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Faculty of Sciences Zulfi –Department Computer Science & Info

المملكة العربية السعودية
وزارة التعليم العالي
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HOSPITAL SYSTEM.

BY
Amal Ahmed AL-Odiab.
351204874

Supervised by
Dr. Sarah M. Eljack
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Abstract

Technology has made great advances in health, as technology in hospitals is the system that conducts the health process, and the presence of new technologies helps to improve the performance of health institutions by improving the quality of health services.

In today's era, with the advent of technology and information technology, people have had to participate in this development. The age should use its available tools in the development of the health field to highlight a more educated and more understanding generation associated with the modern age.

The aim of the study is to find out the impact of information systems on the quality of patients at Zulfi Hospital and the impact of these systems on the performance of hospital staff.

It aims to identify the most prevalent diseases in the hospital and the most drugs

Acknowledgment

First, thanks to my family for having the patience with me for having taking yet another challenge which decreases the amount of time I can spend with them., my mother, who has taken a big part of that sacrifice, my father, who share credit on every goal I achieve.

I would like to thank my university staff to all those who teach me in A college and give me the possibility to complete this report. A special gratitude I give to Supervisor, Dr. Sarah M. Eljack whose contribution in stimulating suggestions and encouragement, helped me to coordinate my project especially in writing this report

**MAJMAAH UNIVERSITY,
COLLEGE OF SCIENCE AL ZULFI,
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION**

(CERTIFICATE BY STUDENT)

This is to certify that the project titled “**HOSPITAL SYSTEM**” submitted by me (**Amal Ahmed AL-Odaib , 351204874**) under the supervision of **Dr. Sarah M. Eljack** for award of Bachelor degree of the Majmaah University carried out during the Semester 1, 2018-19 embodies my original work.

Signature in full:

Name in block letters: **Amal Ahmed AL-Odaib**

Student ID: 351204874

Date 27/ 11/ 2018

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Chapter 1 : Methodological framework research

1.1 Overview

Technology has greatly influenced the progress of the health field. Technology in hospitals has helped to manage the hospital system and to add an electronic management process to the health systems. This has helped to make decisions and to identify the weaknesses and strengths of the health system. By using technology, hospitals are able to be more specific to their requirements. It concerns the geographical location, the environment and the population Which aims to identify the most prevalent diseases in the hospital and most of the drugs that have been spent.

1.2 Abstract system description

The main idea of this project is to create an application program as an idea that the graduation project requires to serve Al-Zulfi hospital, citizens and residents.

As well as the establishment of a database for the hospital Zulfi that this project is the core of decision support systems and the extraction of statistics for the hospital for the coming years, God willing.

Al-Zulfi Hospital is facing a problem in knowing the statistics of the most prevalent diseases in the region and the most drug quantities distributed during the year to serve the citizens.

This project aims to establish a database for Al-Zulfi hospital so that such data - patients 'data, patients' reviews and treatments - will be available to manage the hospital.

Since the quality requirements of any health system requires that there be continuity of service recipients and follow-up and knowledge of the diseases that suffer from them in the community or the outside was necessary to establish a database of patients to communicate with them.

The communication with patients and the health staff of the hospital is one of the main hubs of feedback to know their opinions about the services provided to them and the difficulties encountered in the hospital so that it can be avoided through the development and provide programs to serve the recipients of the service.

It is also important to know which diseases are most prevalent in the environment near Zulfi Hospital and the most needed drugs in the area.

This will only come through the opinions of patients and reviewers, and this will not be known by the hospital except by linking data and information of appointments, clinics, and pharmacy database.

The hospital will not know what the needs of the community of programs and services they need, but through the extraction of statistics and reports through the database that we aim to develop.

Hence, the Zulfi Hospital database is a service provided by the hospital to the management and decision-makers to benefit both the hospital and the patients.

In this project we will try hard to develop and establish an effective system to facilitate the scientific follow-up of patients and patients and communicate with them and save time and effort and create statistics and reports to serve multiple users of the system.

The project purpose will analyze the work procedures of this system through (data collection, collection of forms, hospital visit, management interview, staff and monitoring of hospital work mechanism) for needs.

Also will also use modern techniques to program the system on the Internet and connect it with a database.

1.3 Problem definition :

The problem of this research is to know the quality of the health services provided by Al-Zulfi Hospital to citizens, whether Saudis or foreigners, whether the application of information systems and technology is a role in providing high quality of health to citizens or a role in improving the quality of health service provided by Zulfi Hospital.

1.4 Goals

1. Apply the information systems tools to provide a high Quality health service in the hospital.
2. Knowledge about the current management information systems of Al-Zulfi Hospital in Al-Zulfi Governorate affect the quality of the health Service provided by the hospital to citizens
3. Determine the relationship between the information systems used in The Hospital and satisfaction of patients from the hospital Zulfi Province.
4. Identify the most common diseases in Al-Zulfi Hospital in Al-Zulfi Governorate.
- 5- Identify the drugs are most commonly used in Al-Zulfi Hospital in Al-Zulfi Governorate.

1.5 Objectives of the study

The objectives of the study are as follows:

- 1.To Determine The effectiveness and type of the information systems used in Zulfi hospital.
- 2.To Recognize the importance of the health services quality in Zulfi hospital and the role of using the current systems.
3. To Identify the most common diseases in specific seasons at Al Zulfi Hospital.
4. To Identify the common and widely used drugs in Al Zulfi hospital.

1.6 Critical success factors

Planning is all administrative activities undertaken for the purpose of defining objectives for a project HOSPITAL DISEASES STATISTIC. And ways to achieve these goals. Project success depends to a large extent on good planning, so a poor planning is a key factor in project failure (Bakri 2009).

