



NEAR EAST UNIVERSITY

Faculty of Engineering

Department of Computer Engineering

PATIENT'S LIST OATBASE APPLICATION

Graduation Project
COM-400

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PATIENT'S LIST DATABASE APPLICATION

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ABSTRACT

The increasing use of computer in all the fields of life have made things easier for many people, but this have also increased the competition and ever growing demand of better and new technologies, Database development is one of the main area of computer science and it also improving it selfby the time.

The aim of this project is to develop a database system for medical purposes. Development of medical systems is one of the most complex problems of modem age.

The main aim of this project is to develop a patient's database for a general-purpose medical practitioner. This project is done to help create a system that will keep record of different patient's and their problems" so that any doctor could analyze the patient more correctly.

Microsoft's Access is used to solve the problem, the basic structure and fonction of Access is also discussed in the project.

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INTRODUCTION

Many excellent database systems are available to doctors all around the world, developed in Ms Access or other databasa tools .So wh-y another database? .In talldng to many medical doctors and practitioners I have learned that the medical systems mostly availafale are for the exp.erit o.r p.ower: computer users and mostl;y intended for certain bnmcb:es of mediciae, atso the complex design of the medical databases available make them diffi.cult to be understoeld by: a. simple me.dical protessi,:maL They need a database syste:m that is easy to use and stable in design. So I took this project to make a database that isi uot otly easy: to use but al.sn any; general doctor can use it keep track of patients,. and with liddle change it could be adopted by specific field specialists.

This project begins. hy providing general information about the importance of' comptrter in oer nfe and then in the medical bus:iness. In die first chapter there is a brief history of develop:ment of databases: in all ever the worfc.f. and their need in car tifo and afier: that the role of MS Aeeess in the field of computer seienee as a database system is provi:ded. Also, the functionaiity of MS Access is also a part of it. At tbe ei:ld of the chapter the advancements made in the field ofMS Access ere explored.

Second chapter: provides:tlie brief case study of the: patient.'s record systemr then the design of the tables and there relationships are given. 'fhis is föllowed by the logic of the program aad its tfowcharts:.

Irt the third chapter the designs of the forms used and reports ere given. It also includes: menu: forms. The properties and logic behind-it is also discussed.

Fourth chapter gives the detail codeig behind each form and queries used fo:r tables, sea:rch fürms: and reports:.

CHAPTER ONE

EXPLORING THE WORLD OF DATABASE DEVELOPMENT AND ACCESS

1.1 Need of Computers In Life

As we know that computer software has become a driving force. It is the engine that drives, business decision making. It serves as the basis for modern scientific investigation and engineering problem solving.

It is a key factor that differentiates modern product and services. It is embedded in systems of all kinds; transportation, medical, military, telecommunication; industrial processes, entertainment, office products and even business concerns, etc.

Now as we move on to the new era software engineering and problem solving will become the main force behind all the fields, from elementary education to generic engineering.

Before the introduction of computers in the different institutions, especially in medical diagnostics and management almost all the daily work was done with pen paper. In the hospitals the information regarding the patients, their medical history, records of rooms, services all were on cards and files. And the cards were updated everyday for updating each and every services and information rendered to the patient. Due to this kind of updating there were more chances of errors, and a wrong and criminal entry could be made. As there no backups for the cards so when they are lost or damaged, all the data was lost.

So to improve the working of any institution, not especially hospitals. A new sense of change had to be brought in, which simply pointed to the fast machines to work place, in place of humans to eliminate any chance of errors and create an environment where every bit of data is secured and can be accessed by a simple touch of a button. And also there would be no or almost zero chance of losing any data due to the presence of backup systems; kept at different places.

A computer system in hospital or in private clinics means that the accuracy and speed of hospital services will increase to a great extent. And also it has increased the speed of diagnoses:

1.2 Database Management System

Database is collections of related data items. Examples of databases are records of students in university, patient' s records in a hospital, customer records in a bank etc.

When it is required to access a particular record in a database, a database management system (DBMS) is used. The DBMS creates the database, provides easy access to users in order to view, update or adda new record. Many small applications can be designed by using a single database. Large applications may require a number of separate databases.

1.3 Relational Database

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

The evolution of high-powered database engines such as MS Access has fostered the development of advanced "enabling" technologies including client/server, data warehousing, and online analytical processing, all of which comprise the core of today's state-of-the-art information management systems.

1.4 Introduction To Access Development

1.4.1 Applications that can be Developed By Using MS Access

Microsoft Access offers a variety of features for different database needs. An Access application is made up of the same objects as an Access database+tables, queries, forms, reports, data access pages, macros, and modules. What makes an application different from a database is that the objects are tied together into a coherent system. An

application organizes related tasks so that the user can focus on the job at hand, not on how the application works or on the program used to develop the application. MICROSOFTS ACCESS can be used to develop five general types of applications:

- Personal applications
- Applications used to run a small business
- Departmental applications
- Corporation-wide applications
- Front-end for enterprise-wide client/server applications

1.4.2 Access as a Development Platform

The keys to an Access application are its objects, their properties, and the events that occur on forms. Your application is made up of objects that users see and use directly (forms, reports, and data access pages) and supporting objects that control how the forms, reports, and data access pages work (tables, queries, macros, and modules).

Although Access might be best suited for departmental applications, it can also be used to, produce applications that are distributed throughout the organization. How successful this endeavor will depend on the corporation. There is a limit to the number of users that can concurrently share an Access application while maintaining acceptable performance. There is also a limit to the number of records that each table can contain without a significant degradation in performance. These numbers vary depending on various factors:

- How much network traffic already exists on the network?
- How much RAM and how many processors the server has.
- What the server is already being used for; for example, are applications such as Microsoft Office being loaded from the server or from local workstations.
- What types of tasks the users of the application will be performing; are they querying, entering data, running reports, and so on.

- Where Access and your Access application will be run from (the server or the workstation).
- What network operating system is in place?

CHAPTER TWO

BUILDING THE RELATIONAL LOGIC

2.1 Case Study

It is required to design a patient's list database application, which is used to keep the records of patients for a general doctor. We are assuming that the doctor needs information about the patient's personal information like address and phone number, also the doctor needs the previous medical history of the patient when he/she comes to the doctor the first time so that he can understand the problems of the patient more accurately.

Also the visit history of the patient to the doctor is required, with information like what is the cause of the visit? And when the visit was made. Also, it is required to have information about the drugs and the tests that the doctor has recommended to the patient.

And also there is need to output lists of patient's at different times,

2.2 Solution

I have selected MS ACCESS as my development tool; as it is one of the best database application development tools. This application is going to be a single tier application, that means it is going to be run on a single platform but it can also be converted to n-tier application by simple enhancements.

2.2.1 Design steps for Building the System

The design steps for building the application are given below, but remember that each step is work in progress, so we may have to revisit any step during development. Following are the steps:

1. Designing the database structure that will go to hold the persistent data. And make relationships between tables.
2. Designing the stored procedures in the database to perform basic functions like add, update from the records.
3. Design the user interface for the system.
4. Program the user interface by using modules and macros also make requirements.

Prir@ff!!W"<f~m...~:irr:ir@'300"i:!!Waf:!!WR(i"G.@fr:~m:~r,W:~e~

history : Table		
Field Name	Data Type	size
P.Jd.	l.le.)~	: ~J.1
Y~(It~	.pat~/Ti~e.	L
~yri:ip	i.Te.)~..	i?P..
cli9..	Lle..xt)\$O

IIP >| !!

||||~ ... H:r J:~

Figure 2.2. Structure of history table

drug : Table		
Field Name	Data Type	size
~	Text	4
j rrlj9_nerllle.	Je.r<.t	15
f dese_	Text	15
l m he.ciu..e.~il	}riC...	'IS'
r dete start	Date/Time	
tr:it:~P	J~:t =:	.Jc _9
run_out_date	Date/Time	

Figure 2.3. Structure of drug table

2.4 Relationship Between the Tables

The relationship mean that how are the databases interacting with each other, and how is the data in one table is related with the data in other tables. In relationships one thing *is* always important that is you must have one master table, in our database the Pre table is our master table and other tables are linked with it, in one to many relations. That means against one record in Pre table you can have many records in Drug er History table.

Also the primary key is in Pre table which is p_id (Patients ID) that means it can not be duplicated. The relationship is shown in Figure 2.4.

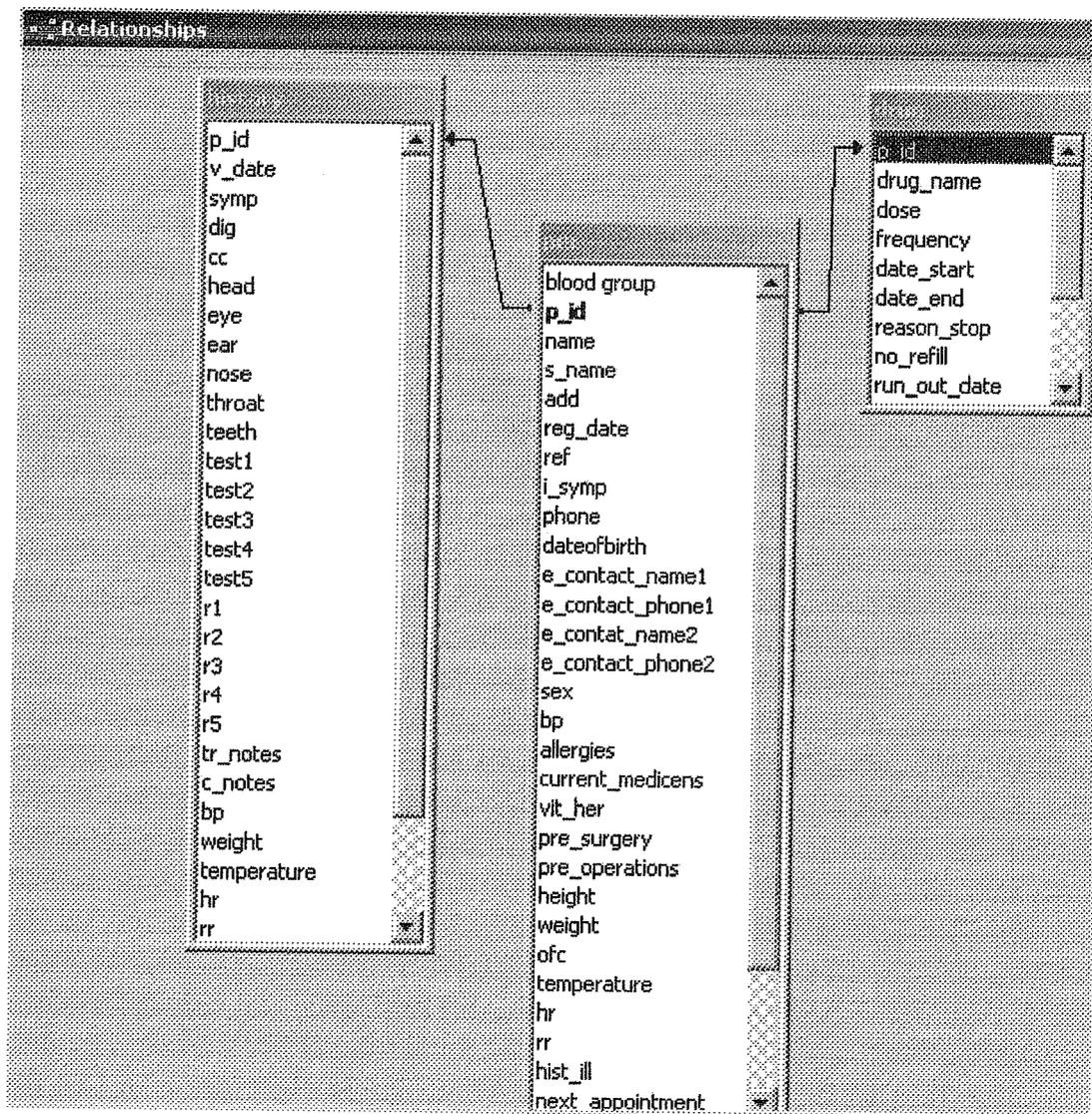


Figure 2.4. The relationship between tables.

2.5 The Flowcharts

Flow charts are one of the best tools for software engineering modeling, they show how the data and information is flowing in the system also they made easy to make the final application of any kind. Actually they are the steps of how the program is going to be developed.

There are many kinds of flowcharts, like dataflow diagrams, simple flowcharts, structure charts etc. I have used a mixture of structure and traditional flowcharts to model the system, The flowchart symbols and there explanation is given in Appendix A.

2.5.1 Flowchart of the Menu's

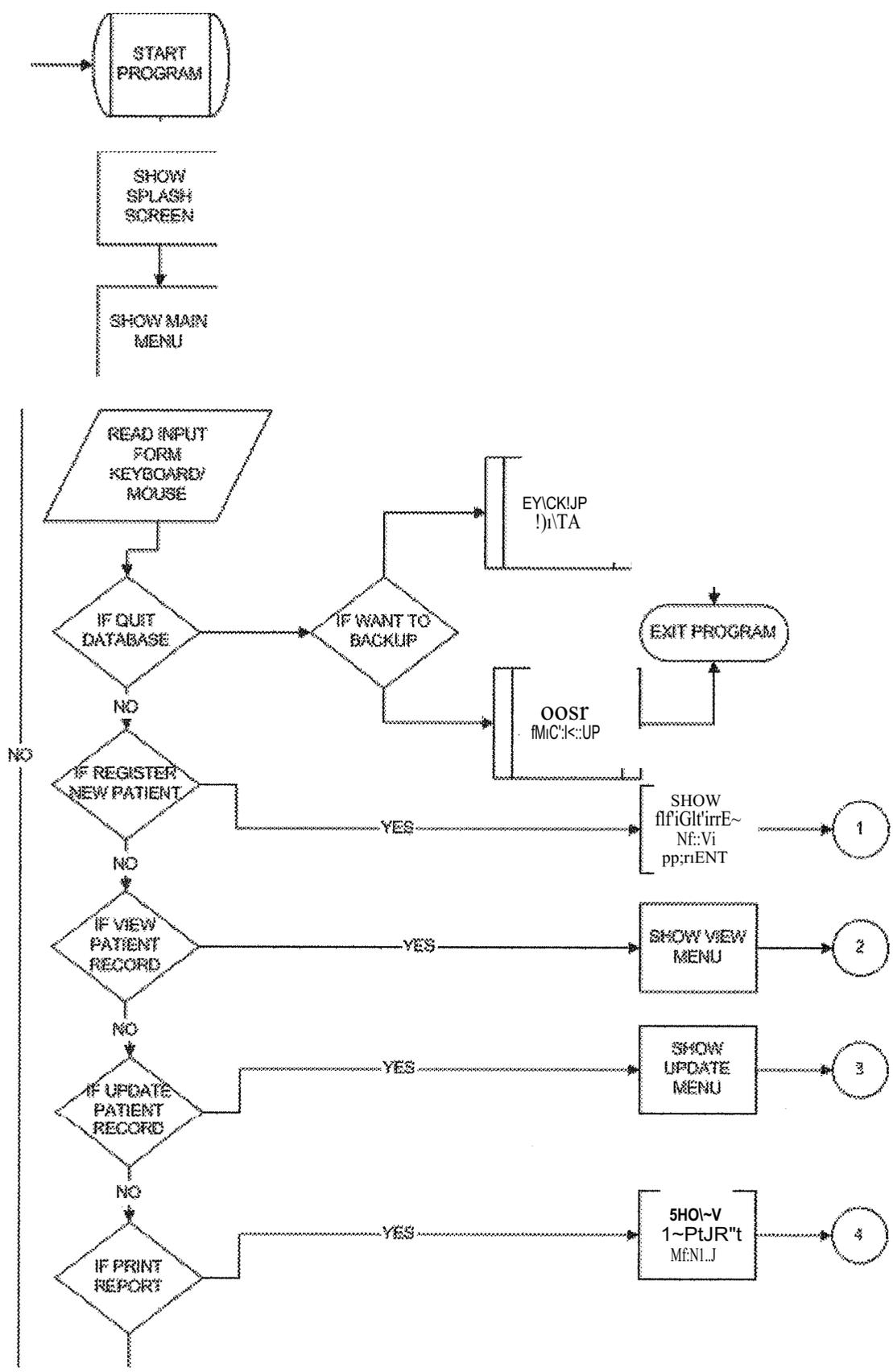


Figure 2.7. The main menu

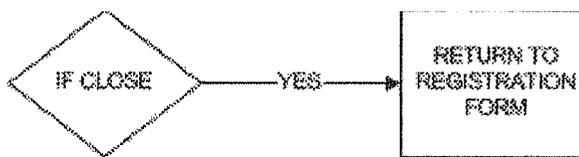
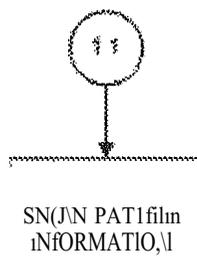


