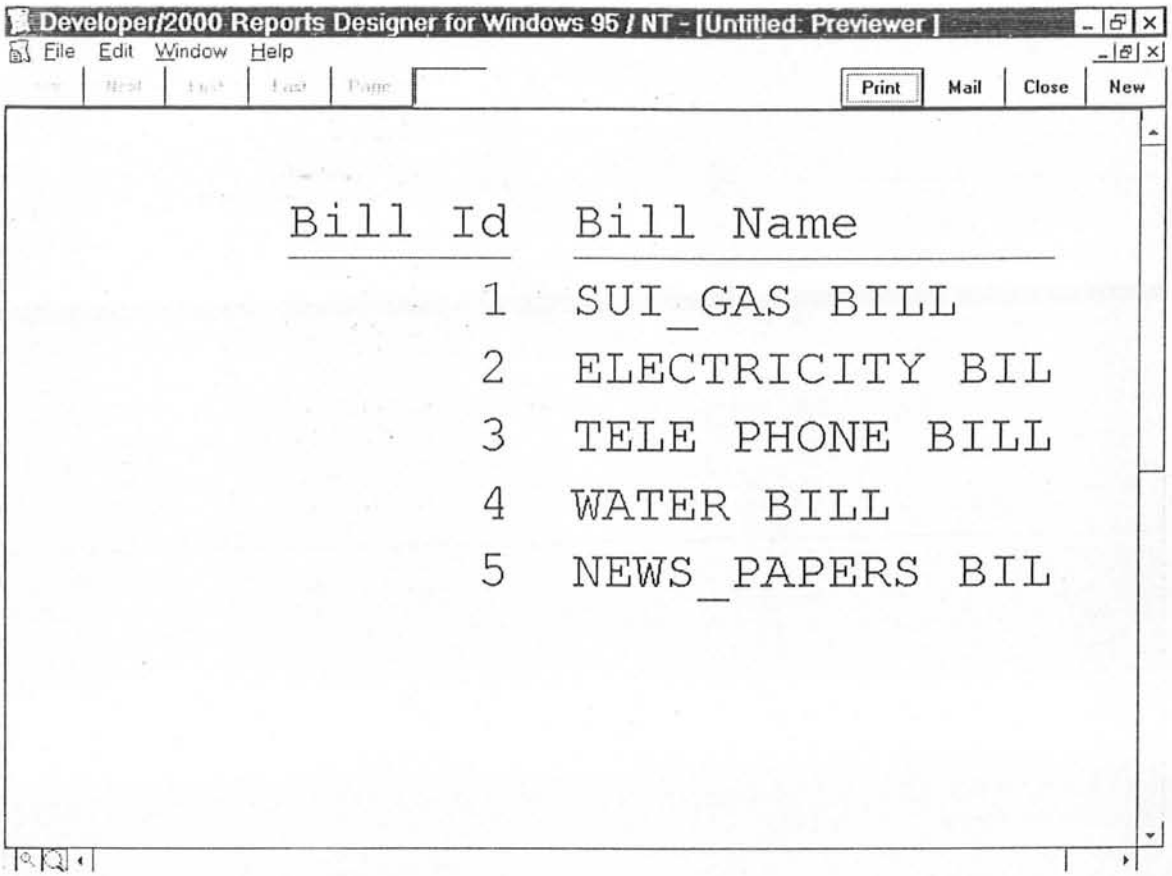
SOME DESIGN OF REPORTS

This report display the name of classes



Class No	Class Name
1	1ST
2	2ND
3	3RD
4	4TH
5	5TH
6	6TH
7	7TH
8	8TH
9	9TH
10	10TH

reports about different bills



This report tells us about some sports played by student