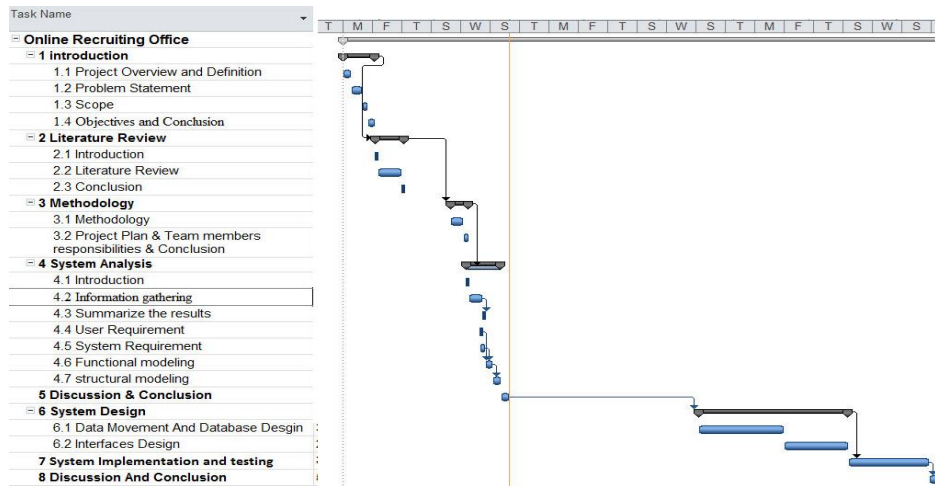
1.6.1 Planning activities

1. The Cost
The required costs in the proposed system are simple computer and internet.
2. Scope or Limits of the Project:
Extract reports and statistics at the Zulfi hospital for the most prevalent diseases and drugs and provide information to support the decision.
3. Project requirements and constraints
 - Human Resource: System Analyst, Database Programmer and Web Page Programmer.
 - Equipment: 2 computers.
 - Software: ASP.Net + Microsoft SQL Server.

Constraints: in this case be as follows: see figure (1)

- Cost: The cost of Hosting the site and the prize of the software used.
 - Time: Project time should not exceed 6 months (3 months analysis and 3 months Programming).
4. Project schedule
The project schedule is one semester and includes a theoretical aspect as follows:
 - Data collection two weeks.
 - Two weeks analysis.
 - Design one month.
 - Test a week.
 - Time adjustment is not specified (as required).
 5. Project criteria:
 - Use both (Microsoft SQL Server 2008 language) to create databases
 - Use Asp.net to connect to databases and interfaces)
 - The project must Run in the Internet environment
 6. Quality characteristics required
 - Confidentiality: maintainability and development according to the needs of the beneficiaries (doctors - patients - pharmacy staff - administration).
 - User Friendly : The system is also by ease of use through the multi-facades and easy to understand

The following map shows the planning of the project activities, the implementation schedule and the critical path.



Figure(1-1): Constraints.

1.7 General rules (assumption)

The study is based on a set of hypotheses that aim to answer the following questions:

- 1-Is there a correlation between the effectiveness of the information System within Zulfi Hospital and the quality of health services?
- 2-Is there a correlation between the information systems of Al-Zulfi hospital and the quality of information produced by the system?
- 3-Is there a correlation between the information systems at Al-Zulfi hospital and patients satisfaction?
- 4- Can the information systems used at Al Zulfi Hospital identify the most common diseases in the hospital?
- 5- Does the information system used in Zulfi hospital determine the most commonly used drugs in the hospital?

1.8 The importance of the study:

The importance of the study stems from the importance of the topic covered by the study. The research is concerned with the importance of information systems in Zulfi Hospital in Zulfi Governorate and the impact of these systems on the quality of health services and patients' satisfaction with the service provided to them, and the effectiveness of Zulfi hospital management in improving the information systems inside the hospital and knowledge of the most common diseases and the most common drugs.

1.9 Research Methodology:

The project team used the statistical methodology to study and analyze the data. (See appendix A&B).

1.9.1 Data Gathering

Data collection is the process of collecting and measuring information on the target variables in a systematic method. In this project we will use the following data collection methods:

1.Interview:

The researcher visited Al-Zulfi hospital and met with the hospital director and asked him about the information systems used in the hospital and the reports provided by these systems.

The researcher received a sample of doctors and asked them about the most cases of patients. The researcher collected the models used to dispense the treatments and schedule the patients.

2. Monitoring:

The researcher monitors the visibility of how the procedures work
The researcher monitored the reception department and monitored the scheduling of patients and how the work procedures

3. The Questionnaire

The researcher distributed the following questionnaire to a group of doctors, staff, patients. Since the project is considered a small enterprise it is appropriate for us to use the waterfall model in the research methodology

1.9.2 Waterfall Model

Waterfall Model After explaining how to get information and deal with it, the project will now talk about the style of the chivalry model, which is one of the most famous classical models found in software engineering literature, a model that arranges the basic processes in the production of flow programs⁽¹⁾. This model suggests that the production life cycle of the program goes through specific stages, Independent of each other, and sequentially. They discovered, of course, that this was not always possible, and introduced many modifications, producing other models, such as the Iterative and Component-based Model. But we chose this classic model because it is clearer and closer to the logic of the sequence of operations.

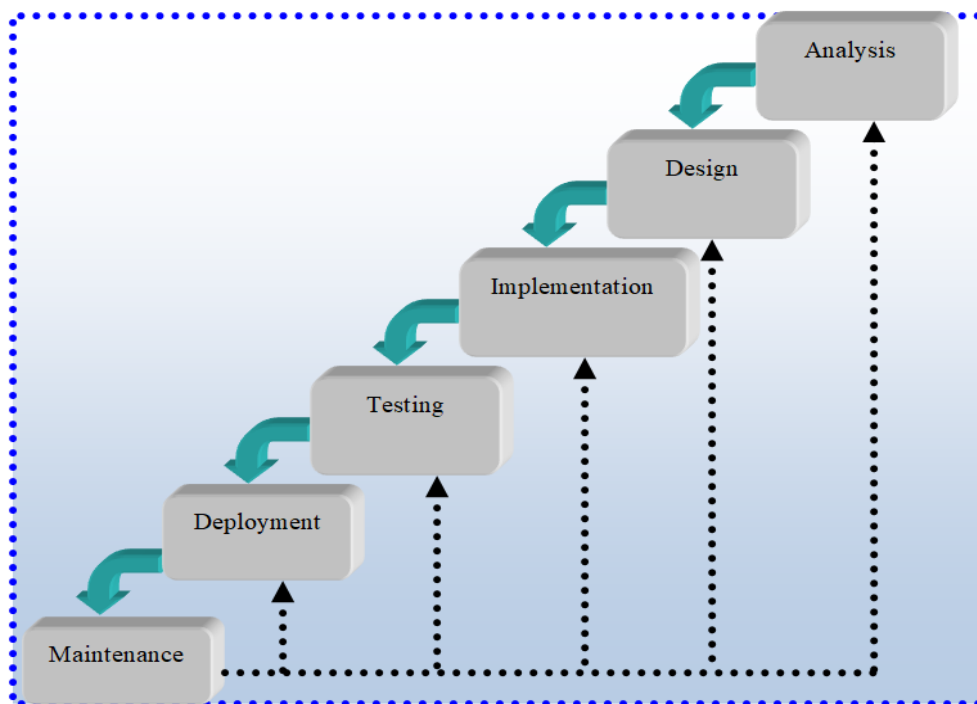


Figure (1-2) illustrates the cascade of the waterfall

(1) Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company.