Figure 2.S. The validation process

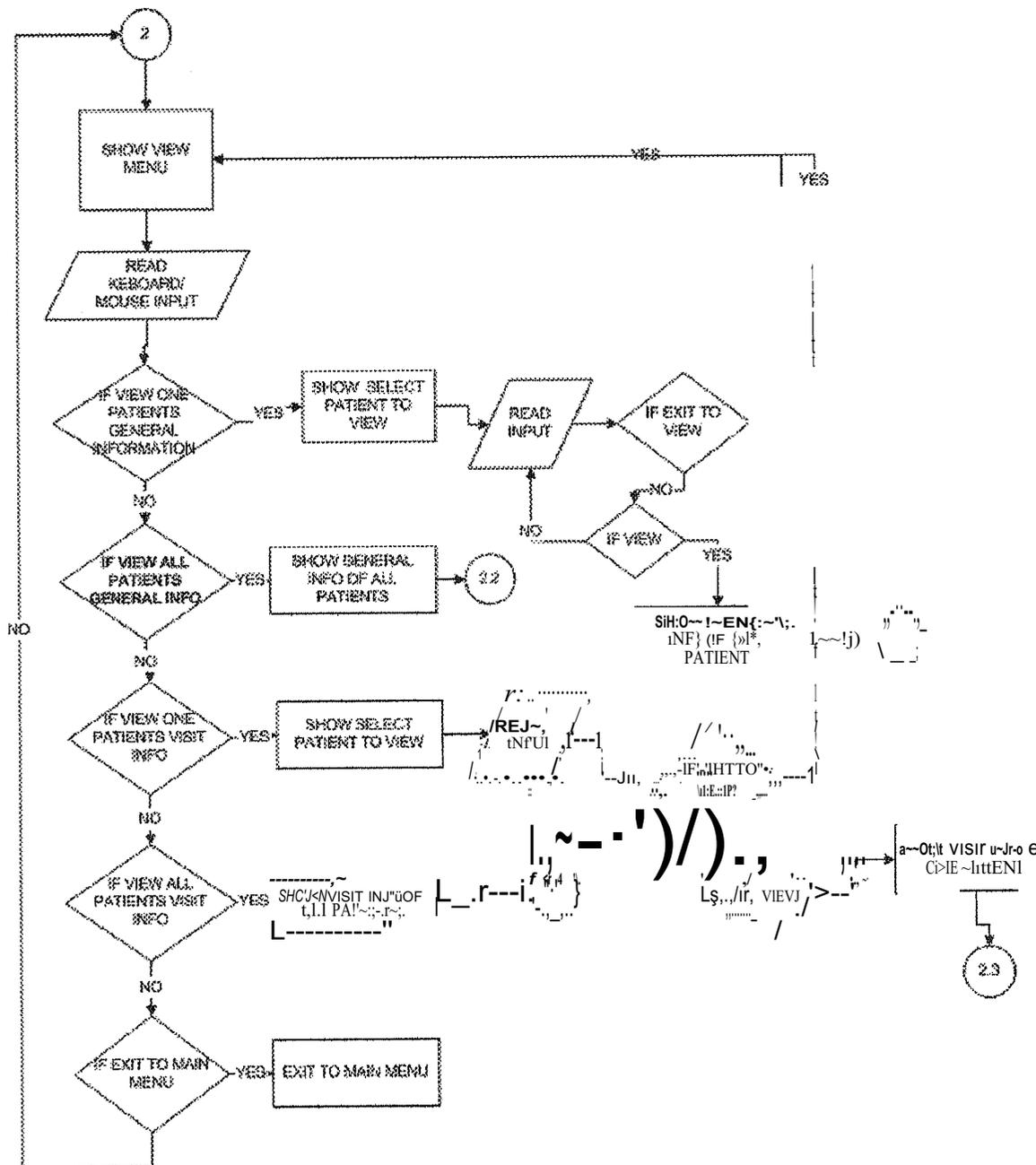


Figure 2.9. The View menu

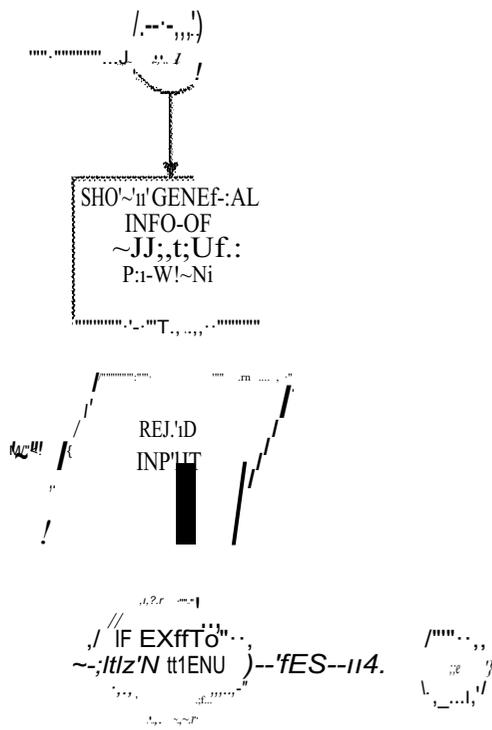


Figure 2.10. The process 2.1

Developers often think that forms exist solely for the purpose of data entry. On the contrary, forms serve many different purposes in Access 95:

1. Data entry: Displaying and editing data.
2. Application flow: Navigation through your application.
3. Custom dialog boxes: Providing messages to your user.
4. Printing information: Hard copies of data-entry information.

Probably the most common use of an Access form is as a vehicle for displaying and editing existing data or adding new data. Fortunately, Access provides numerous features that enable you to build forms that greatly ease the data-entry process for your users. Access also makes it easy for you to design forms that allow your users to view data but not modify it, view and modify data, or add new records only,