As we observe, the model assumes that there are at least six operations (each representing an independent stage), which should be done in order to produce the application⁽²⁾. These operations are:

1. Analysis.
2. Design.
3. Implementation.
4. Testing.
5. Delivery.
6. Maintenance.

Analysis this semester began gathering information, Design and other stages it will be in the next semester.

The model also assumes that each phase ends completely (with a product) before the next stage begins. For example, the analysis ends with an SRS (System Requirements Specification) or system requirements specification. Now we will see what each stage means⁽³⁾.

1.10 The limits of the study:

1.10.1 Spatial boundaries

This research deals with the importance of information systems in Al Zulfi Hospital in Al Zulfi Governorate.

1.10.2 Human Boundaries:

This research deals with the staff of Al-Zulfi hospital and the sick patients and their families on the hospital.

1.10.3 Time Limits:

It started on 1439H.

1.10.4 Local borders:

The importance of information systems in Al-Zulfi Hospital to the quality of health services and satisfaction of patients about the services provided to them and support management with statistics on the most common diseases and the most used drugs.

(2) Kendall, Kenneth E., et al. *Systems analysis and design*. Vol. 4. New Jersey: Prentice Hall, 1992.

(3) Alter, Steven (2002) "Information Systems: A Management Perspective", 4th ed. n.y. the Benjamin/ Cummings publishing company, Inc, USA

1.11 Previous Studies:

The previous studies are important so that they contribute to providing the researcher with aspects that have received the attention of former researchers and thus facilitate the focus on other aspects did not pay enough attention and help to learn from the experience of others.

There are several previous studies related to the subject of information technology and its use in the health aspect.

The researcher Fayrouz Musleh Al-Damour discussed the impact of the use of information technology in Prince Hamza Hospital, an applied study on Jordanian hospitals. The study results indicate a positive relationship between information technology and organizational creativity. the work⁽⁴⁾. (1)

another study, researcher Samir Al-Qaisi said in the role of information technology in improving the decision-making process⁽⁵⁾. Case study: Princess Raya Jordan Hospital. The results of the study indicated that the use of information technology leads to improved decision-making. In the hospital towards the role of information technology in the effectiveness of administrative decision-making, attributed to sexExperience and qualifications, while there are differences due to age, career level and training courses. (2)

Also the researcher Anwar Al-Ruwaili spoke about ⁽⁶⁾"the impact of personal characteristics in the use of information technology in the central organs of public administration in the Kingdom of Saudi ArabiaAnd The results of the study revealed a positive relationship between personal characteristics and the use of information technology and a negative relationship between practical experience and information technology. (3)

And Mohammed Al-Jadayah said⁽⁷⁾: "The level of use of ICT tools and its impact on organizational performance in private hospitals in JordanThe results of the study found that there is a high level of use of ICT tools in the private hospitals sector, in addition to a positive correlation between the level of technology use and the performance of the work and the level of using systems and teamwork. (4)

(4) Fayrouz Musleh Al-Damour. " discussed the impact of the use of information technology in Prince Hamza Hospital." JOU Theses (2015).

(5)"Decision Support and Expert Systems: Manage Support System", Macmillan Publishing Company.

(6) Anwar Al-Ruwaili. . " the impact of personal characteristics in the use of information technology in the central organs of public administration in the Kingdom of Saudi Arabia." Business and Management Research 1.3 (2012):

(7) Mohammed Al-Jadayah said. " The level of use of ICT tools and its impact on organizational performance in private hospitals in Jordan." JOU Theses (2017).

Chapter 2 : System analysis

2.1 Introduction

Analysis is the basis that if you do not care, the system collapsed even after a while. Always the first step. What is built on invalid is invalid, and vice versa mostly.

The analysis phase can be summarized in two words: combination and understanding. Its purpose is to understand all the functions of the system clearly and accurately, with an understanding of all the constraints that the system should operate within⁽⁸⁾

In order to do so, you are gathering everything that can help this understanding. This includes any printed forms used manually, ie information from people directly in interviews or questionnaires, any regulations followed, and everything that can be inferred and observed, which cannot be collected by other means, either by observation or thinking! At this stage we will analyze the problem at Zulfi Hospital.

2.2 UML diagram

2.2.1 Class diagram

describe the static structure of a system. That shows project boundaries as a set of tasks with a hierarchical structure from top to bottom. In the following figure we find a general form organization chart and responsibility of each element of the system.

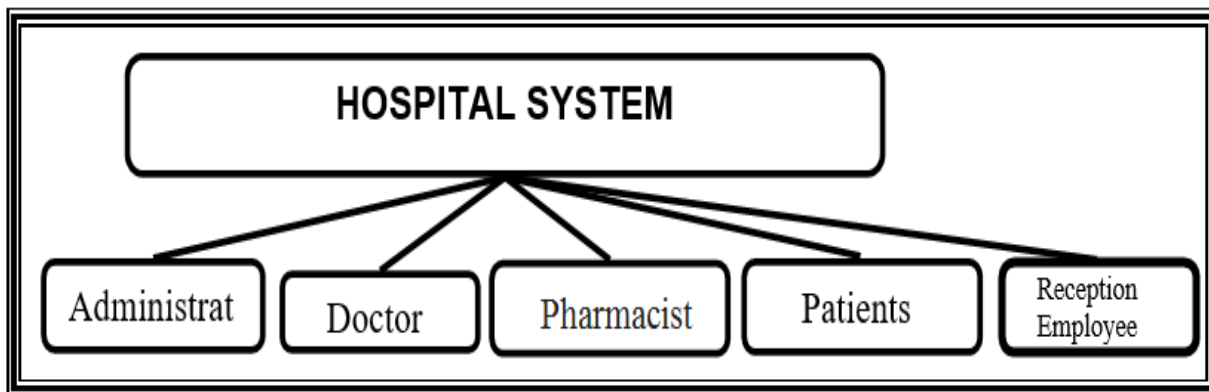


Figure (2-1) general element in system1

This figure 2-1 shows the basic elements of the system where four types of users can be identified from this form: the manager of the system, the doctor, the patient, the pharmacist.

(8) Kendall, Kenneth E., et al. *Systems analysis and design*. Vol. 4. New Jersey: Prentice Hall, 1992.

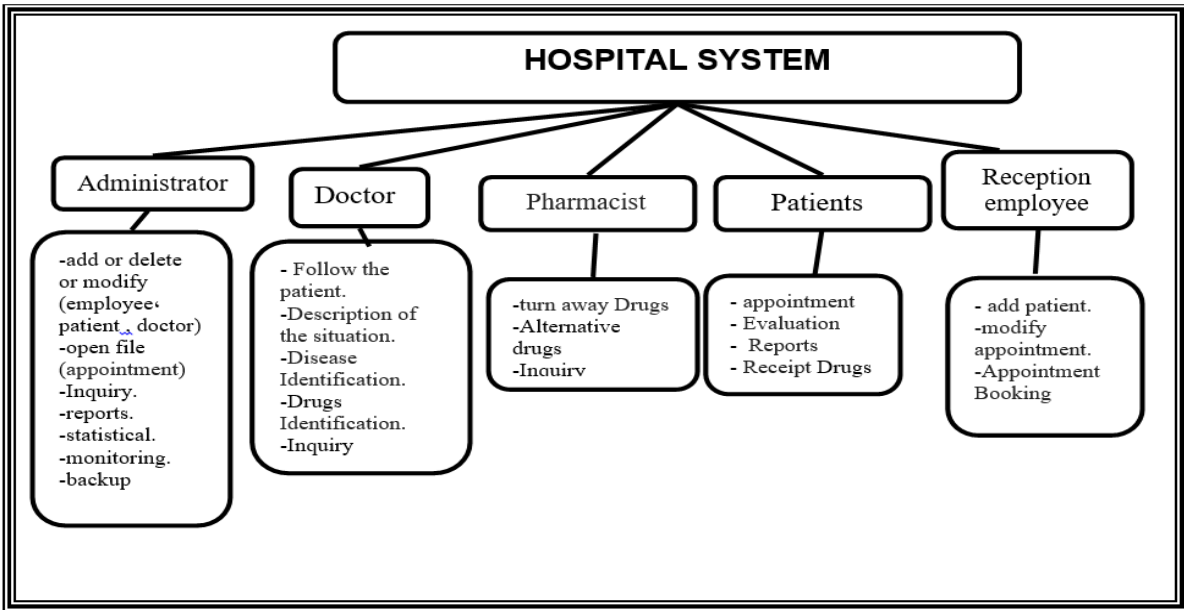


Figure 2-2 general element in system 2

The figure 2-2 describes the processes for each element of the system and the processes and powers associated with this element (user) from the addition, modification and powers that explain the structure of the system