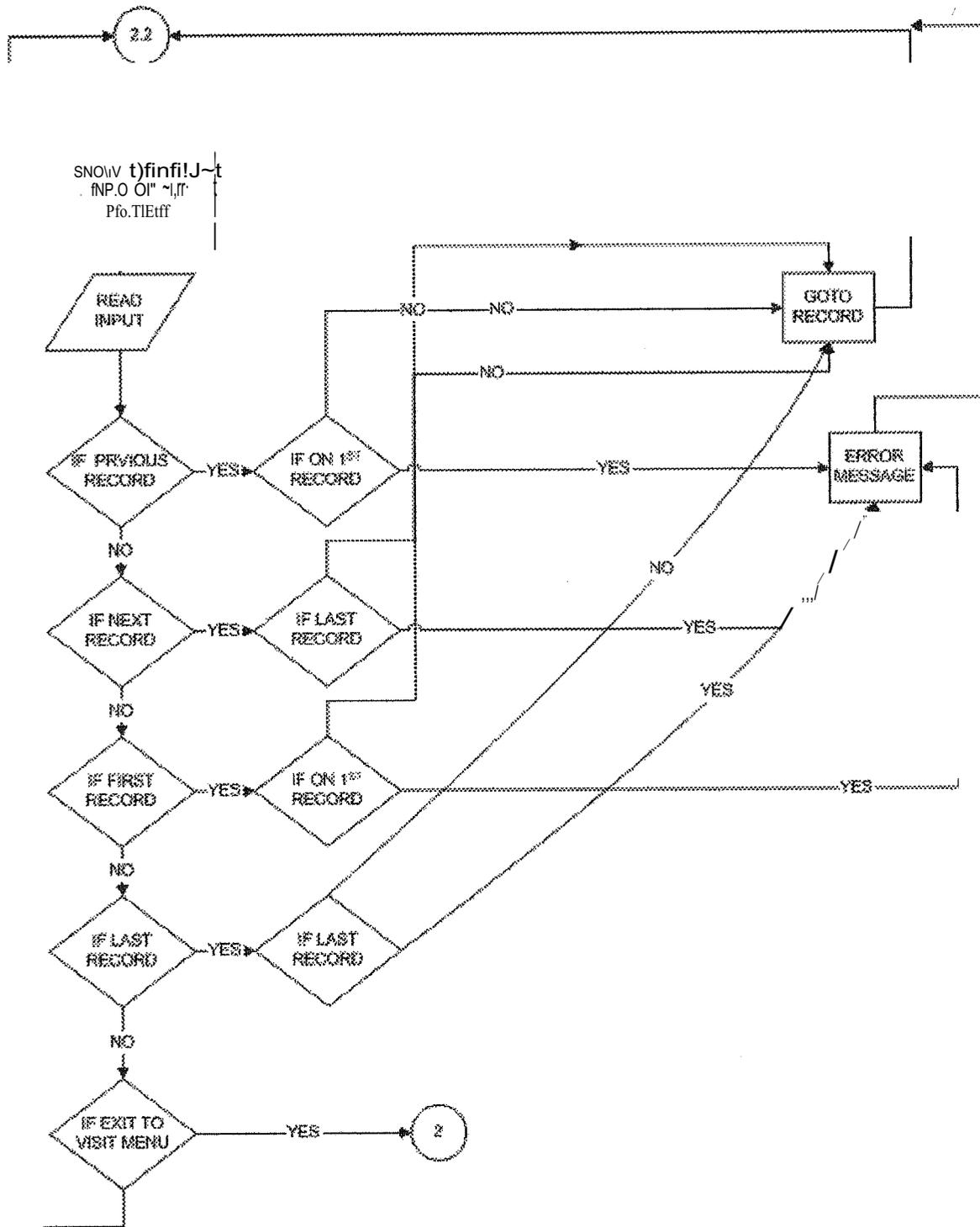


Figure 2.11. The 2.2 process detail

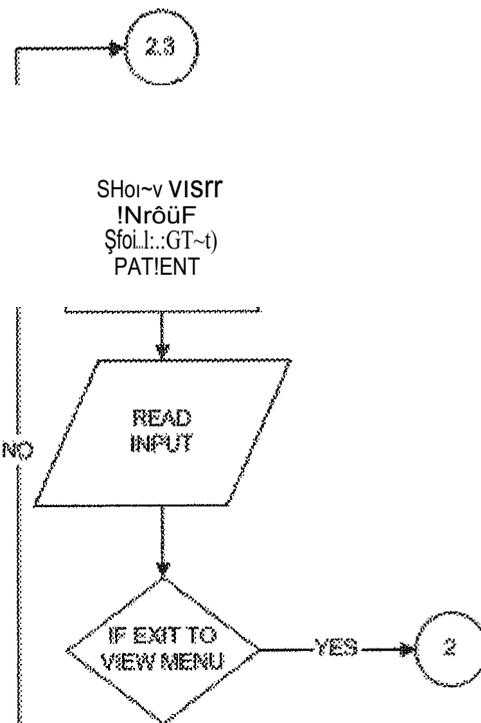


Figure 2.12. The 2.3 process detail

-1-
~~~~~)

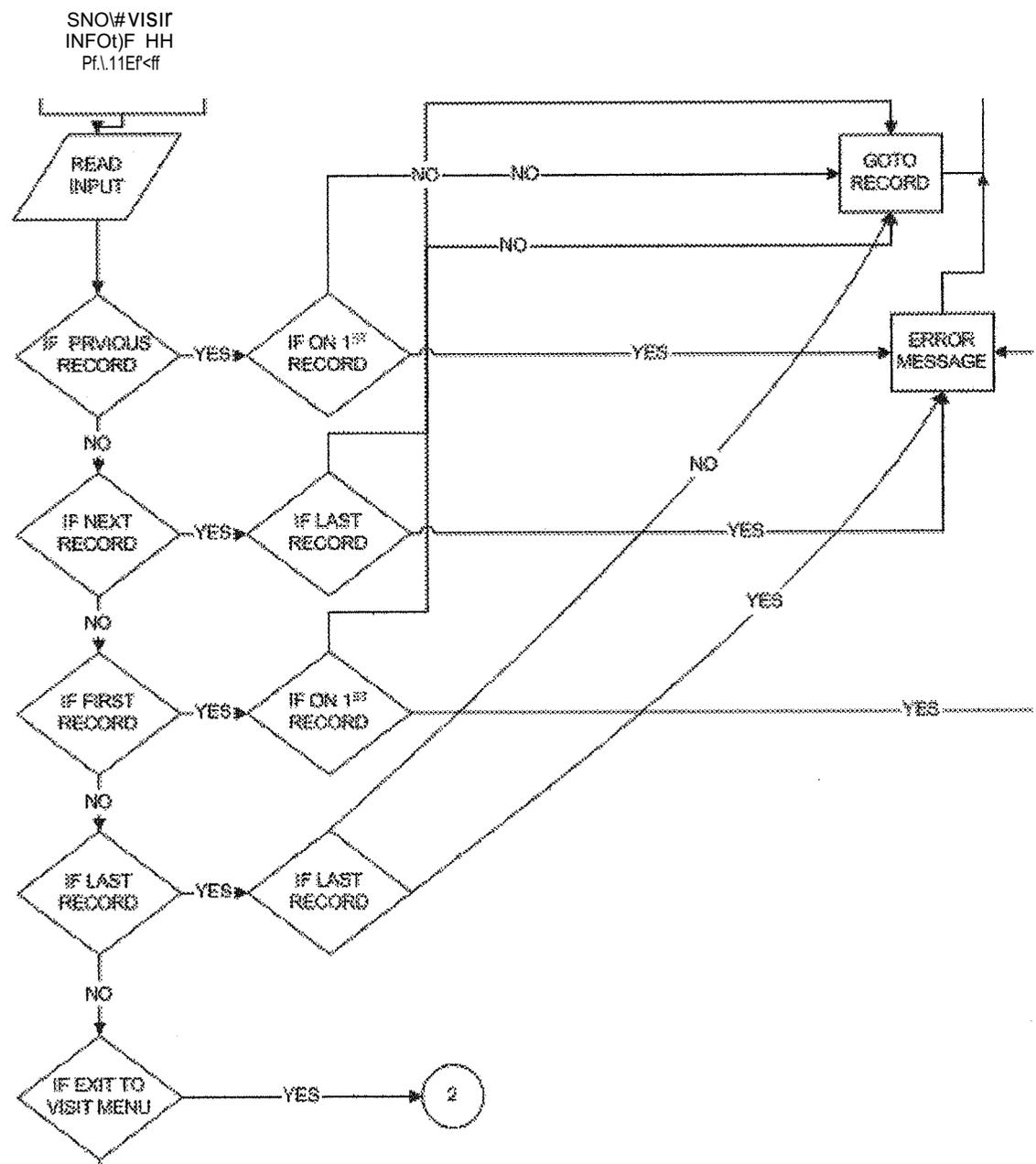


Figure 2.13. The 2.4 process detail

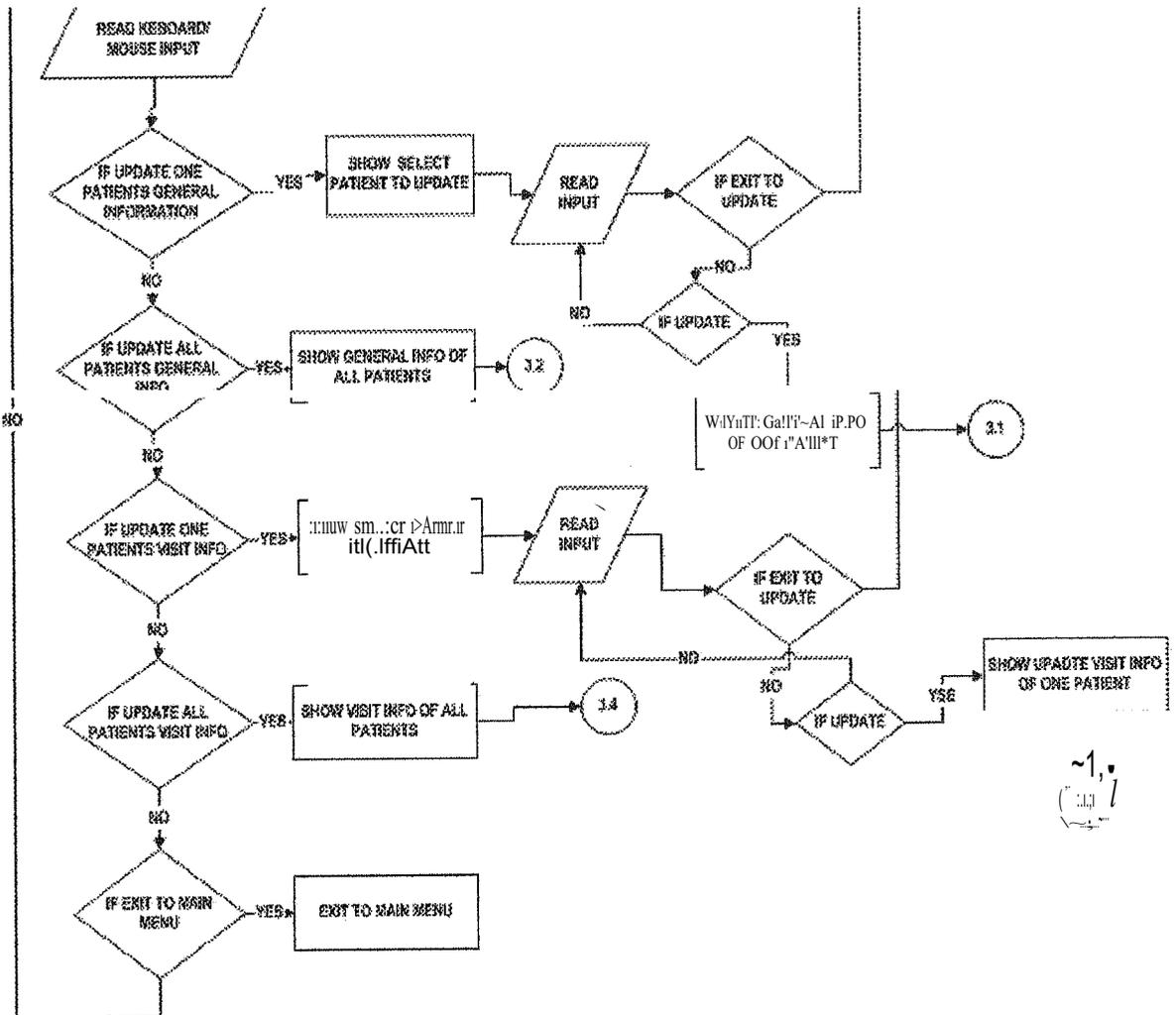


Figure 2.14.

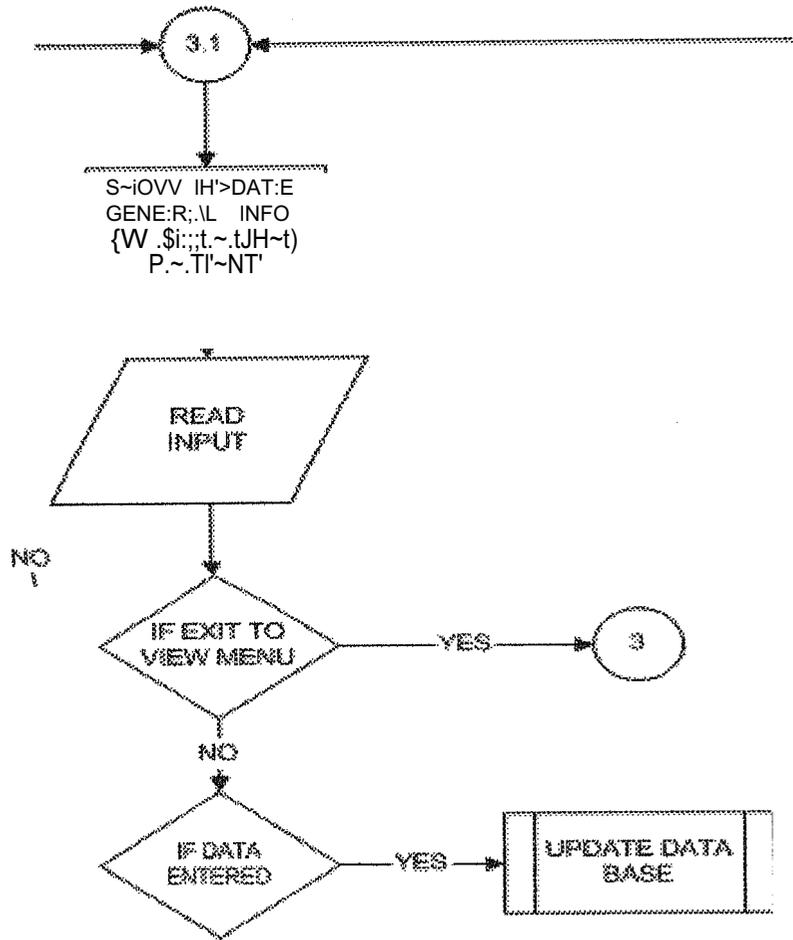


Figure 2.15.



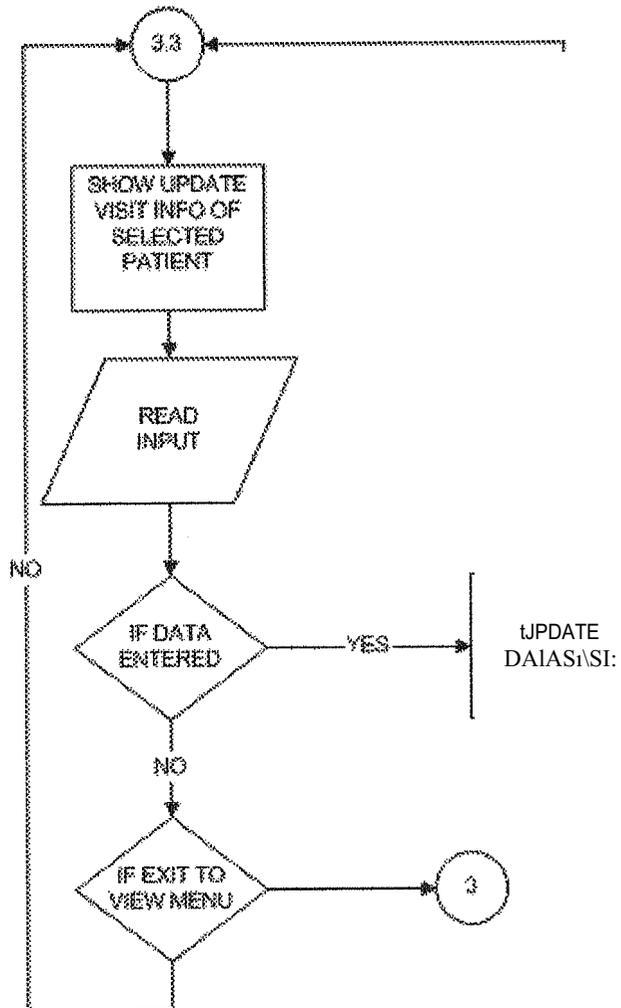


Figure 2.17.

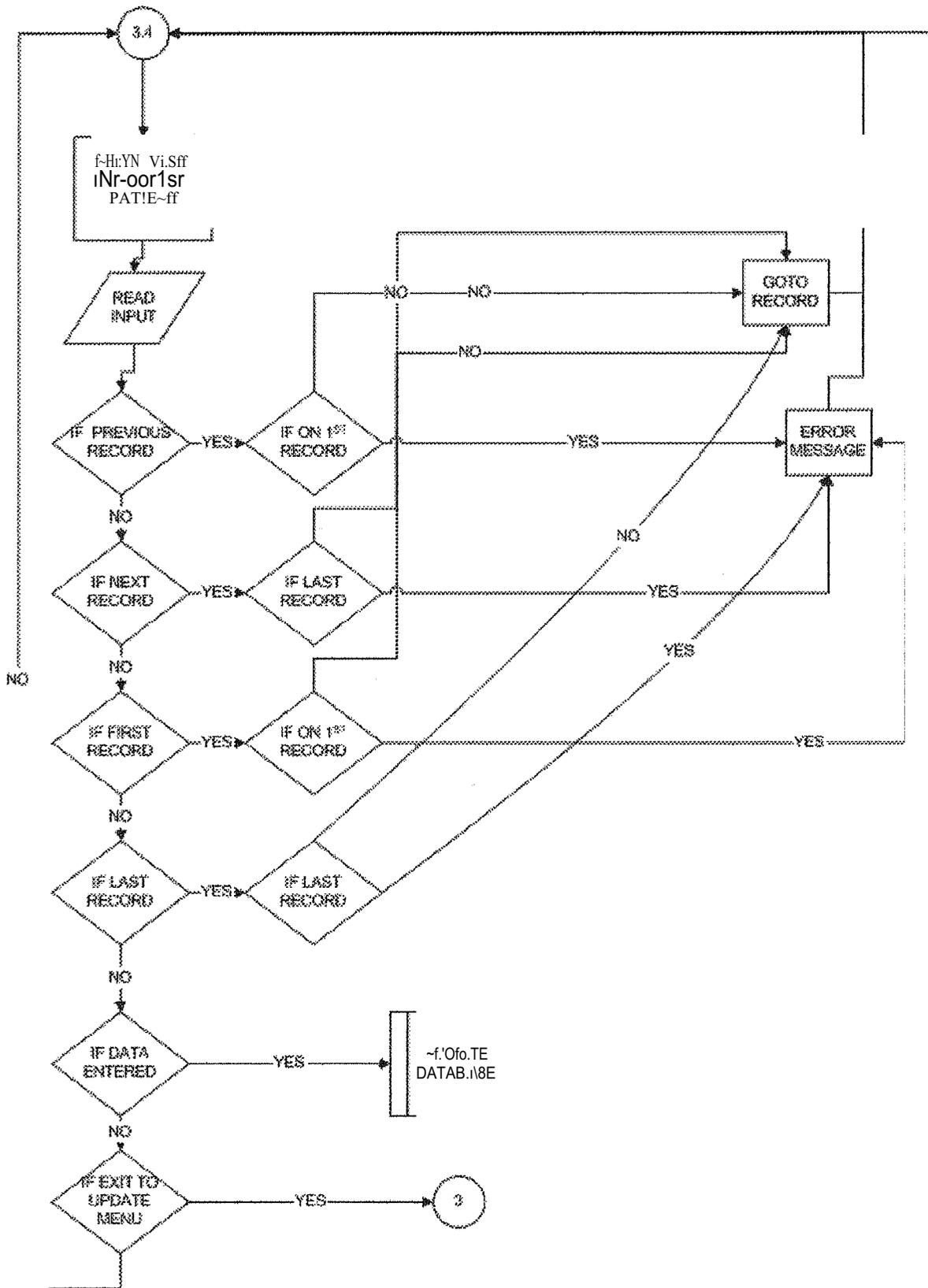


Figure 2.18.

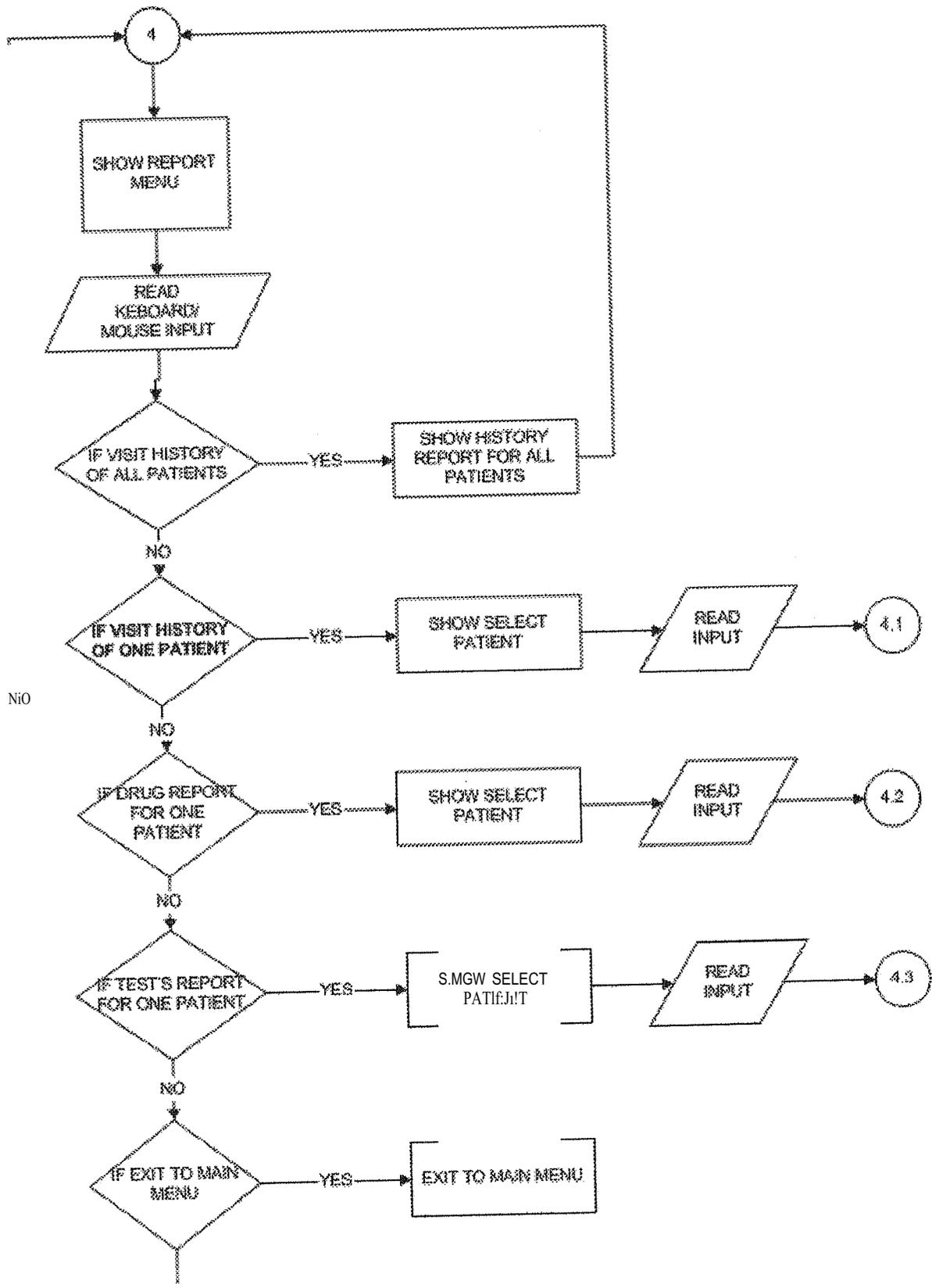


Figure 2.19.

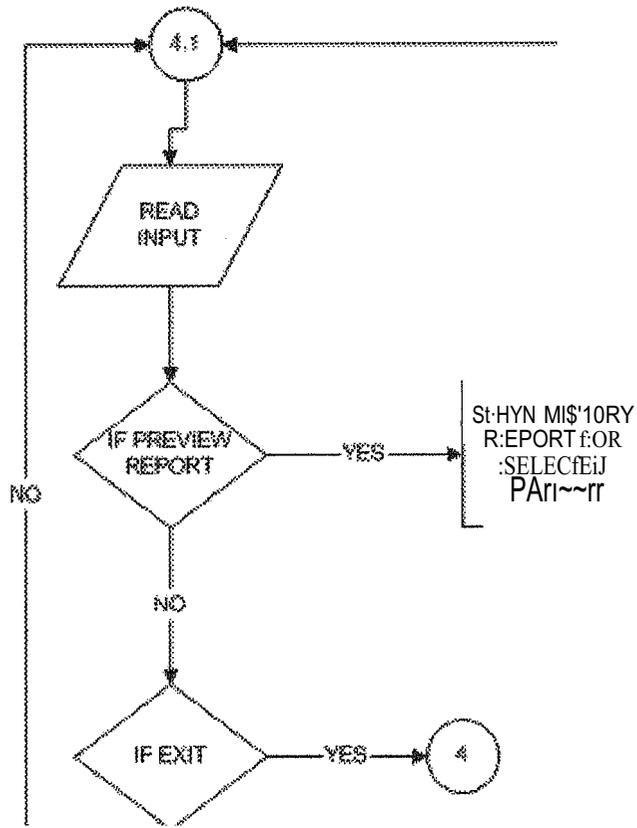


Figure 2.02.

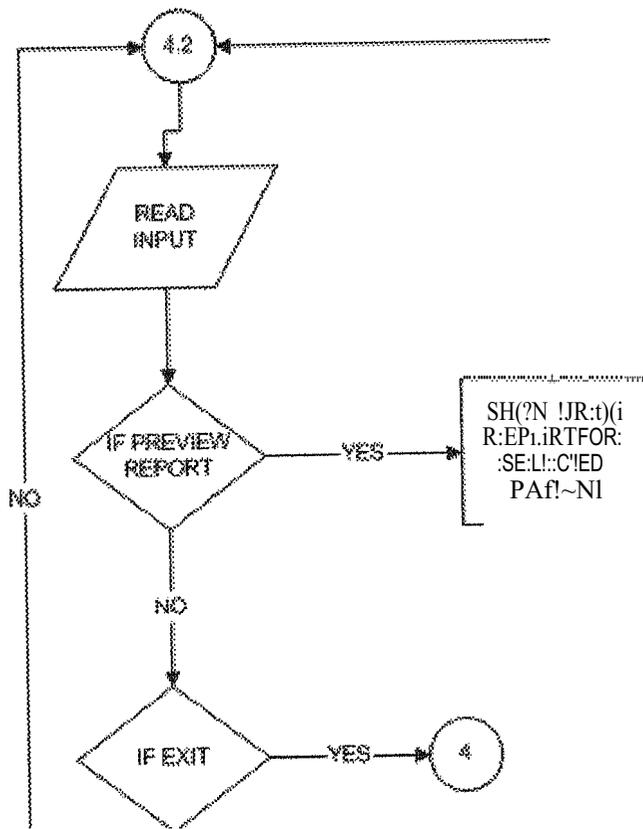


Figure 2.21.

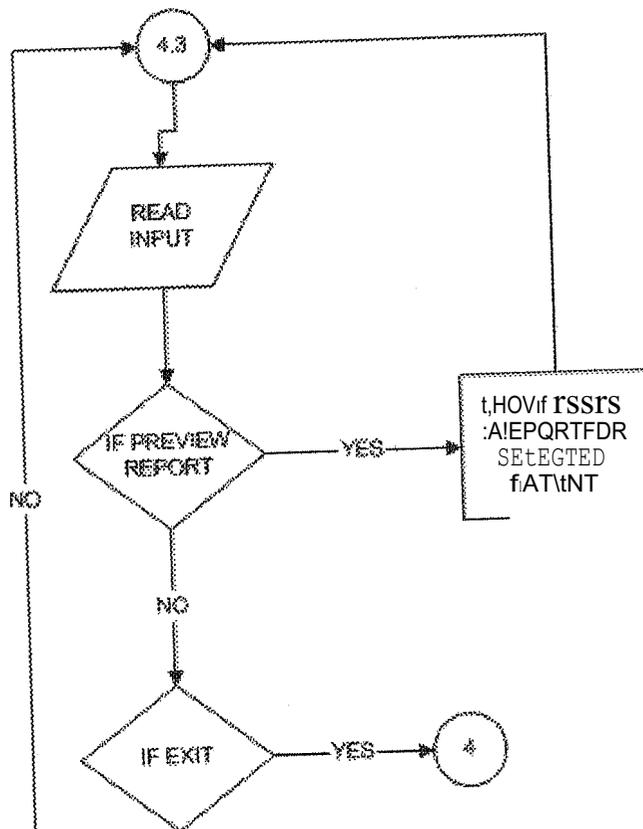


Figure 2.22.

## CHAPTER THREE

### BUILDING USER INTERFACE

#### 3.1 Building Forms

The next step is to make the user interface for our project. This will define how the user interacts with our application and how our user interface must interface with the logic of application, We can take many different approaches to building the interface. We are using one main form as the main menu and other MDI forms linked with it to navigate to other menus. Also there are linked forms to enter, update the records.

##### 3.1.1 The Splash Screen

The splash screen is going to appear when the application is going to be loaded which is going to give a little information about the program, its name and the name of its creator.

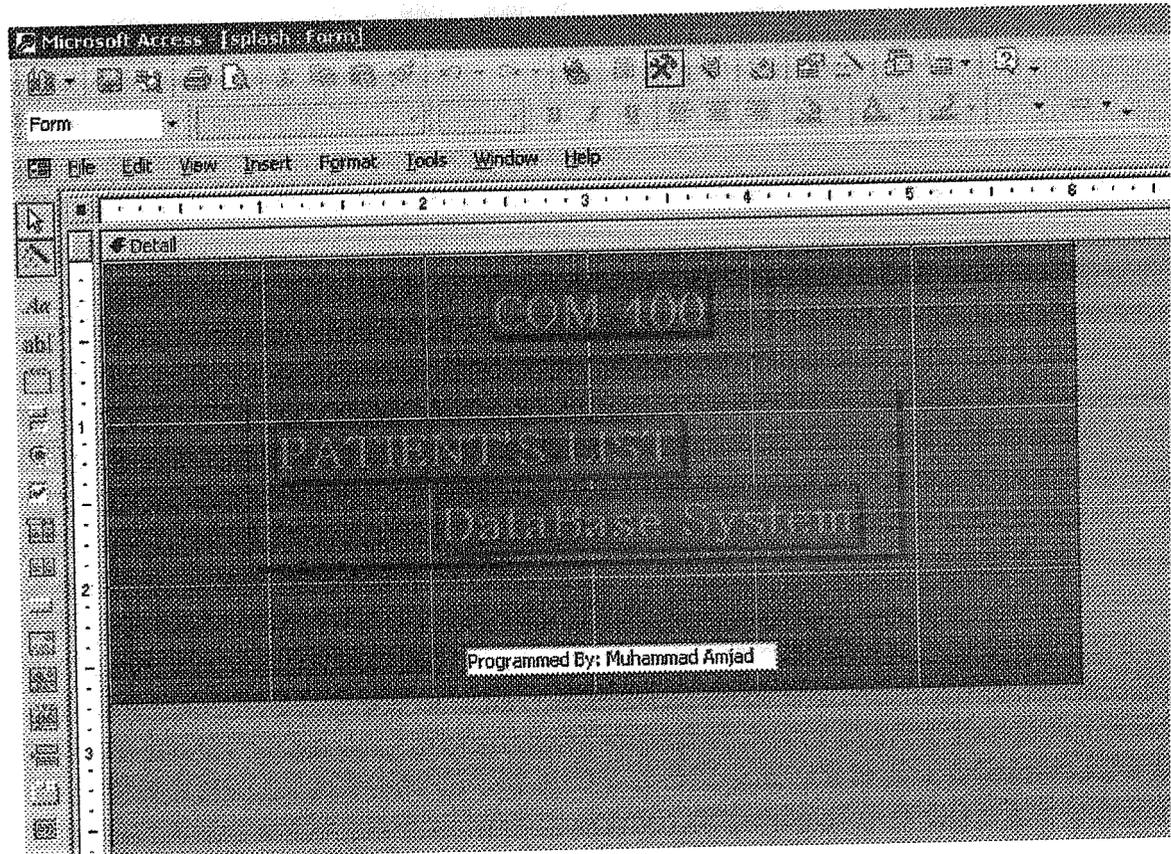


Figure 3.1. The Splash Screen design

### 3.1.2 The Main Menu

The main menu going to navigate to other menus .it is containing five options, user can go any of the sub menus like view menu or user can quit the data base .When user is going to quit database the program is going to ask if the user wants to backup the data or not. The main menu design isin Figure 3.2.

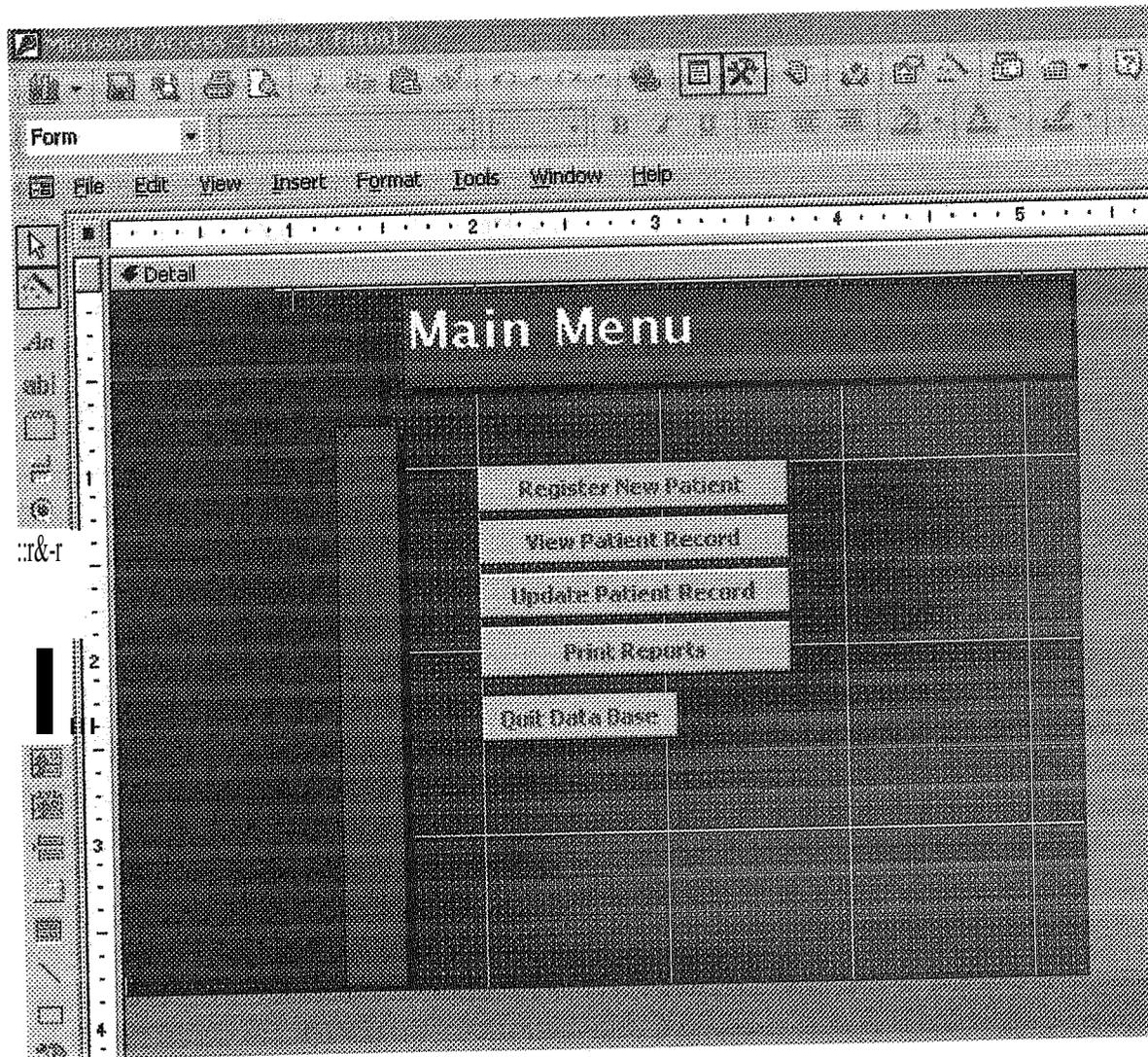


Figure 3.2. The main menu

### 3.1.3 The Sub menus

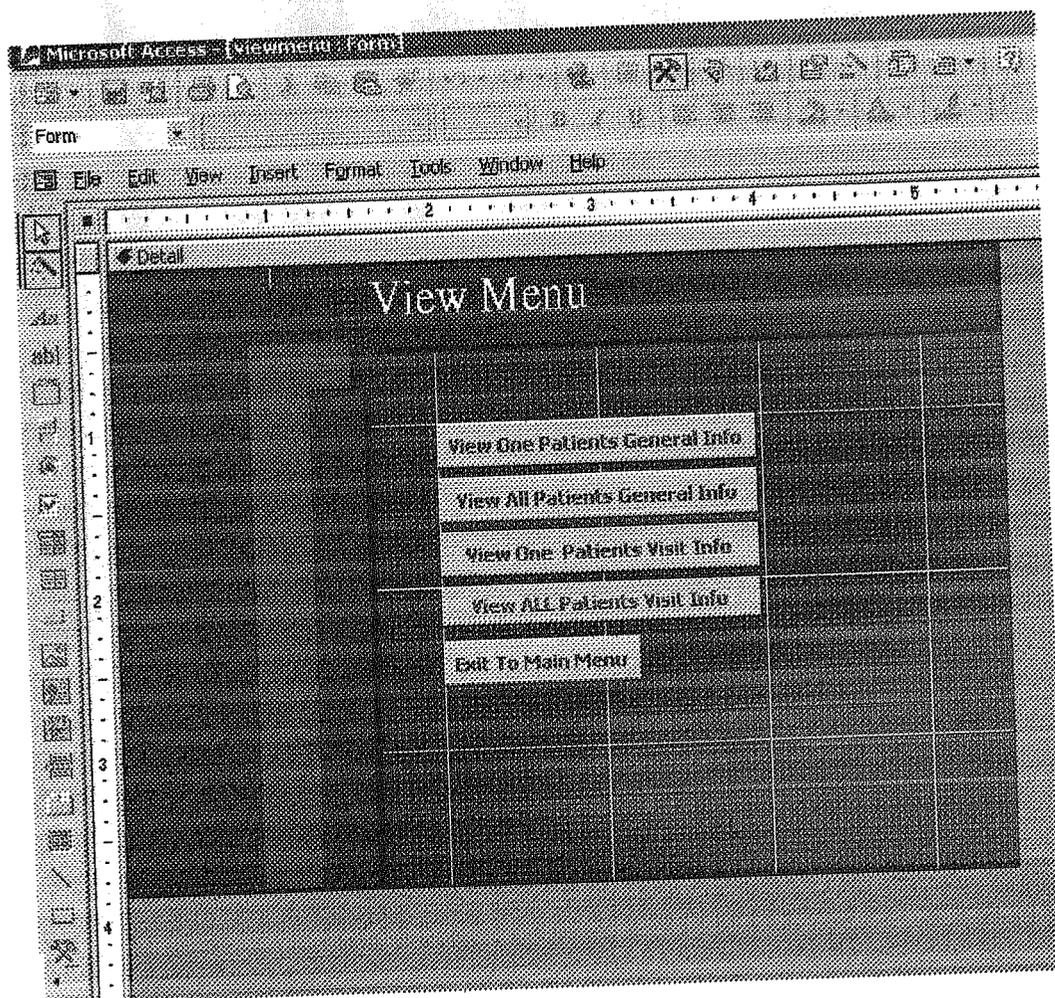


Figure 3.3. The view menu

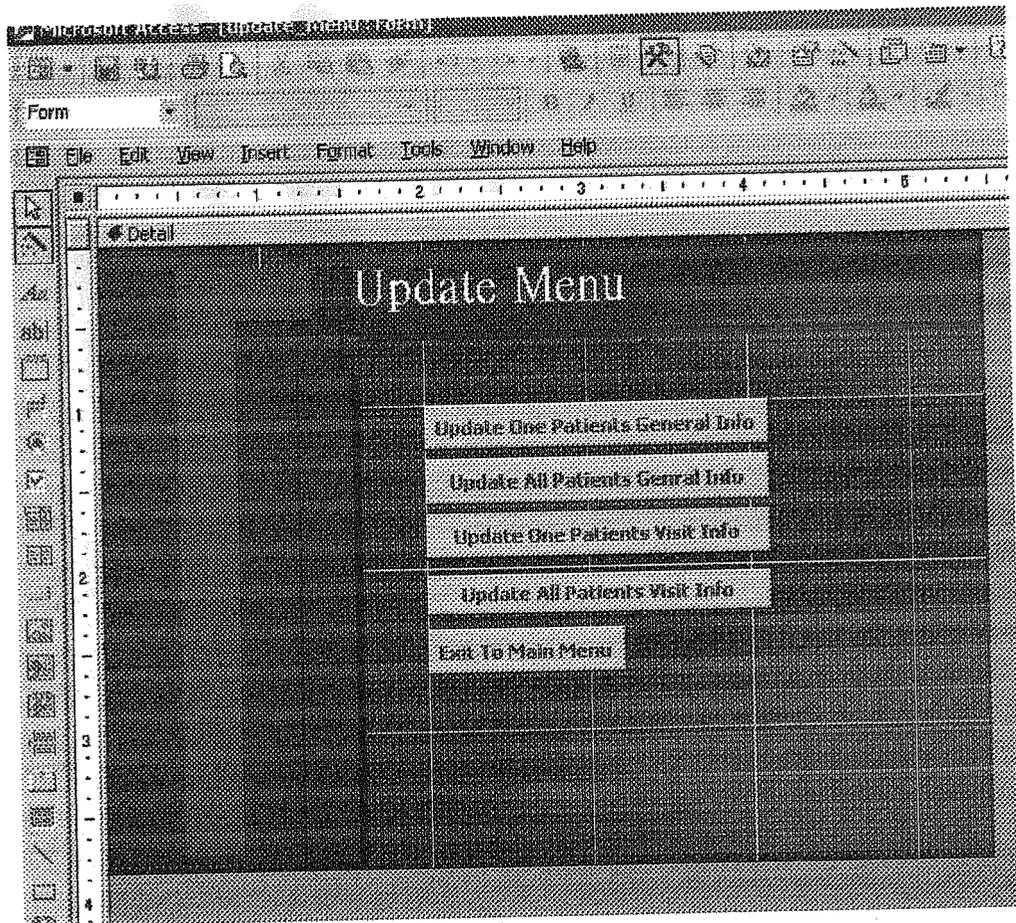


Figure 3.4 the Update Menu

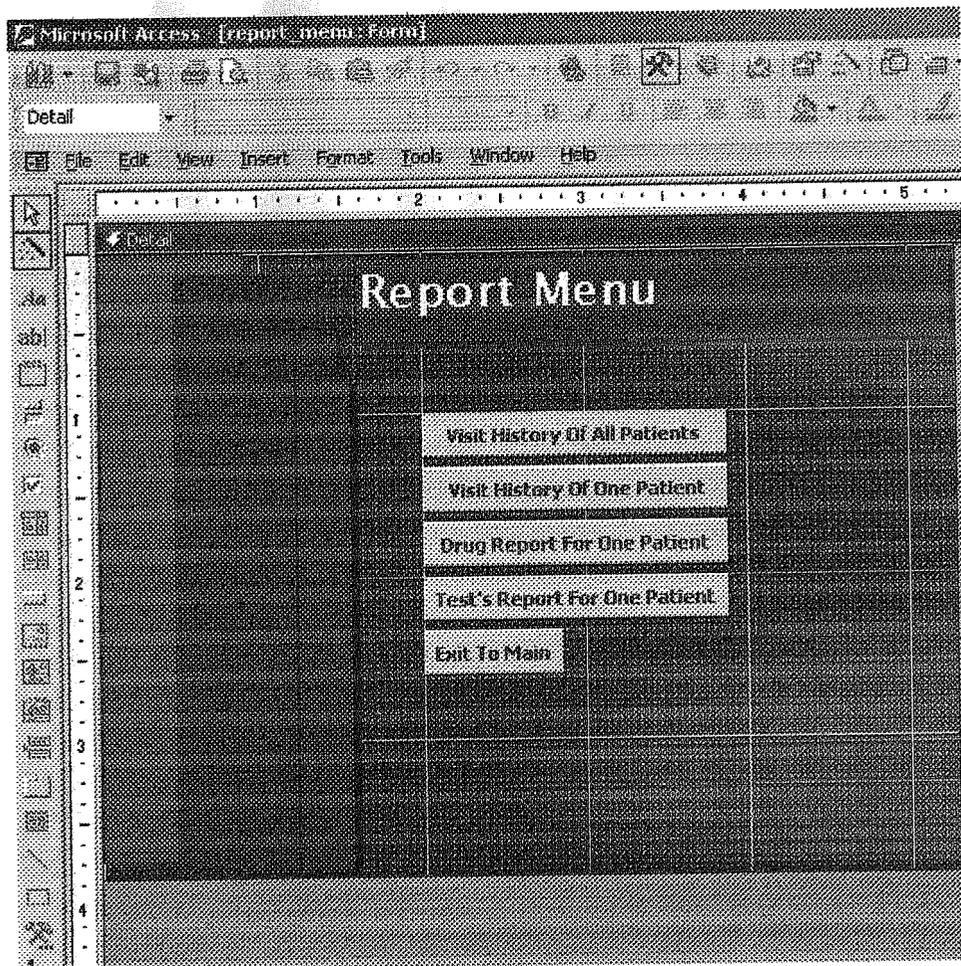


Figure 3.5. The Repertr Menu

#### 3.1.4 The Registration Form

This form is going to be executed when a new patient is needed to be registered, it will also going to contain a link to sub form called check or validate in which user can see to whom a particular id is allotted, if the new id entered is invalid. It also contains tab control on which there are four tabs for personal, medical, contact and history information.

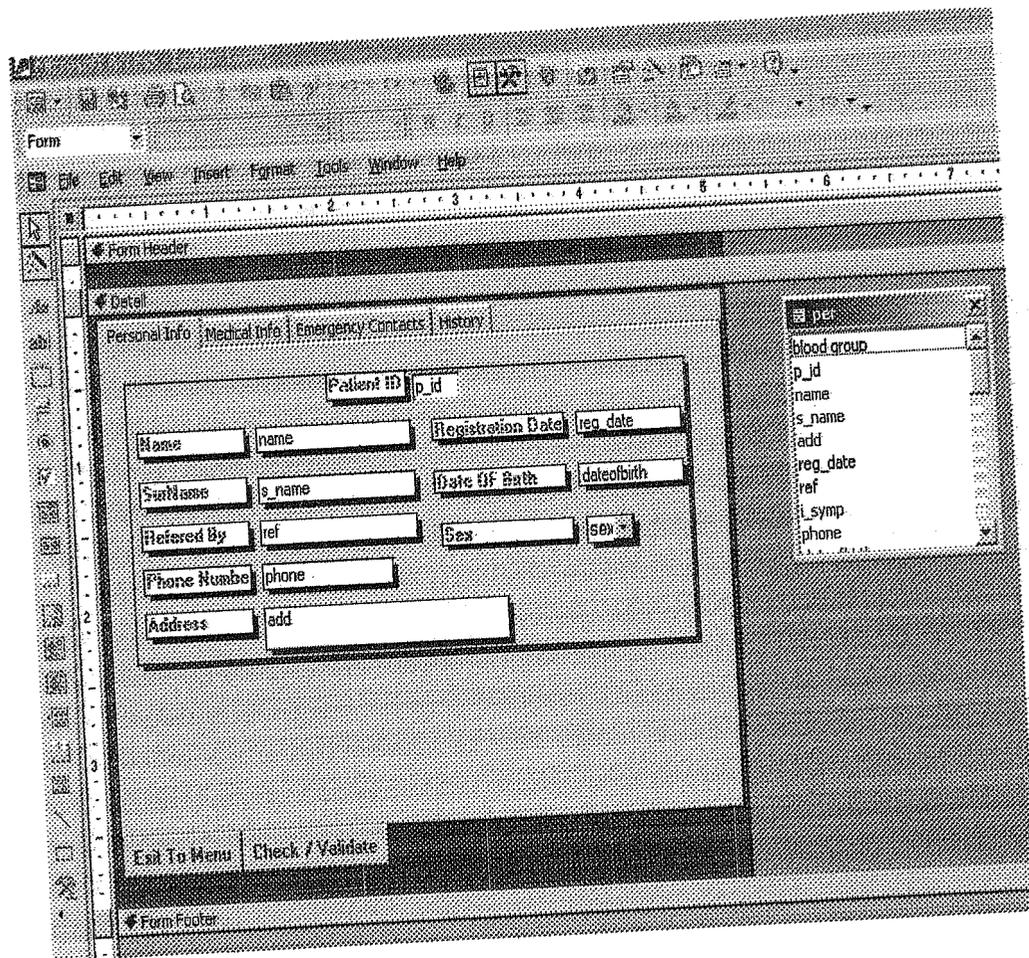


Figure 3.S. Personal Tab

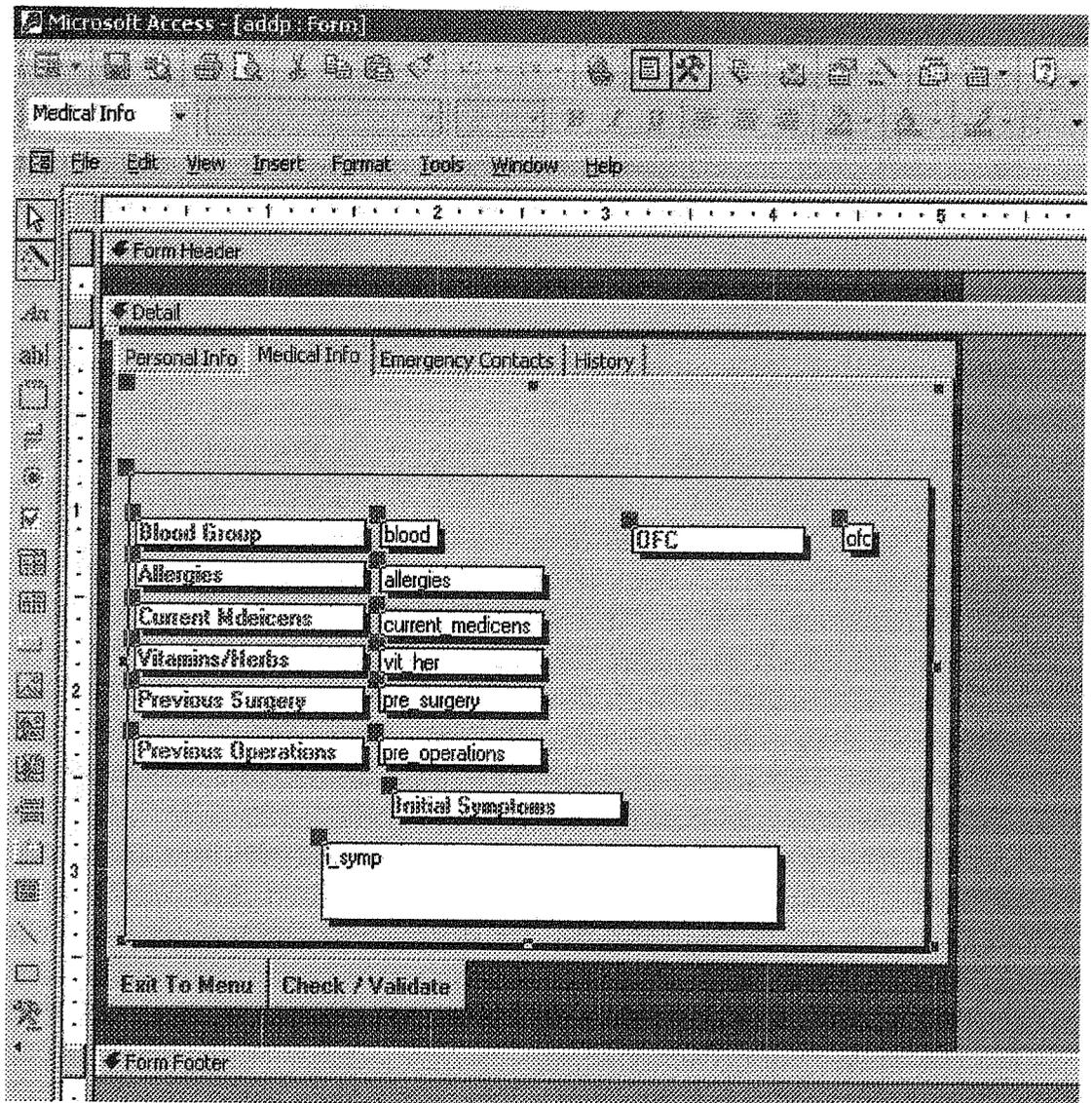


Figure 3.5. Medical tab

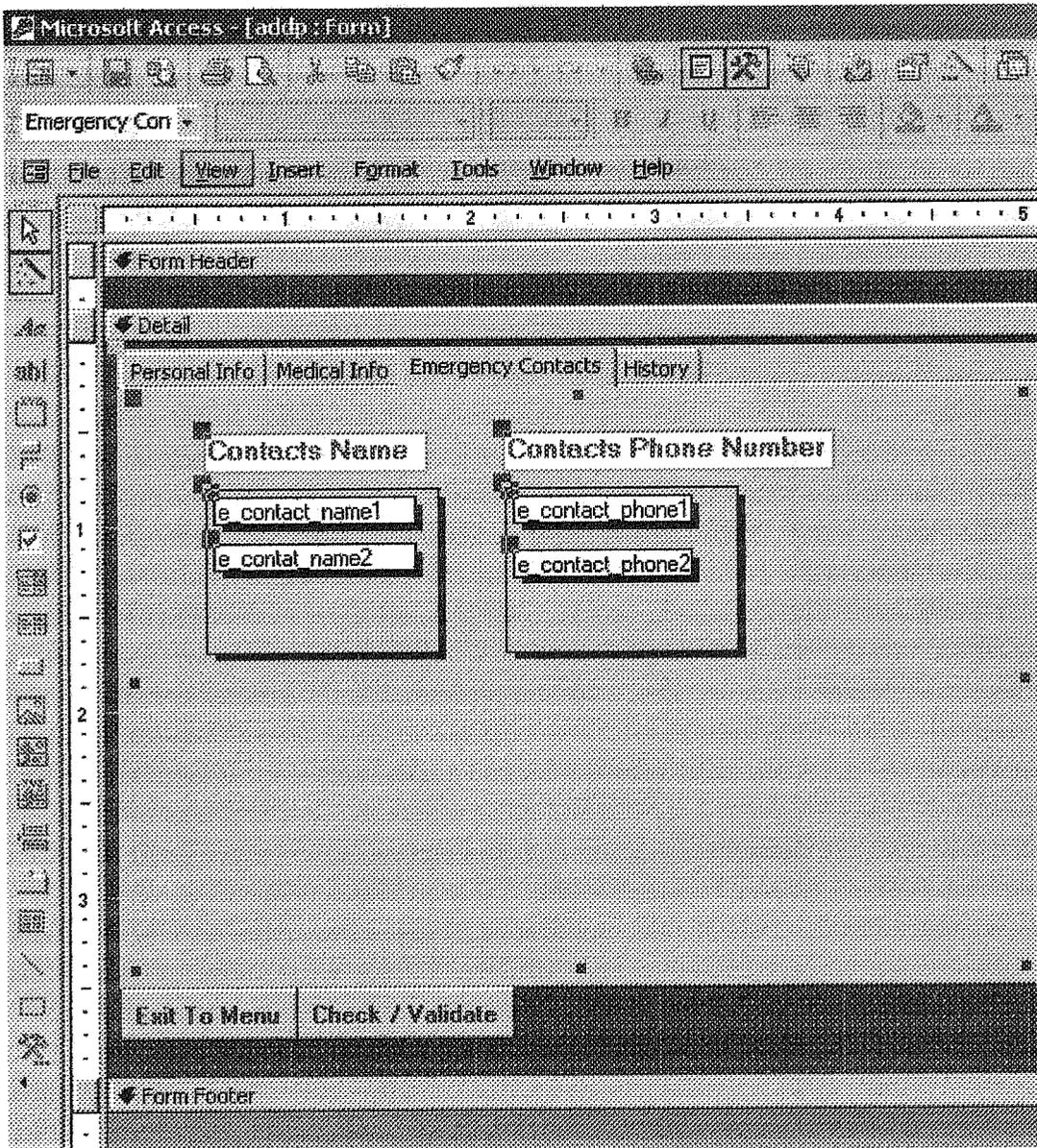


Figure 3.6. The emergency contact tab

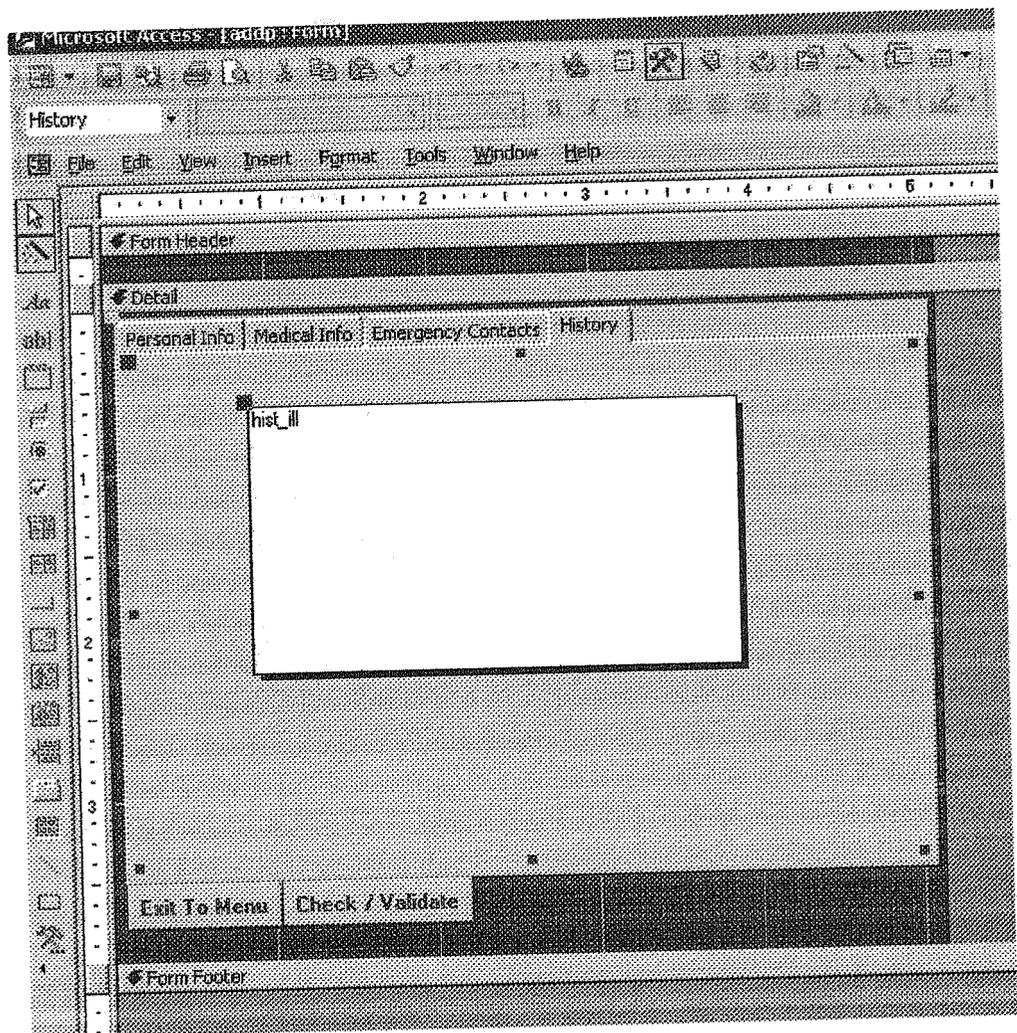


Figure 3.7. The history tab

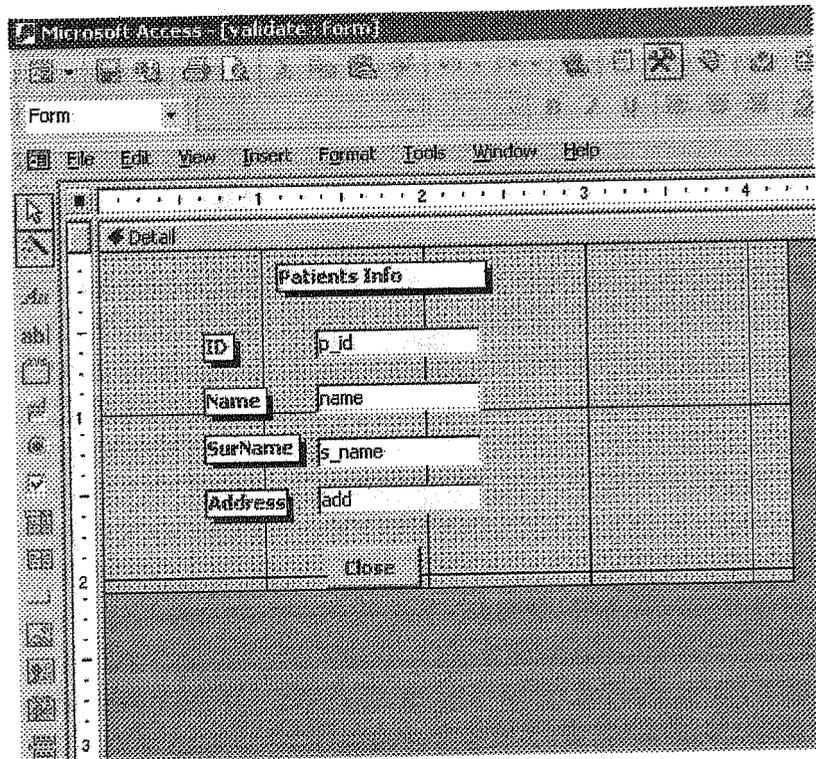


Figure 3.7. The patients info sub form