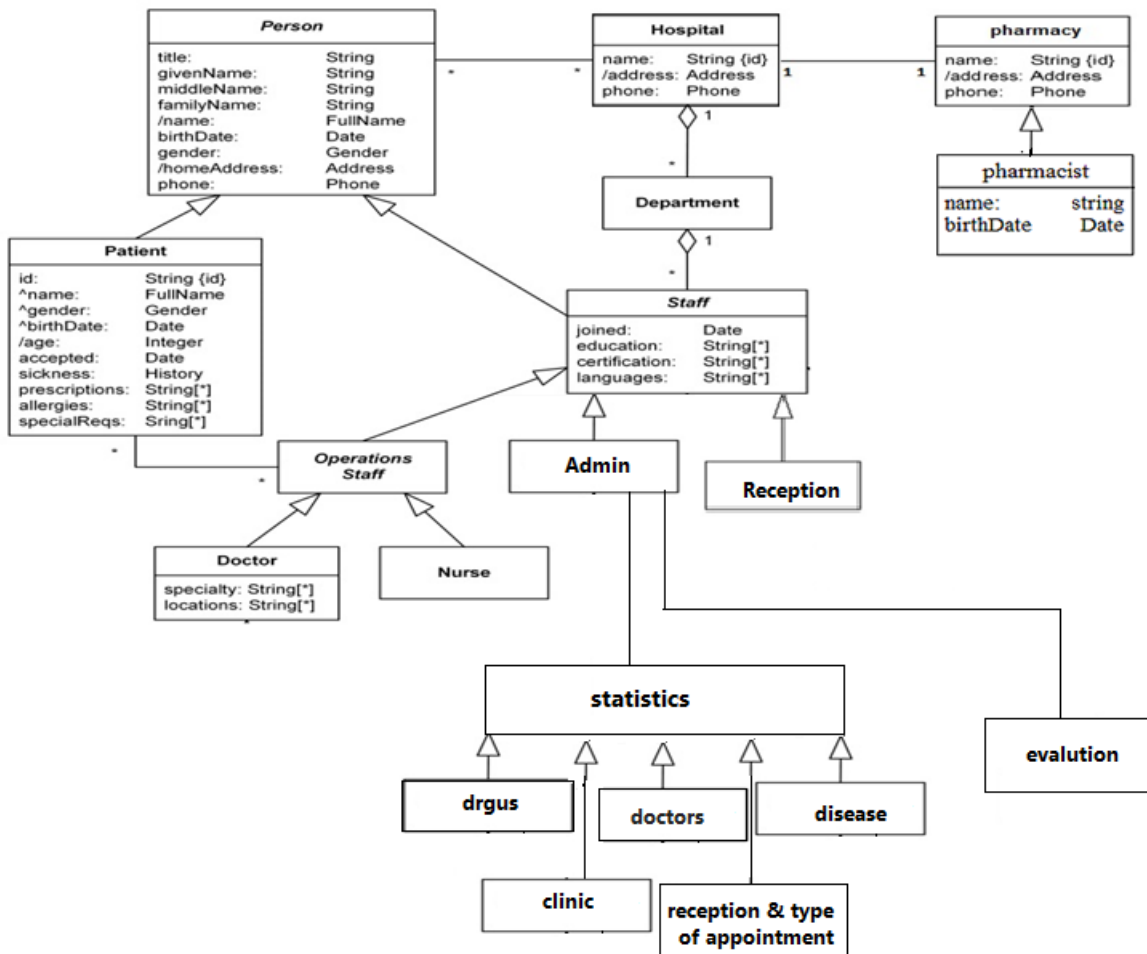
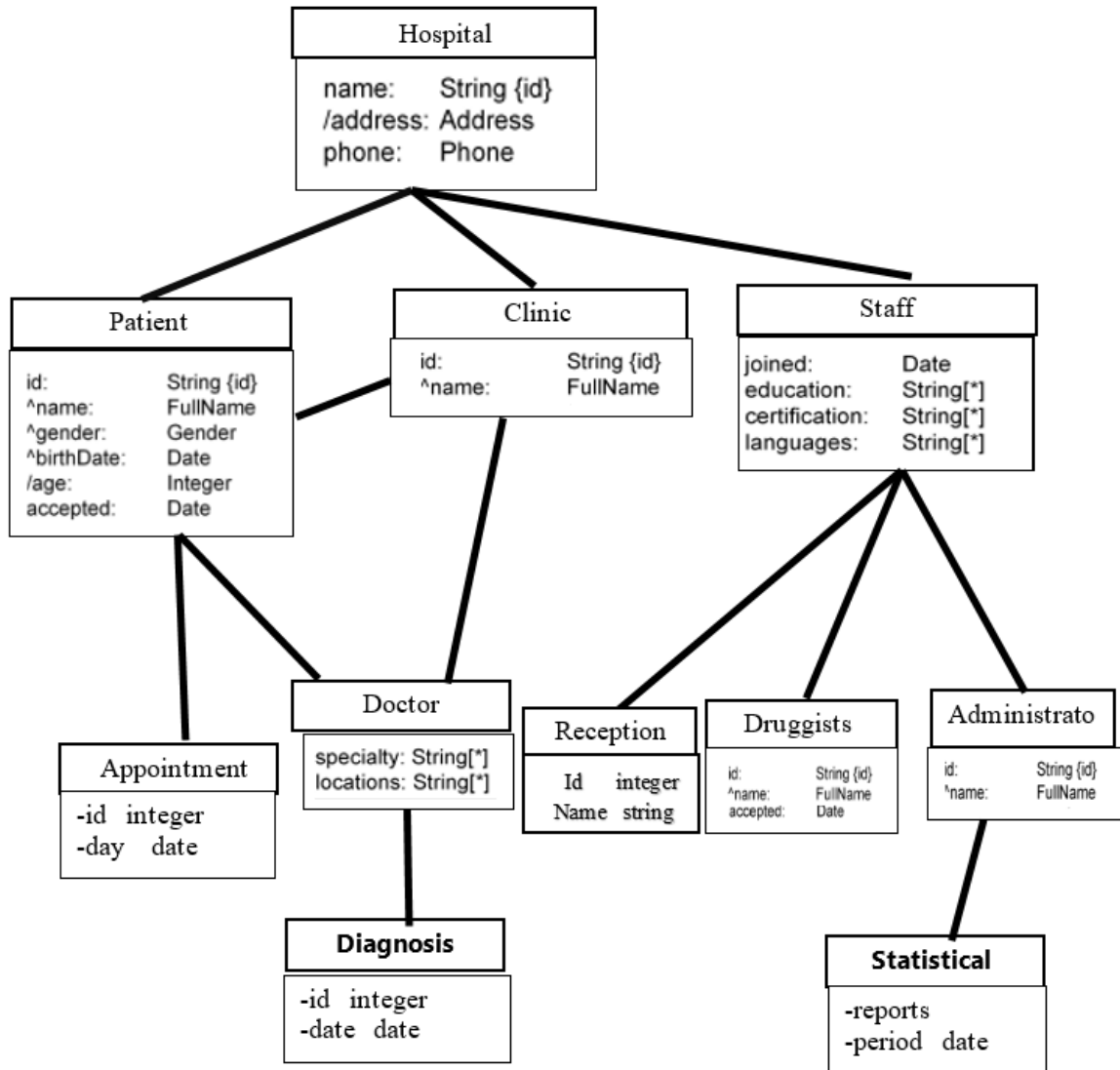


Figure (2-3) class diagram

The figure (2-3) is show the relationship between entities and describe the function for each one .

2.2.2 Object Diagram.



Figure(2-4) Object diagrams

Object diagrams are derived from class diagrams so object diagrams are dependent upon class diagrams and represent an instance of a class diagram. The basic concepts are similar to class diagrams .Object diagrams also represent the static view of a system.

2.2.3 Use Case

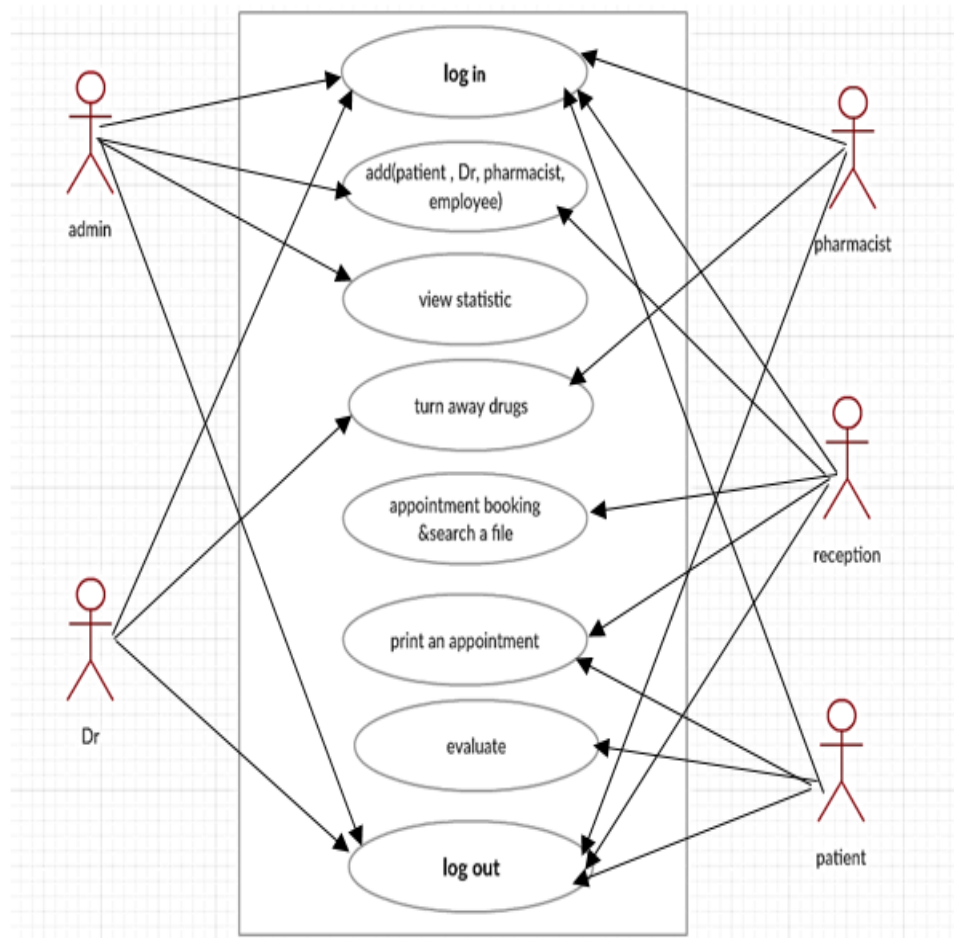


Figure (2-5) use case

The Figure 2-5 describes the entry and exit mechanism and the use of the model in the system as well as the powers associated with the user and the structure of the system.

Note : Reception only add patient

2.2.4 Sequence diagram

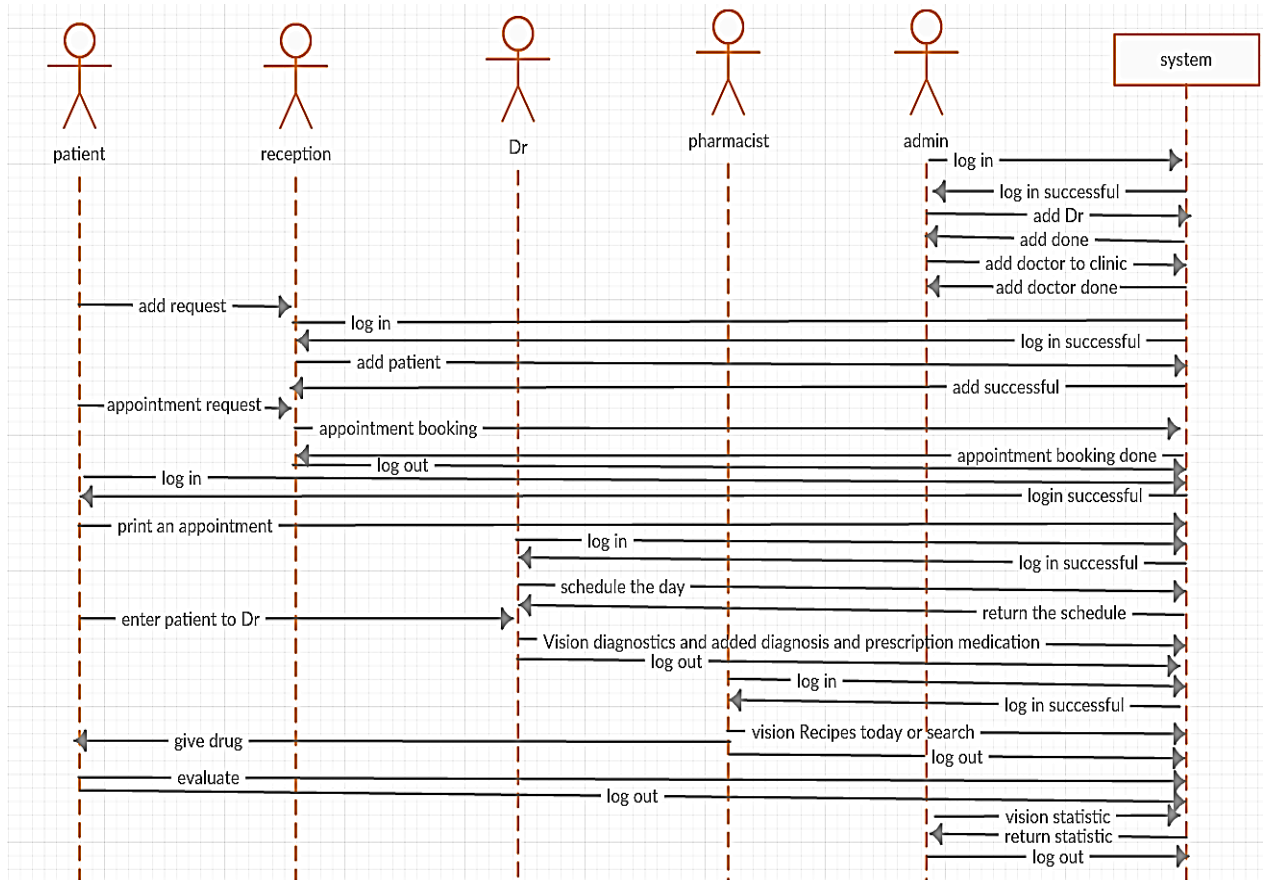


Figure (2-6) Sequence diagram

The Figure 2-6 is sequence diagram shows object interactions arranged in time sequence. and the sequence of operations exchanged between the objects needed to carry out the functionality of the system .