### 3.1.5 The ViewMenu

The view menu contains five options; one of the options is to go back to main menu. The view one or all patient' s general info is going to show the general information entered at the registration time .but it will going to ask for a id if you want to see one particular patients record. Same is the case when you want to see the visit info of a particular patient.

Here I am showing the designs of the selection forms and the general information for all patients and visit information forms.



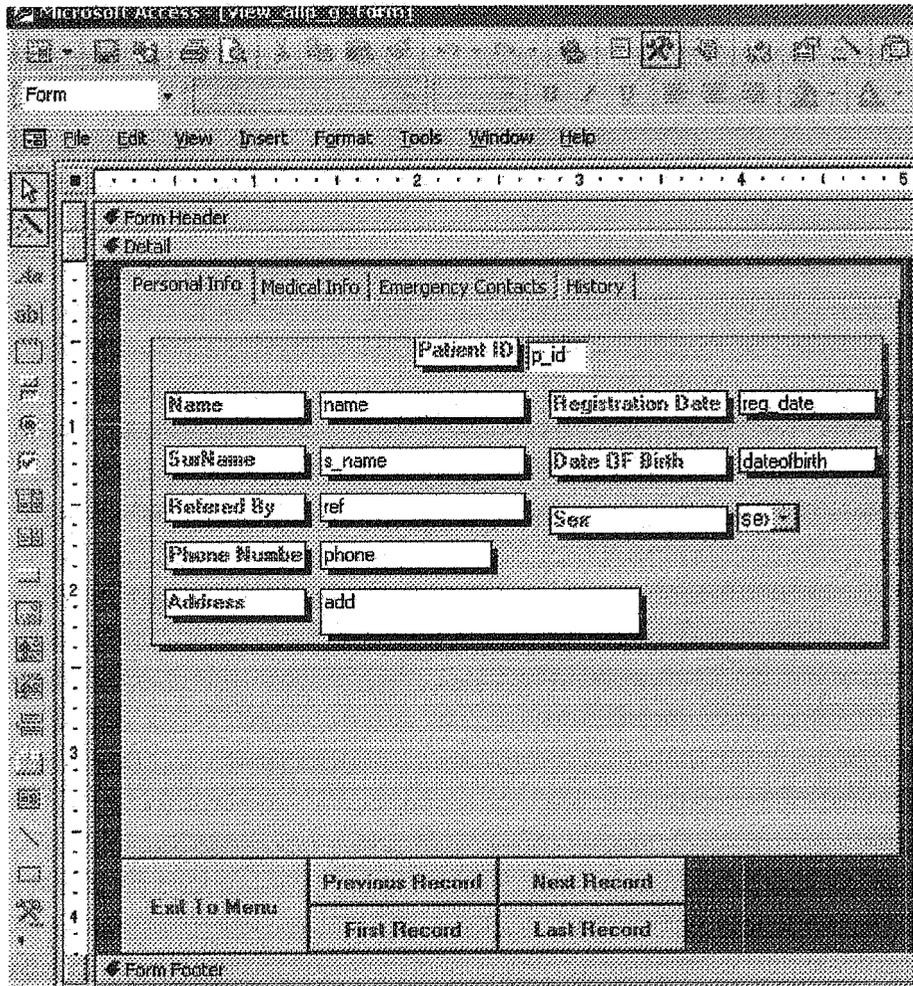


Figure3.9

The previous .next and other bnitoas gives user ability to navigate himself to any desired record, but user cannot update any record at this instant as all the fields are going to be locked.

Microsoft Access - View Objects - Patient

Form

File Edit View Insert Format Tools Window Help

Form Header

Detail

|               |        |                     |           |                      |            |
|---------------|--------|---------------------|-----------|----------------------|------------|
| Patient Id :  | pid    | Date Of Birth :     | dateofbrn | Allergies :          | allergies  |
| Blood Group : | blood  | Registration Date : | reg_date  |                      |            |
| Name :        | name   | Sex :               | sex       | Date Of Next Visit : | next_visit |
| SurName :     | s_name | Referred BY :       | ref       |                      |            |
| Address :     | add    | Phone Number :      | phone     |                      |            |

Form Header

|                 |                 |                     |                   |  |  |
|-----------------|-----------------|---------------------|-------------------|--|--|
| Date Of Visit : | Symptoms seen : | General Diagnoses : | Chief Complaint : |  |  |
|-----------------|-----------------|---------------------|-------------------|--|--|

Detail

|        |      |     |    |        |              |
|--------|------|-----|----|--------|--------------|
| v_date | symp | dig | cc | Drug : | Health       |
|        |      |     |    |        | Test/Results |

Exit

Form Footer

Figure 3.10 The visit info form of one patient

Form

File Edit View Insert Format Tools Window Help

Form Header

Detail

|               |        |                     |           |                      |            |
|---------------|--------|---------------------|-----------|----------------------|------------|
| Patient Id :  | pid    | Date Of Birth :     | dateofbrn | Allergies :          | allergies  |
| Blood Group : | blood  | Registration Date : | reg_date  |                      |            |
| Name :        | name   | Sex :               | sex       | Date Of Next Visit : | next_visit |
| SurName :     | s_name | Referred BY :       | ref       |                      |            |
| Address :     | add    | Phone Number :      | phone     |                      |            |

Form Header

|                 |                 |                     |                   |  |  |
|-----------------|-----------------|---------------------|-------------------|--|--|
| Date Of Visit : | Symptoms seen : | General Diagnoses : | Chief Complaint : |  |  |
|-----------------|-----------------|---------------------|-------------------|--|--|

Detail

|        |      |     |    |        |              |
|--------|------|-----|----|--------|--------------|
| v_date | symp | dig | cc | Drug : | Health       |
|        |      |     |    |        | Test/Results |

Exit

|              |          |
|--------------|----------|
| First Record | Previous |
| Last Record  | Next     |

Form Footer

Figure 3.11. The visit info form of all patients

The visit info form gives the detail information about the patient's previous visits and also when is the patient's next visit due. Now if the user wants to see the drug, health or tests information of the selected patient, simply click on the buttons and get the information.

The screenshot shows a Microsoft Access window titled "Microsoft Access - [drug - form]". The window displays a form with the following structure:

- Form Header:** A dark grey bar with the text "DRUG INFORMATION" in white.
- Detail:** A section containing a list of fields, each with a label and a corresponding input field:
  - Patient ID (p id)
  - Recommendation Date (r date)
  - Drug Name (drug name)
  - Dose (dose)
  - Frequency (frequency)
  - Starting Date (date start)
  - Ending Date (date end)
  - Reason For Stopping (reason stop)
  - Number Of Refills (no refill)
  - Run Out Date (run out date)
- Form Footer:** A dark grey bar at the bottom of the form.

Figure 3.12. Drug information form

The screenshot shows a Microsoft Access form window titled "Microsoft Access - [Health Form]". The form is divided into several sections:

- Form Header:** Contains the title "General Health Condition".
- Data:** Contains a grid of input fields for patient and health data.
 

| p_id   |        | v_date           |             |
|--------|--------|------------------|-------------|
| Head   | head   | Weight           | weight      |
| Eye    | eye    | Heart Rate       | hr          |
| Ear    | ear    | Respiratory Rate | rr          |
| Nose   | nose   | Temperature      | temperature |
| Throat | throat | Blood Pressure   | bp          |
| Teeth  | teeth  |                  |             |
- Notes On Health Condition:** Contains a text box labeled "c\_notes".
- Form Footer:** Contains a small icon.

The form also features a standard Microsoft Access menu bar (File, Edit, View, Insert, Format, Tools, Window, Help) and a toolbar with various icons for navigation and editing.

Figure 3.13 Health information form

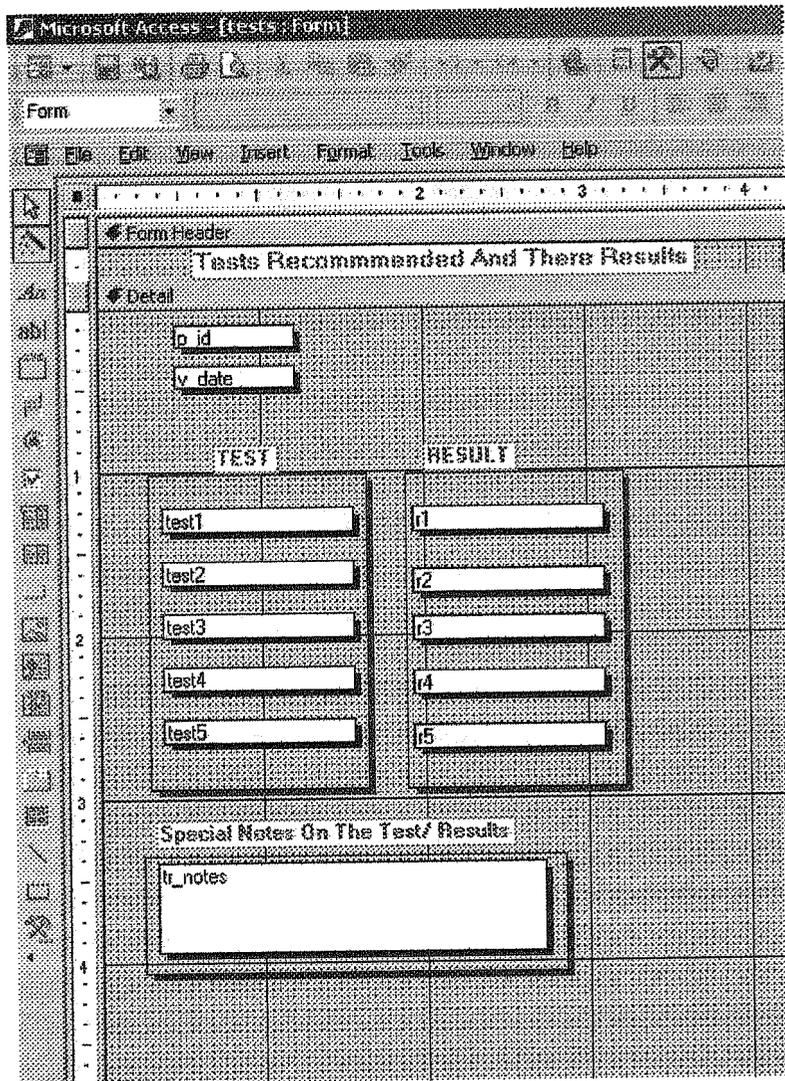


Figure 3.14. Test Information form

### 3.1.5 The Update Menu

The structures and design's of the forms are same in the update menu, the only difference is that user can update the records or the information about the patients:

This is the last menu which is dealing with the forms in the next menu there are only reports of patient's history.

### 3.1.7 The Report Menu

In this menu only three forms are used; if user wants to get report about some particular patient the user must have to select patient's id from the select dialogue forms to process report;