2.2.5 State diagram

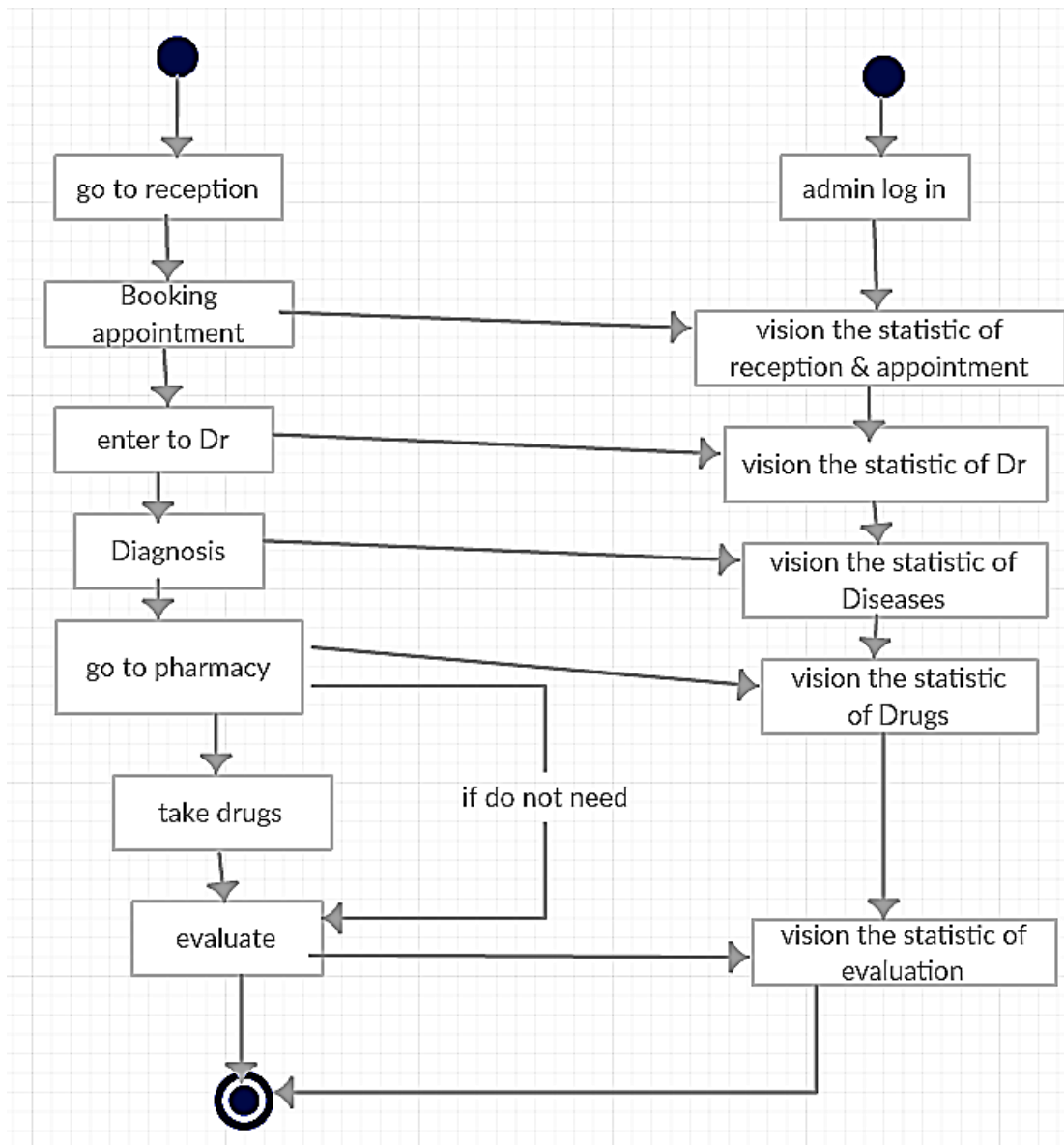


Figure (2-7) State diagram

The Figure 2-7 is state diagrams explain the creation of distinct nodes for every valid nodes parameters. that define the system.

2.2.6 Activity diagram

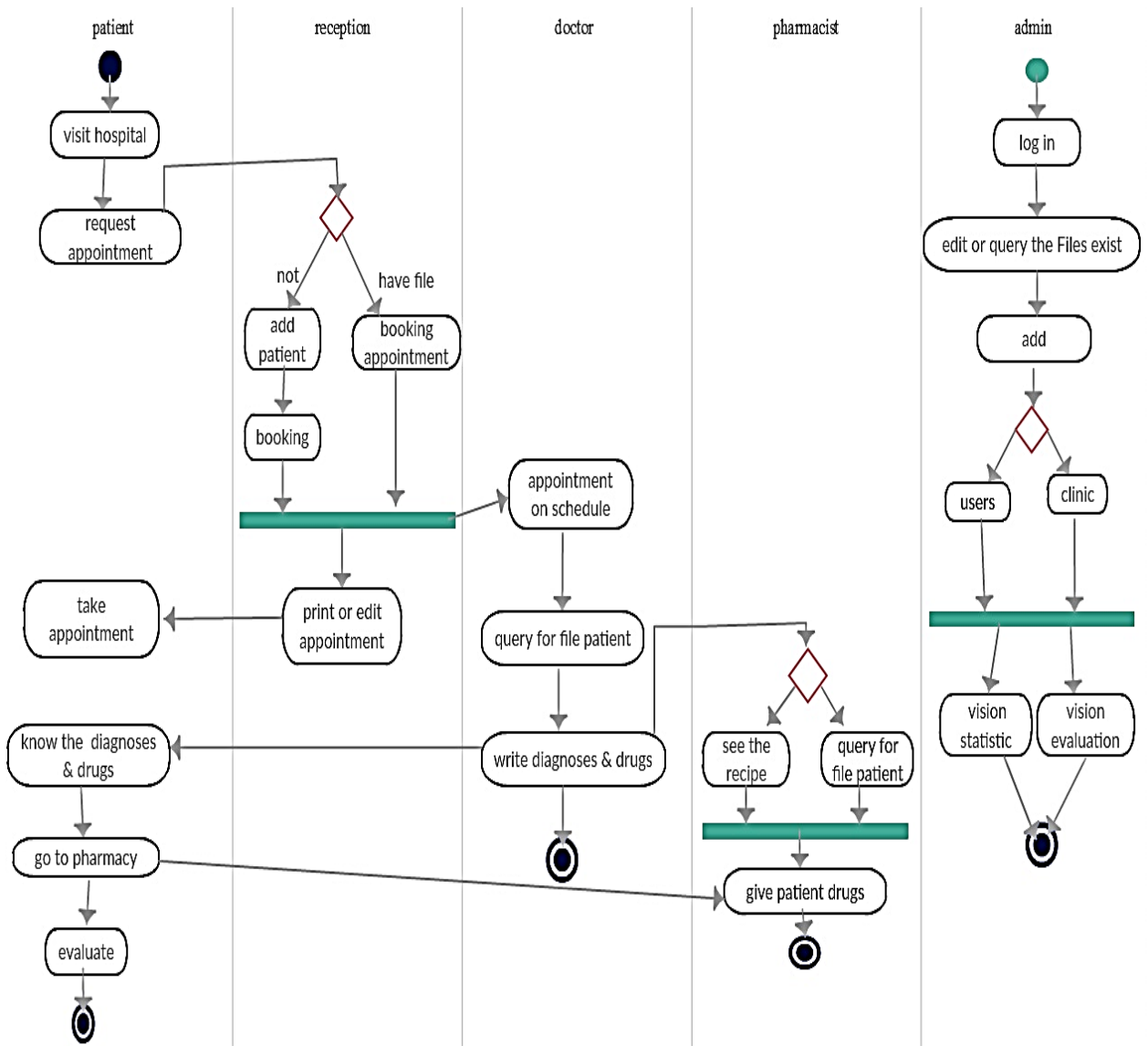


Figure (2-8) activity diagram

The Figure is activity diagram that Use the object graph. To illustrate a complete or partial view of the typical system structure at a specific time.