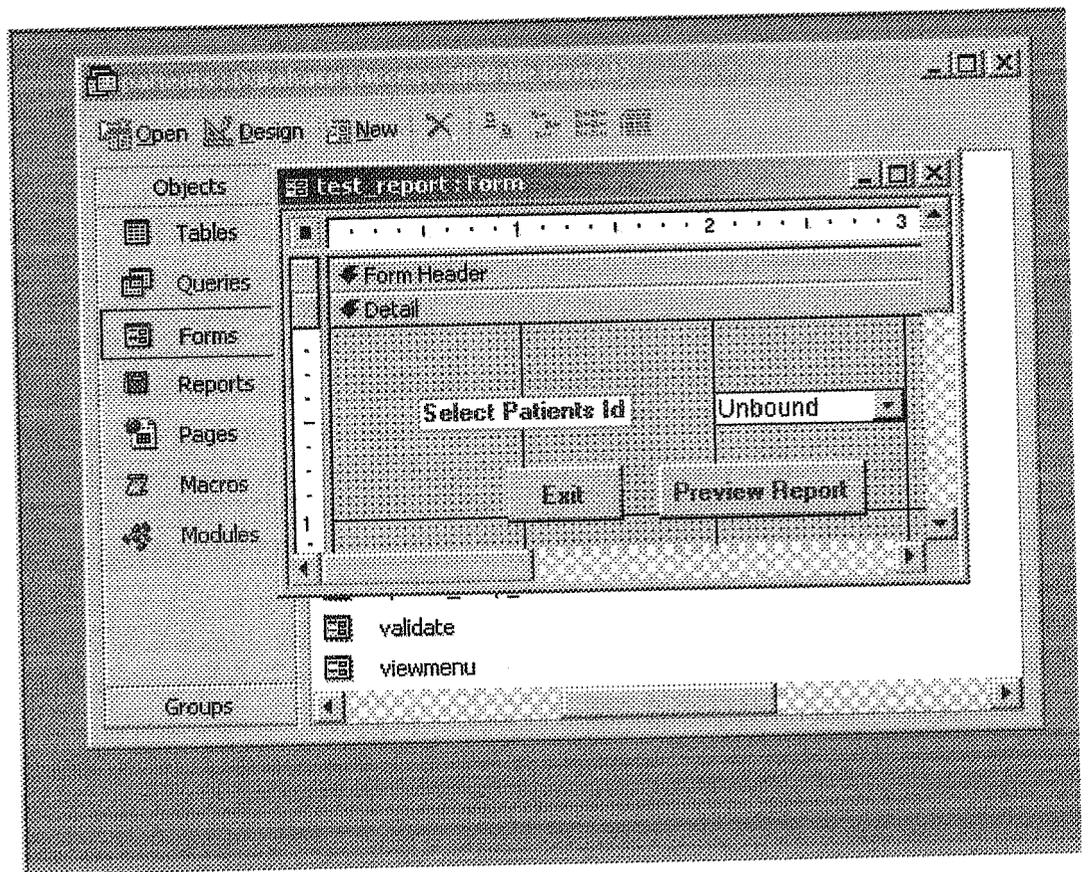


Figure 3.15 Select patient's id to preview tests report of one patient

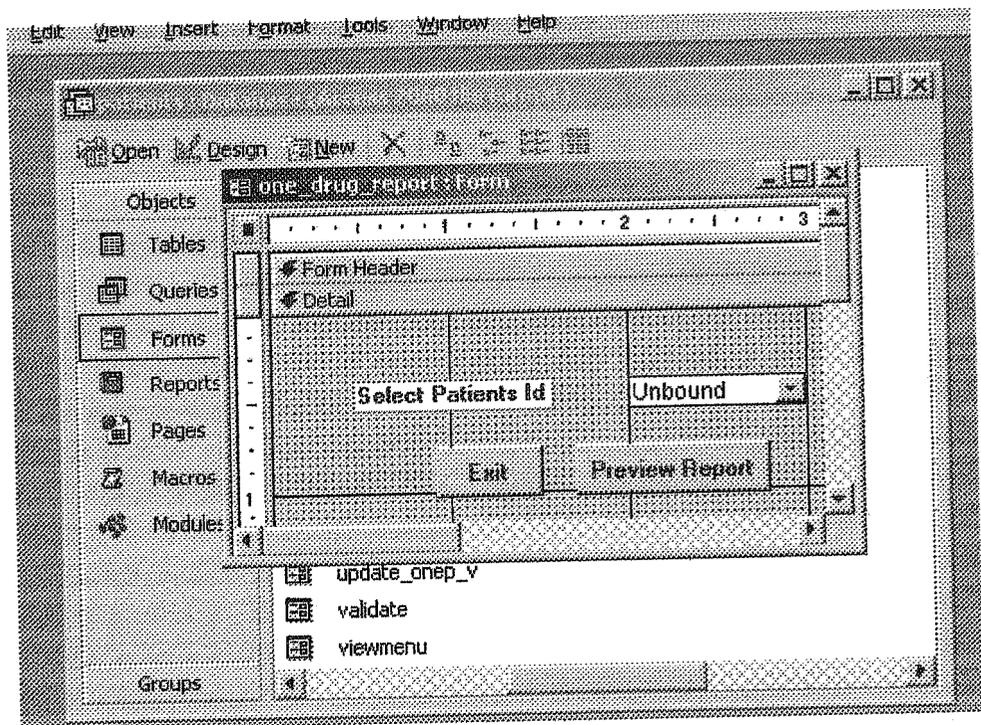


Figure 3.16 Select patient' s id to preview drugs report of one patient

### 3.2 Building Reports

As seeing information in black and white is the most traditional method of reporting that's why even in this advanced information technological era man wants to have solid results on the paper, also in the field of medicine where most of the time one doctor recommends the patients to other one, in stages like this the brief reports about the medical history of the patient is important.

Here I have designed four basic reports which are as follows:

1. The first report gives brief history of all the patients.
2. The second report gives the history of a particular patient.
3. The third report gives the drug history of a particular patient.
4. The third report gives the test's history of a particular patient.

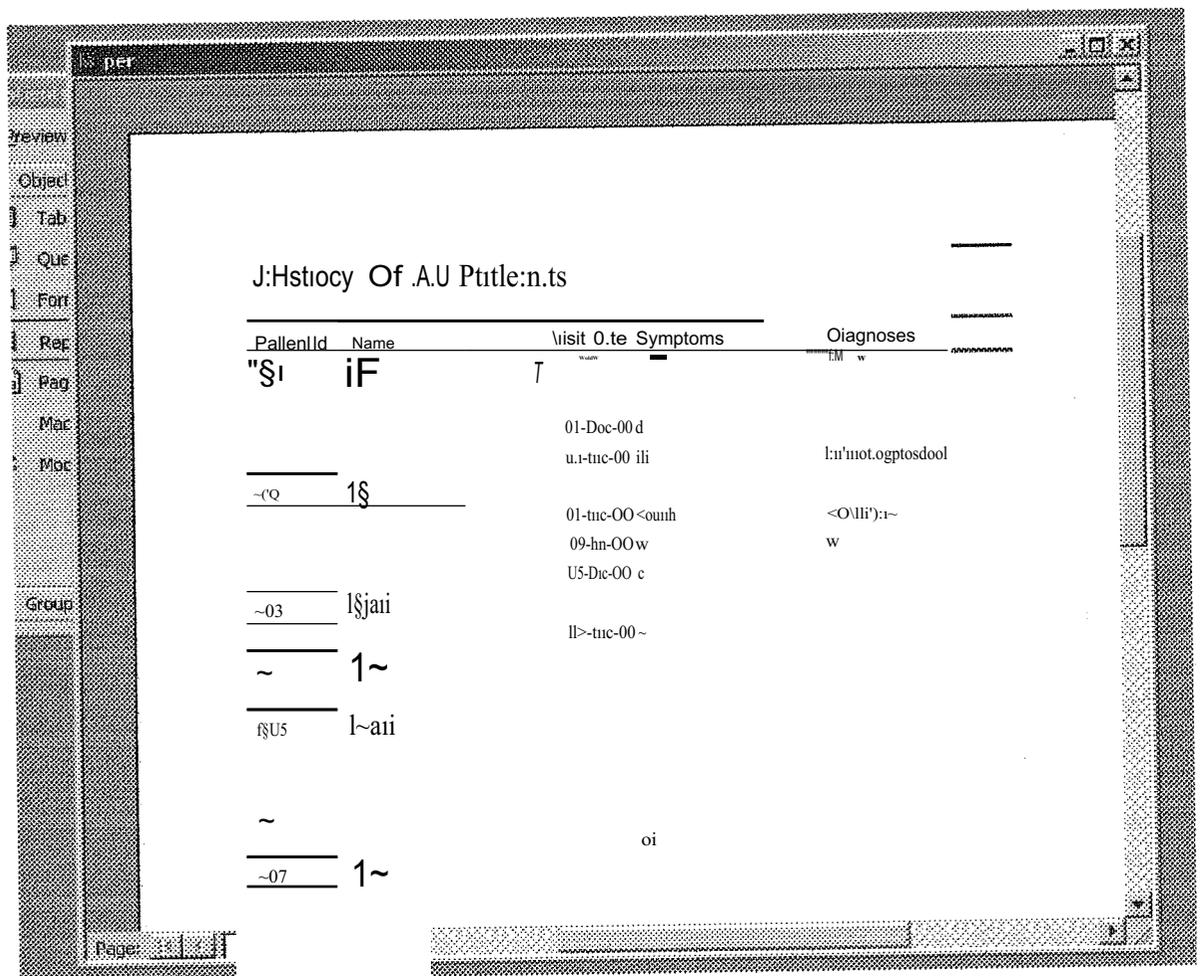


Figure 3.16. All patients brief history report

per

*History of mwm*

| <b>M</b> | <b>Blood Group</b> | <b>Visit Date</b> | <b>Symptoms</b> | <b>Diagnoses</b>     |
|----------|--------------------|-------------------|-----------------|----------------------|
| 0001     | c+                 |                   |                 |                      |
|          |                    | D1-011D           |                 | 0                    |
|          |                    | D2-0e01D III      |                 | Iate ti g: 1D, c1001 |

Page: 1

Figure 3.17 history of one patient

star  
CJ  
~  
~

blood  
blwl

Figure 3.18. Test's history of one Patient

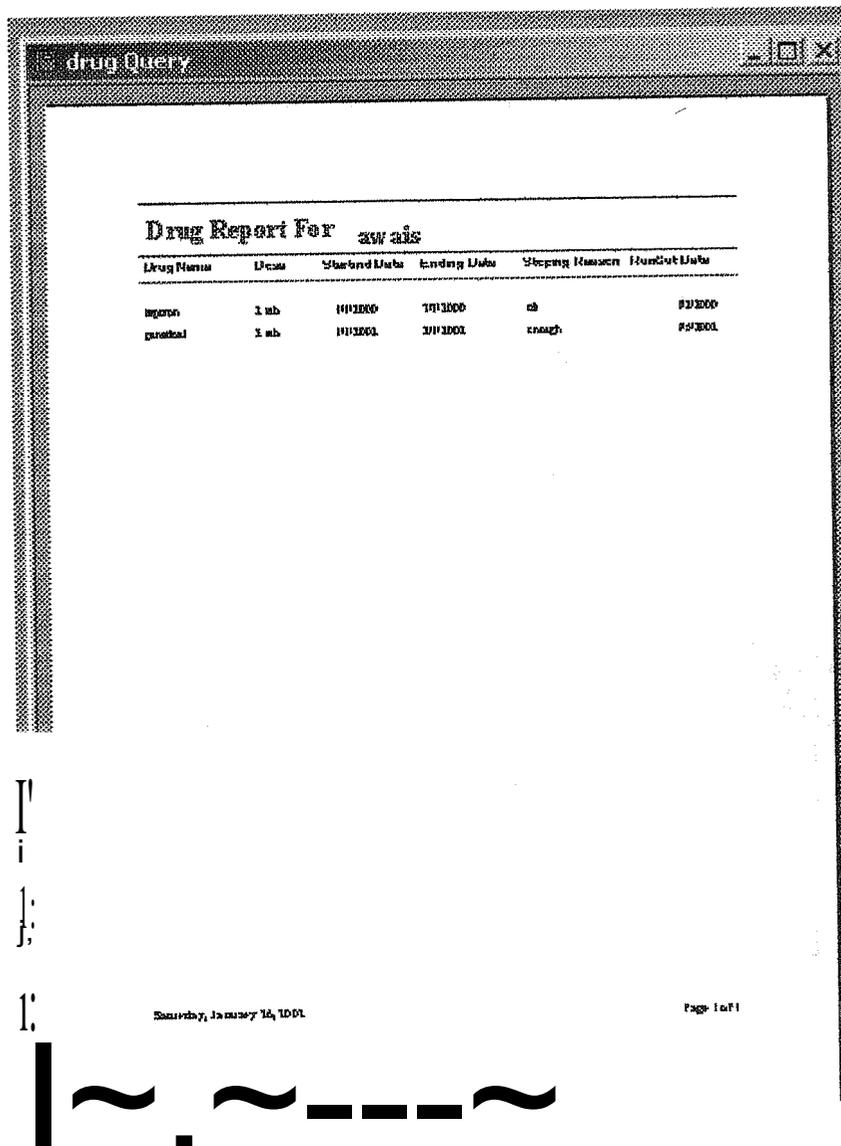


Figure 3.19. Drug history of one patient

## CHAPTER FOUR

### BUILDING THE INTERFACE .CODE

#### 4.1 The Macros

The macros are one of the most powerful features of MS Access. Different sets of macros can perform various useful functions like updating, deleting, closing, and opening the forms within different situations.

There are 15 basic macros used in this application to do simple jobs in less time. The macros are as follows.

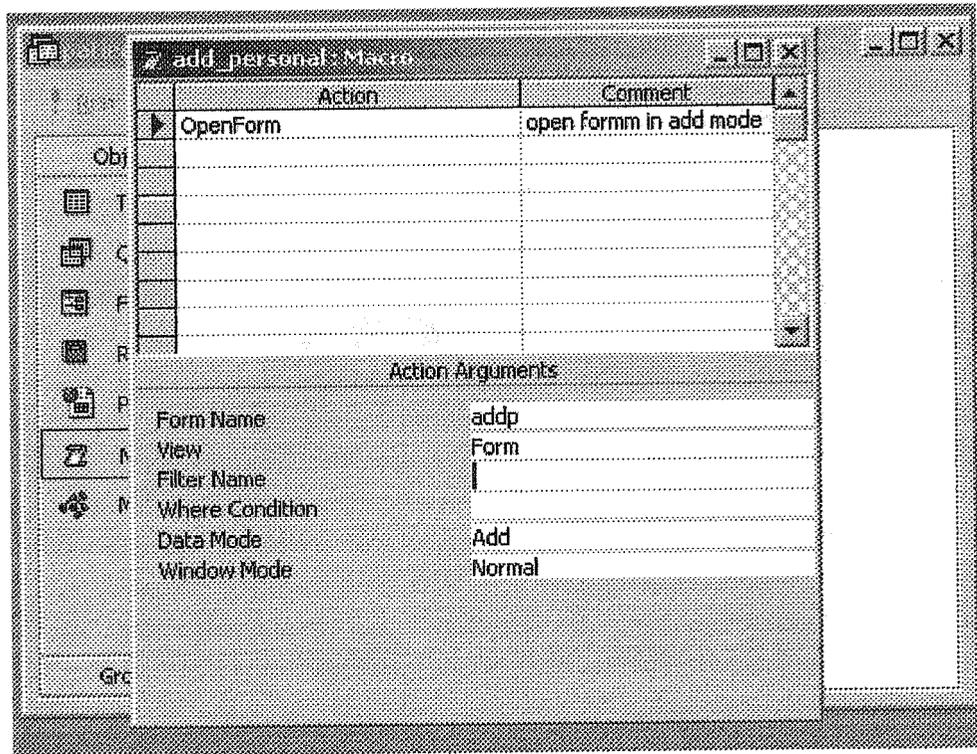


Figure 4.1.

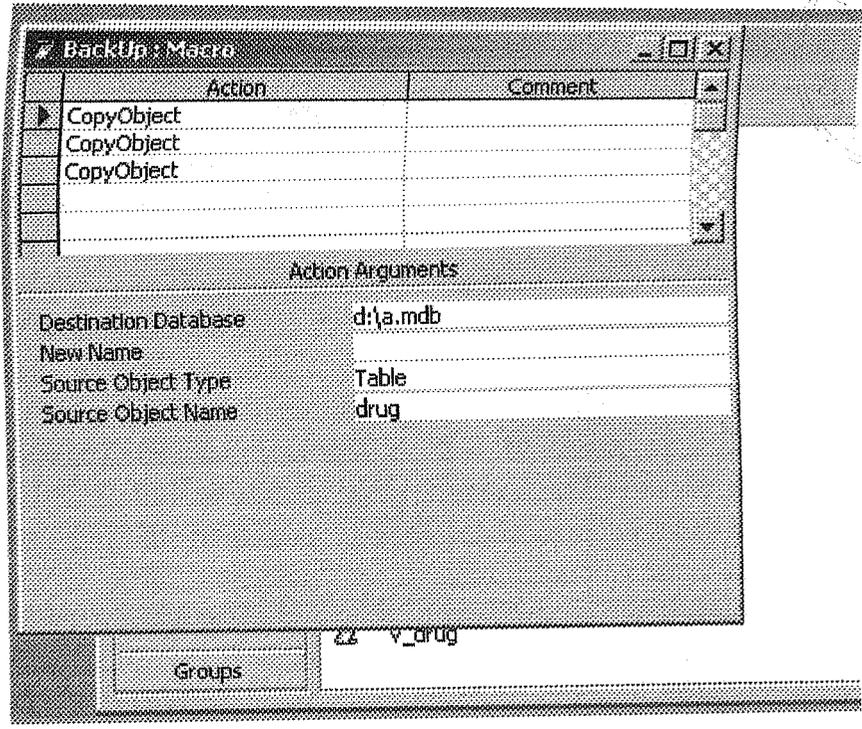


Figure 4.2.

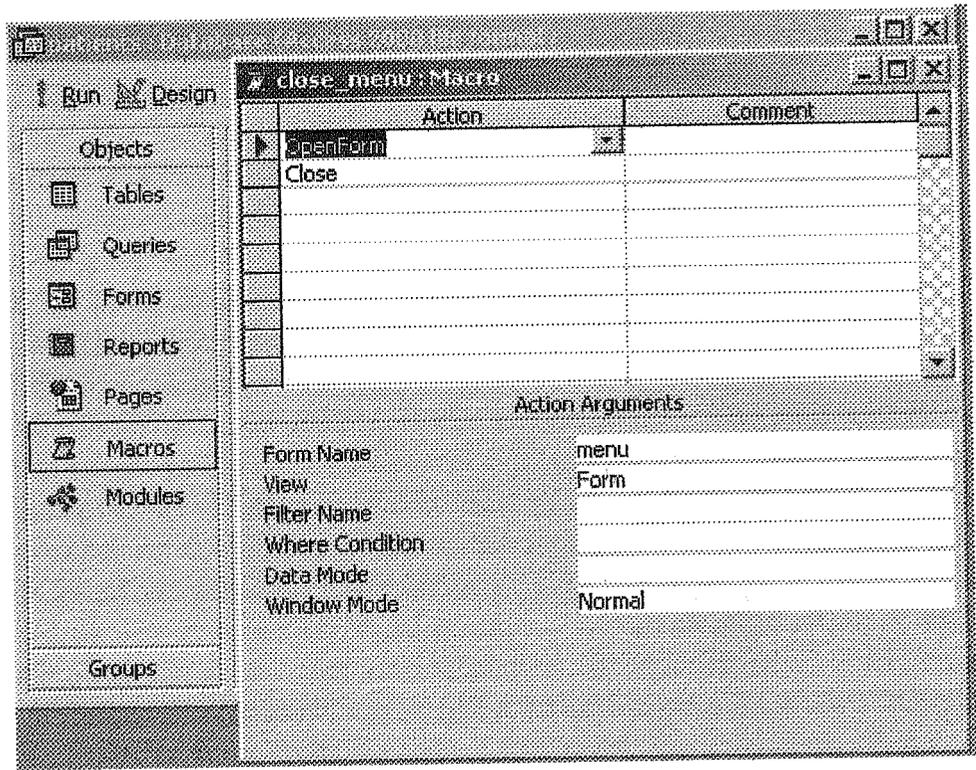


Figure 4.3.

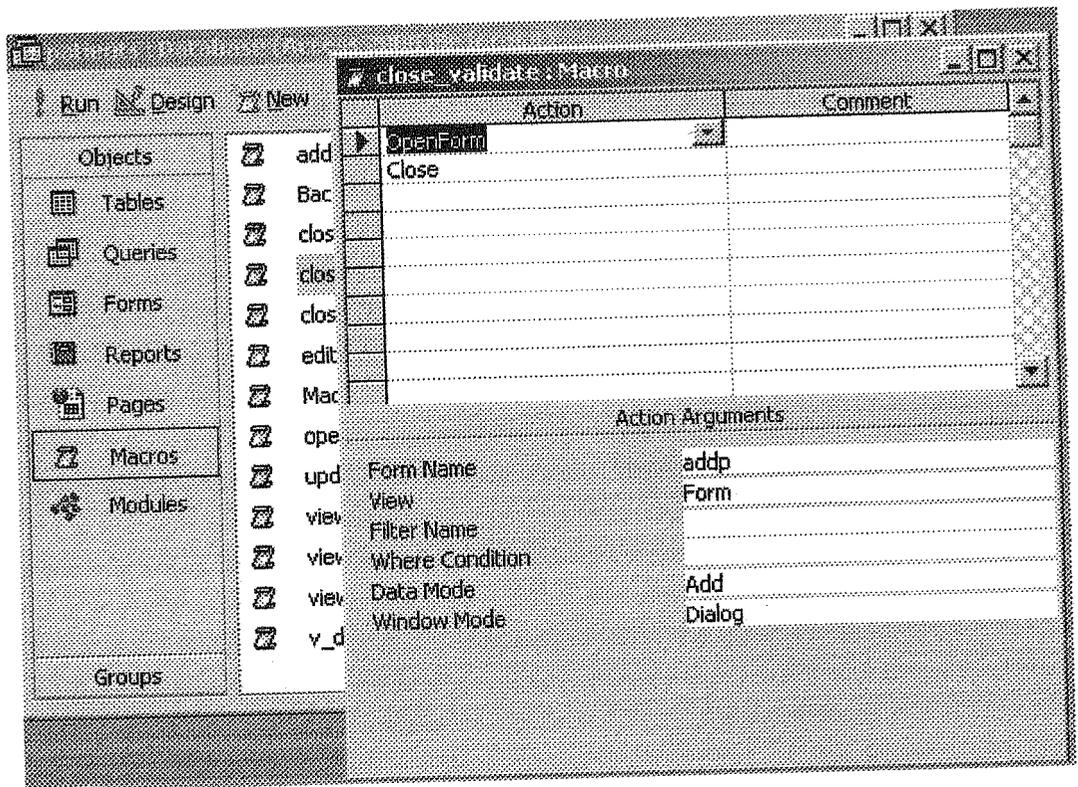


Figure 4.4.

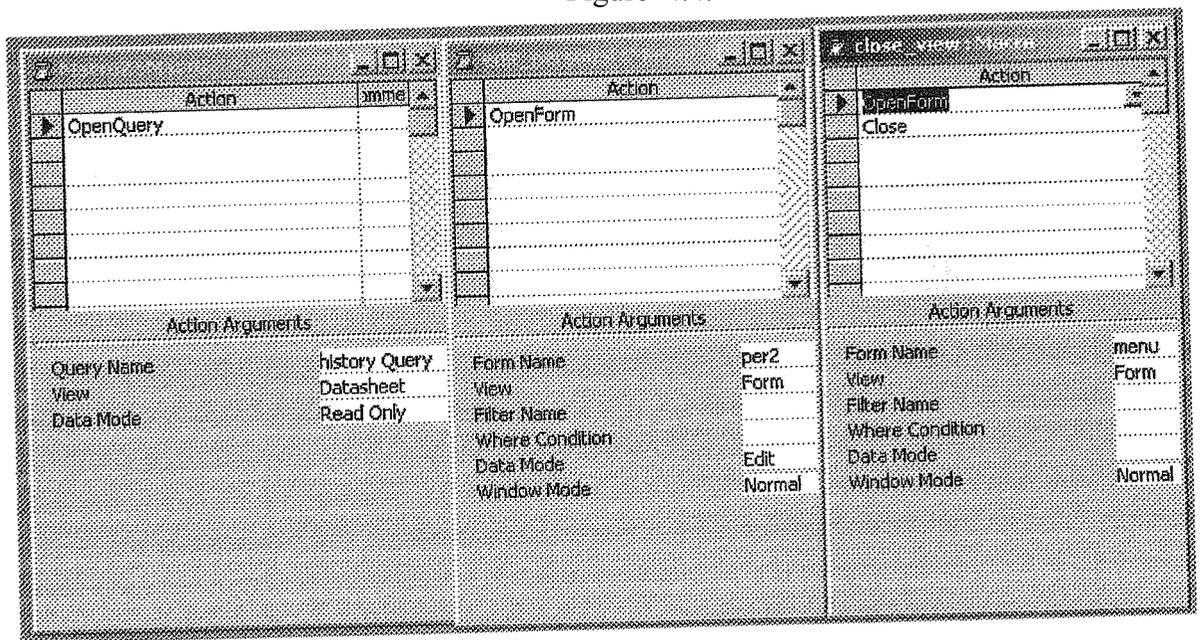


Figure 4.5.

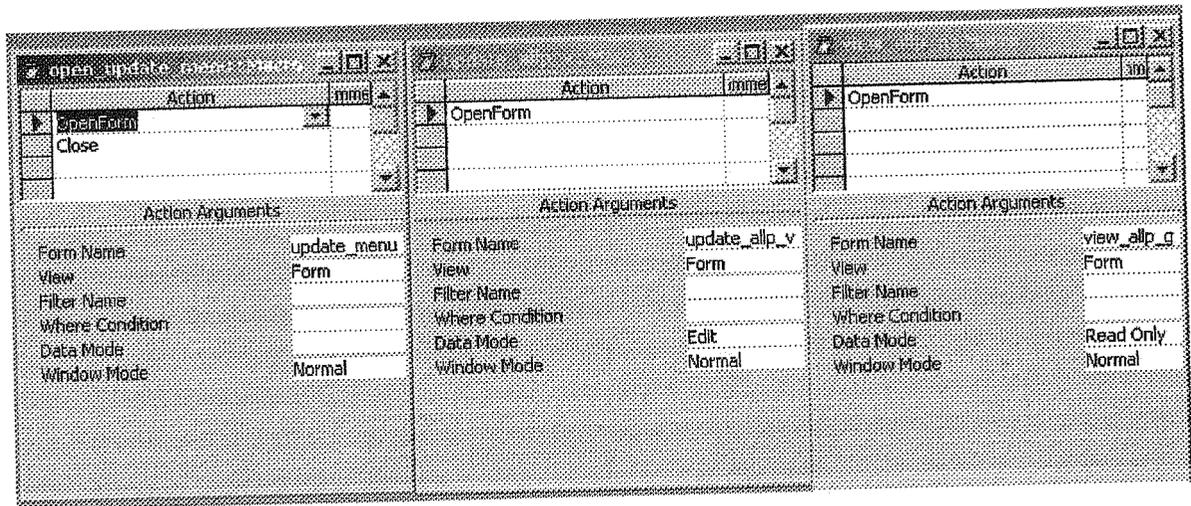


Figure 4.6.

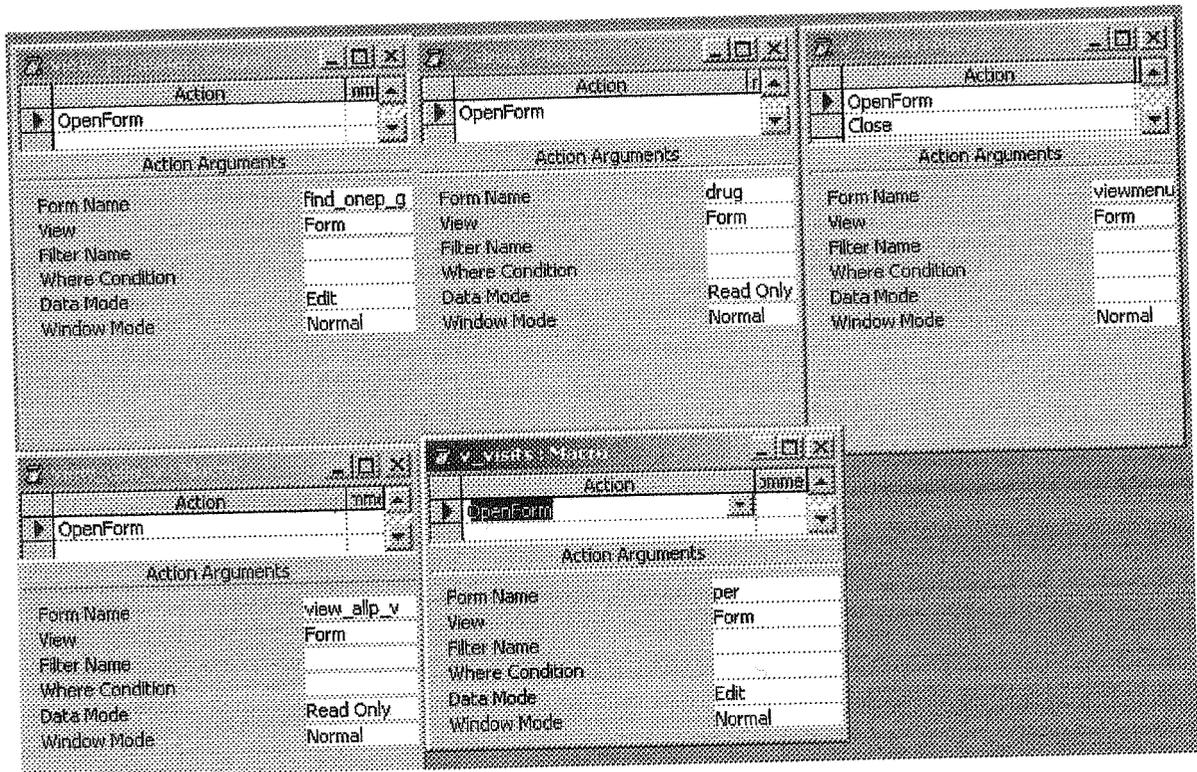


Figure 4.7.

## 4.2 Building Modules

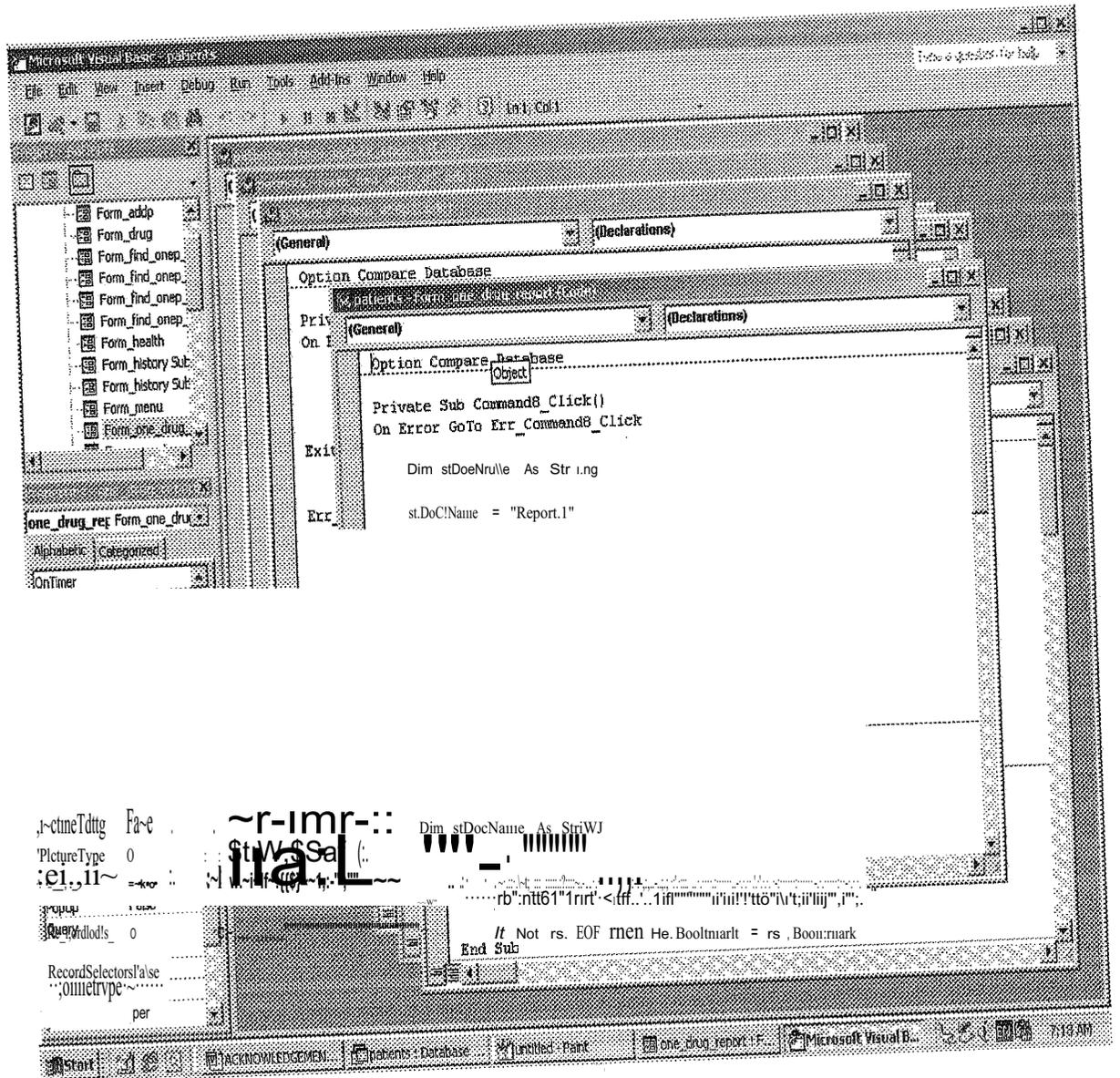


Figure 4.8. The VBA (visual basic for applications) environment

There are no separate modules used in this application to perform any particular function, but there is code used behind the forms and reports for performing functions like searching, populating the combo boxes, validating the input etc.

#### 4.2.1 CodeBehind TheForms

First let us see the important code tJehimUh.e menus. First' the code behind the main

menu,

```
Private Sub cmdclose_Click()
On Error GoTo Err_cmdclose_Click
A = MsgBox("Do You Want To Backup Ur Data " & vbExclamation + vbYesNo,
"BackUp")
If A = vbYes Then
stDocName = "BackUp"
DoCmd.RtnMacro stDocName
DoCmd.Close
Else
DoCmd.Close
EndIf
Exit_cmdclose_Click:
ExitSub
Err_cmdclose_Click:
MsgBox Err.Description
Resume Exit_cmdclose_Click
EndSub
Private Sub Command19_Click()
On Error GoTo Err_Command19_Click
Dim stDocName As String
Dim stLinkCriteria As String
stDocName = "view Patient"
stLink.Criteria = "[p_id] & Me!ff ext16J.&."
DoCmd.OpenForm stDocName, , stLinkCriteria
Exit_Command19_Click:
ExitSub
Err_Command19_Click:
MsgBox Err.Description
```

```
Resume Exit_Command1_9_Click
```

```
EndSub
```

Now let us observe the important code working behind the buttons of view menu.

```
Private Sub Command4_Click()
```

```
On Error GoTo Err_Command4_Click
```

```
Dim stDocName As String
```

```
Dim stLinkCriteria As String
```

```
stDocName = "per"
```

```
DoCmd.OpenForm stDocName, , stLinkCriteria
```

```
Exit_Command4_Click:
```

```
Exit Sub
```

```
Err_Command4_Click:
```

```
MsgBox Err.Description
```

```
Resume Exit_Command4_Click
```

```
EndSub
```

```
Private Sub Command6_Click()
```

```
On Error GoTo Err_Command6_Click
```

```
Dim sIDocName As String
```

```
Dim stLinkCriteria As String
```

```
stDocName = "view_aHp_g"
```

```
DoCmd.LOpenForm stDocName, , stLinkCriteria
```

```
Exit_Command6_Click:
```

```
Exit Sub
```

```
Err_Command6_Click:
```

```
MsgBox Err.Description
```

```
Resume Exit_Command6_Click
```

```
EndSub
```

Now the code for update and report menus is as under.

```
Private Sub cmd1_Click()
```

```
On Error GoTo Err_cmd1_Click
```

```
Dim stDocName As String
```

```

Dim stLinkCriteria As String
stDocName = "personal Queryn
DoCmd.OpenForm stDocName,,, stLinkCriteria

Exit_cmd1_Click:
ExitSub

Err_cmd1_Click:
MsgBox Err.Description
Resume Exit_cmd1_Click

End Sub

Private Sub Command19_Click()
On Error GoTo Err_Command19_Click

Dim stDocName As String
Dim stLinkCriteria As String
stDocName = "view Patient"
stLinkCriteria = "[p_id]=" & "" & Me[Text16] & ""
DoCmd.OpenForm stDocName,,, stLinkCriteria

Exit_Command19_Click:
ExitSub

Err_Command19_Click:
MsgBox Err.Description
Resume Exit_Command19_Click

EndSub

```

Now let us describe the see the code working behind the major controls of all the other forms, like the code behind the combo box selection etc;

```

Private Sub pJd_AfterUpdate()
OnError GoTo err_a

err_a:
A = MsgBox("This Id is Previously Used Please Enter Other Id", vbInformation)

Me.p_id.SetFocus

EndSub

```

```

Private Sub Command14_Click()
    On Error GoTo Err_Command14_Click
    Dim stDocName As String
    Dim stLinkCriteria As String
    stDocName = "validate"
    stLinkCriteria = "[P:_Jd]="" & "" & Me!{p_id} & ""
    DoCmd.OpenForm stDocName, , , stLinkCriteria
Exit_Command14_Click:
    Exit Sub
Err_Command14_Click:
    MsgBox Err.Description
    Resume Exit_Command14_Click
End Sub

Private Sub Combo3;...AfterUpdate()
    ' Find the record that matches the control.
    Dim rs As Object
    Set rs = Me.Recordset.Clone
    rs.FindFirst "[EP:....id] = " & Me[Co:miboB] & ""
    If Not rs.EOF Then Me.Bookmark = rs.Bookmark
End Sub

Private Sub Command11_Click()
    On Error GoTo Err_Command11_Click
    Dim stDocName As String
    Dim stLinkCriteria As String
    stDocName = "tests"
    stLinkCriteria = "[v_date]="" & "" & Me![v_date] & ""
    DoCmd.OpenForm stDocName, , , stLinkCriteria
    Me.AllowEdits = False
Exit_Command11_Click:
    Exit Sub
Err_Command11_Click:

```

```

MsgBox "There is no record for this date", vbCritical
Resume Exit_Command 11_Click
End.Sub
Dim stDocName As String
Dim stLinkCriteria As String
stDocName= "health"
stLinkCriteria = "[v_dateJ=" & "#" & Me] v_date J & "#"
DoCmd .OpenForm stDocName, , , stLhikCriteria
Exit_Command12 _Click:
Exit.Sub'
Err_Command12 _Click:
MsgBox "There l&No Record For This Date. vbCritical
Resume Exit_Command 12_Click
EndSub...
Private Sub Command13 _Click()
On Error GoTo Err_Command13:..._Click
Dim stDocName As String
Dim stLinkCriteriaAs String
stDocName = "drug"
stLinkCriteria = lt[r_datej=" & "#1 & Me![v_date] & "#1
DoCmd.Ope.nFom1 stDocName, , , stLinkCriteria
Exit:...Command13_ CHek:
Exit Sub
Err_Command13 Click:
MsgBox Err.Desception
Resurae Exit_CommandJ 3:_Click
EndSub
Pdivate Sub Command1O.:_CHck()
On Error GoTo Err_Command1O _Click
Dim sfDocName As String

```

```

stDocName = "history_one"
DoCmd.OpenReportstDocName~ acPreview
Exit_Command10_Click:
ExitSub'
Err_Command10_Click:
MsgBox Err.Description
Resume Exit_Command10_Click
EndSub
Private Sub Combo3_AfterUpdate()
' Find the record that matches the control
Dim rs As Object
Set rs = Me.RecordsetClone
rs.FindFirst "[pjd] = '" & Me![Combo3] & "'"
IfNot rs.EOF Then Me.Bookmark = rs.Bookmark
EndSub
Private Sub Combo4...AfterUpdate()
' Find the record that matches the control.
Dim rs As Object
Set rs = Me.Recordset.Clone
rs.FindFirst "[p_id] = '" & Me![Combo4] & "'"
IfNot rs.EOF Then Me.Bookmark = rs.Bookmark
EndSub
Private Sub Combo6_AfterUpdate()
' Find the record that matches the control
Dim rs As Object
Set rs = Me.Recordset.Clone
rs.FindFirst "[p_id] = '" & Me![Combo6] & "'"
IfNot rs.EOF Then Me.Bookmark = rs.Bookmark
EndSub
Private Sub Combo11_AfterUpdate()
' Find the record that matches the control.

```

```

Dim rs As Object
Set rs = Me.Recordset.Clone
rs.FindFirst "[p_id] = " & Me![Combol 1] & ",",
IfNot rs.EOF Then Me.Bookmark = rs.Bookmark
End Sub
Private Sub List18_AfterUpdate()
' Find the record that matches the control.
Dim rs As Object
Set rs = Me.Recordset.Clone
rs.FindFirst "[p_id] = " & Me![List18] & ",",
IfNot rs.EOF Then Me.Bookmark = rs.Bookmark
EndSub
Private Sub Command27_Click()
On Error GoTo Err_(Command27_Click)
Dim rs As Object
Me.Refresh
Set rs = Me.Recordset.Clone
rs.FindFirst "[p_id] = " & Me![txt1] & ",",
If rs.EOF And rs.BOF Then
MsgBox "kkksksks"
EndIf
IfNot rs.EOF Then Me.Bookmark = rs.Bookmark
Exit_Command27_Click:
Exit Sub
Err_Command27_Click:
MsgBox Err.Description
Resume Exit_Command27_Click
EndSub
Private Sub Command28_Click()
On Error GoTo Err_Command28_Click
DoCmd.GoToRecord , , acLast

```

```

Exit_Command28 _Click:
    Exit Sub
Err_Command28 _Click:
    MsgBox Err.Description
    Resume Exit_Command28 _Click
EndSub
Private Sub Command30 _Click()
On Error GoTo Err_Command30 _Click
    Dim stDocName As String
    Dim stLinkCriteria As String
    stDocName = "addp"
    stLinkCriteria = "[p:_id]=" & "" & Metjxtn] & ""
    DoCmd.OpenForm stDocName, , , stLinkCriteria
Exit_Command30 _Click:
    ExitSub
Err:Command30 _Click:
    MsgBox Err.Description
    Resume Exit_Command30 _Click
End Sub
Private Sub' (.)Command33 _CHck()
On Error GoTo Err_Command33 _Click
    Dim stDocName As String
    Dim stLinkCriteria As String
    stDocName = "Formr"
    DoCmd.OpenForm stDocName,, , stLinkCriteria
Exit_Command33 _Click:
    Exit Sub
Err_Command33 _Click:
    MsgBox Err.Description
    Resume Exit_Command33 _Click
End Sub

```

### 4.3 Queris

This application contains four queries to output reports for a particular patient, getting information from a combo box and sending it to report eriteria.

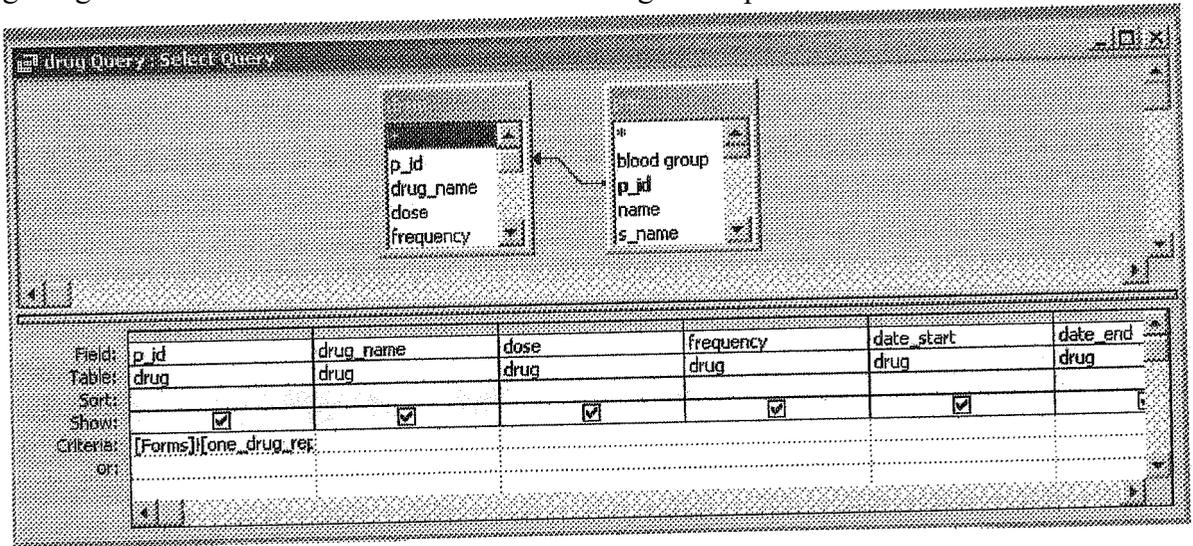


Figure 4.9.

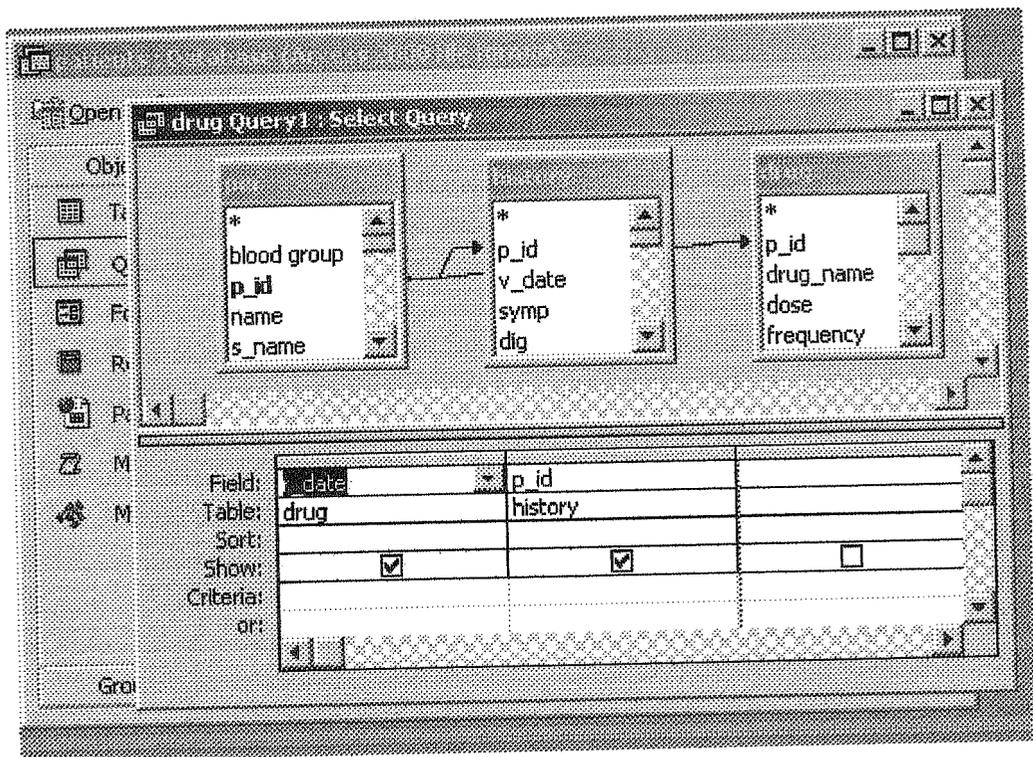


Figure 4.10.

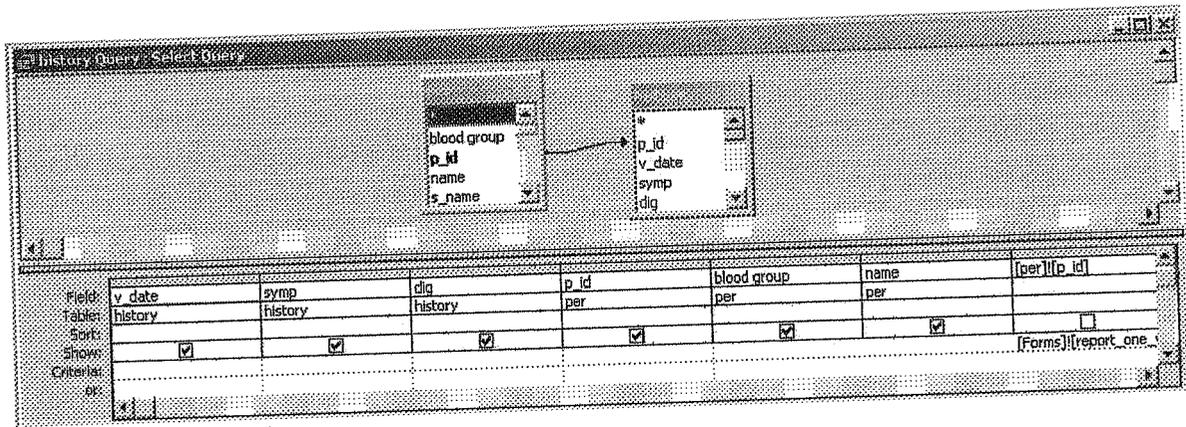


Figure 4.11.

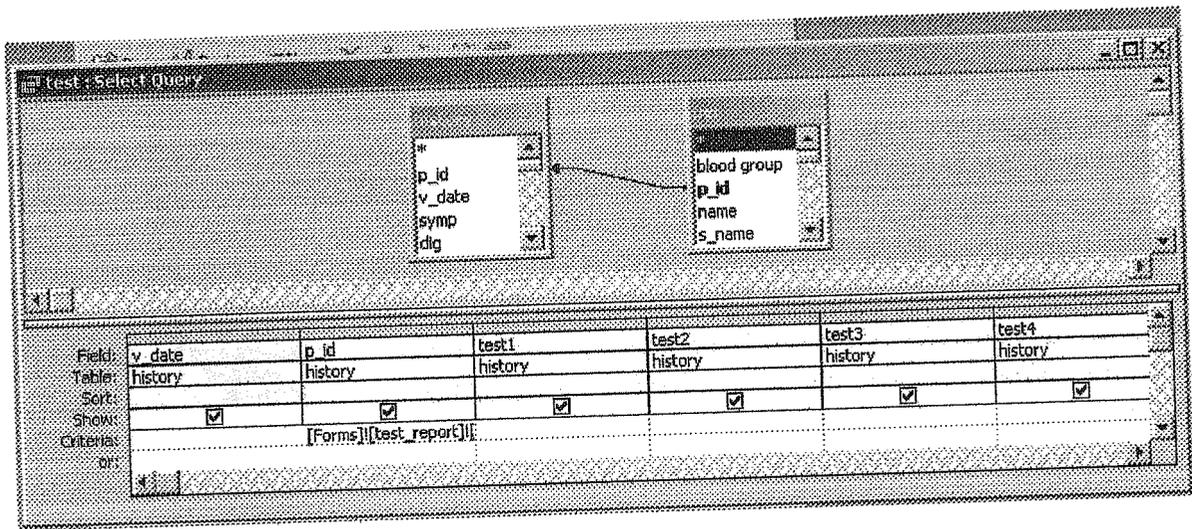


Figure 4.12.

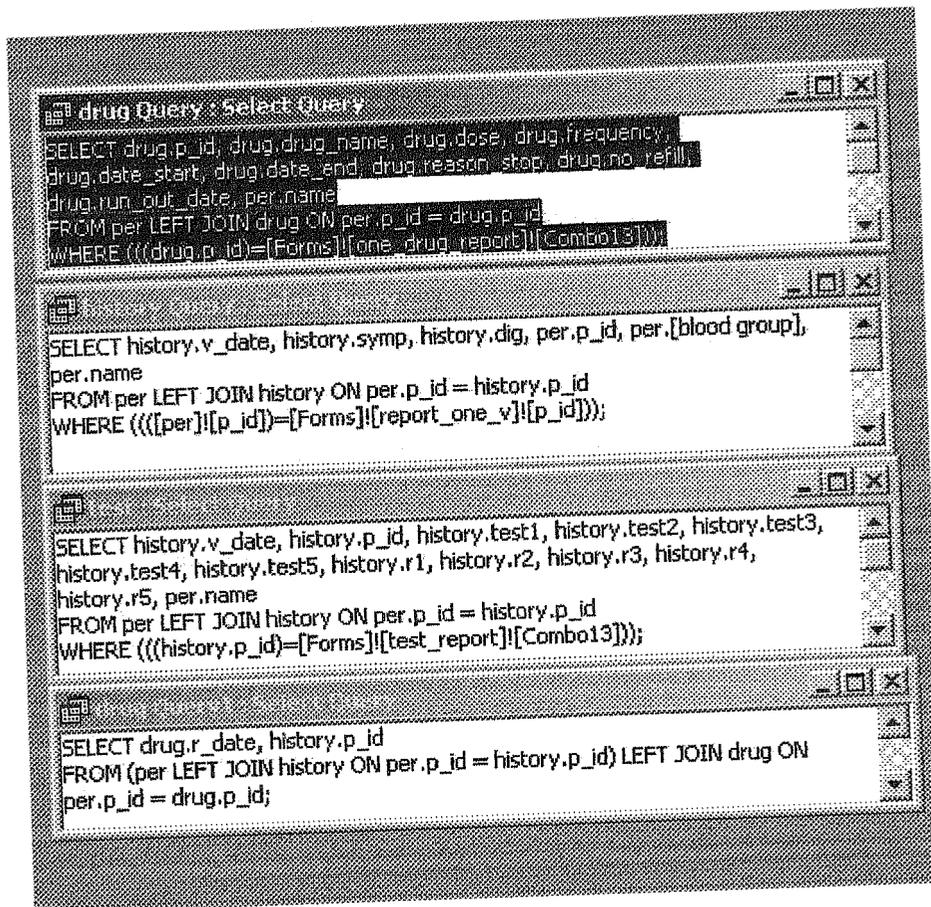


Figure 4.13 The SQL view of queries

## CONCLUSION

The computers have become a vital part of our life, and the solutions provided by the advancement of it are not only complete but also helpful.

The program developed by me is not the perfect solution for a medical system but it can help many doctors keep track of the things. Many objects can be included in this application. It can be developed in Visual Basic as front end and Access as back end database system, which will provide much more stability in user interface design.

Access 2000 has emerged as an exciting new version of Microsoft's venerable Office database component. The new features in Access 2000 gives Access developers a common development environment with Excel, Word, and PowerPoint developers. It will now be easier than ever for Access developers to build cross-component applications that draw on the best of two or more Office components.

The Object Browser can help Access developers learn and apply the object models from these other applications

Despite the fresh interface the VBE delivers, you can see that under the covers you still have familiar procedures, modules; and debugging tools. The VBE changes how you interface with these development tools--not their basic availability.

I want to remark that Access 2000 is a major upgrade in several important areas. The new VBE is just the tip of the iceberg. These are the new ADO models and the new database format. Both of these can have profound effects on how you work with Access.

A Microsoft Access table can contain up to 32 indexes. Very complex tables that are a part of many relationships may exceed the index limit, and you won't be able to convert the database that contains these tables. Version 3.5 of the Microsoft Jet database engine creates indexes on both sides of relationships between tables,

This application can be made a multi tier, far servers like MS SQL server, because Access supports only maximum number of 10 users, On the other hand SQL server supports more than 30 users at same time.

This application is not fully secure yet, but it could be made secure by using tools of access and also if made with SQL server it would be more secure,

But still this application can be used in the office of any doctor with little or no change, and that's what makes it great, is its simple and, stable design.

## REFERENCES

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- [2] <http://www.microsoft.com/access/acEnhast.asp?>
- [3] <http://www.microsoft.com/office/enhaccess.asp>
- [4] <http://www.geocities.com/SiliconValley/Park/7848/access.htm>
- [5] [http://www.google.com/search?q=graduation+projects+ /pub/pub4.html](http://www.google.com/search?q=graduation+projects+&pub/pub4.html)
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- [10] Beginning Access 2000 VBA by David Sussman, Robert Smith
- [11] Developing Client/Server Solutions with Microsoft Access 2000 Projects
- [12] Learn MS Access 2000 Programming by Example by Julitta Korol