2.3 Description of data flow diagram(DFD)

2.3.1 Diagram (level 0)

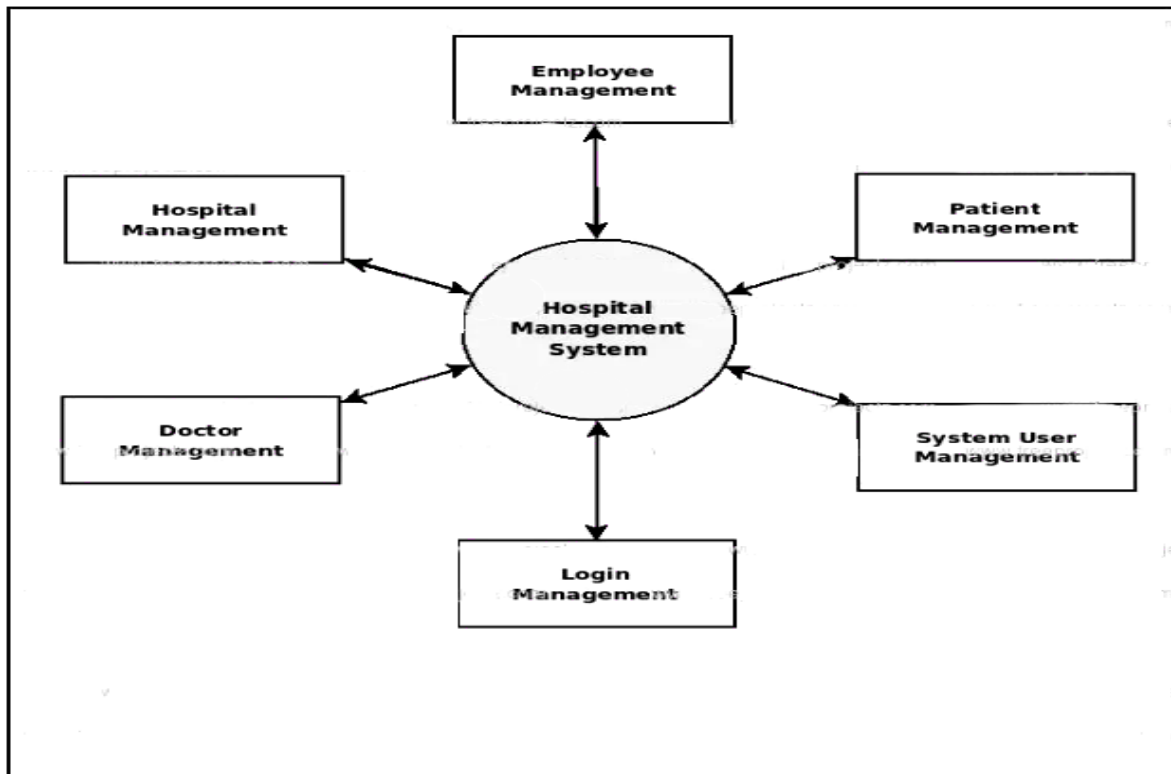


Figure (2-9) Zero level DFD-hospital management system

In this level (Zero) we take the hospital system very high level and it can be divided into a set of model which, if completed, is complete with hospital management system

2.3.2 Diagram (level 1)

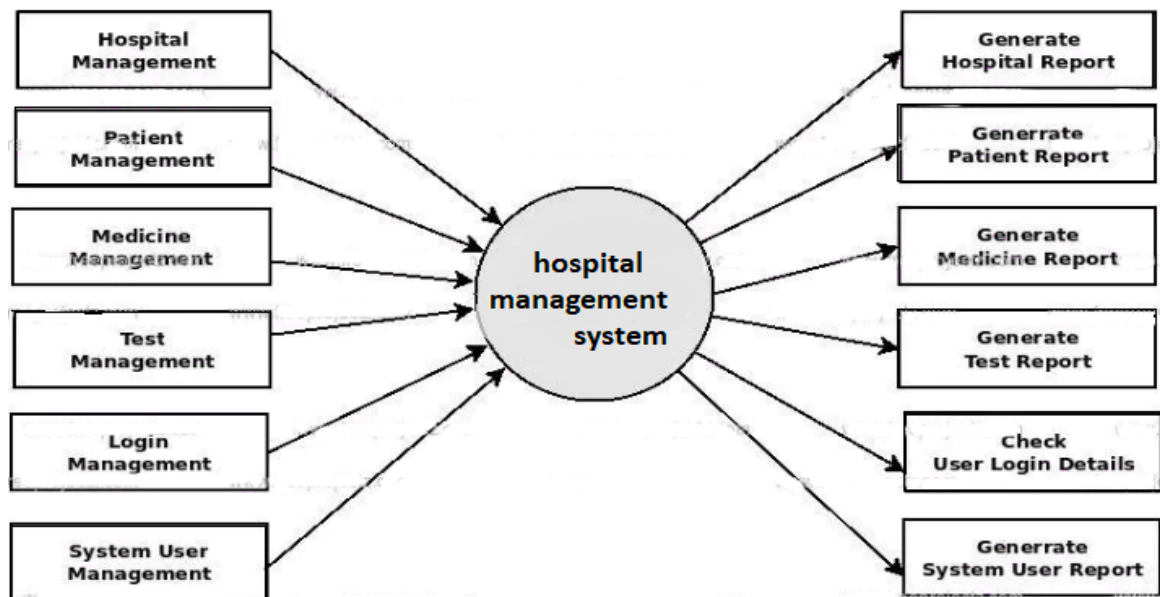


Figure (2-10) First level DFD-hospital Monitoring system

At this level we look at the hospital management system at a lower level than before, and make it clear that the hospital management system is capable of generation reports to all elements of the system. Reports are issued after user access and verification and level2 we explain the details of module admin that have all privileges .

2.3.3 Diagram (level 2)

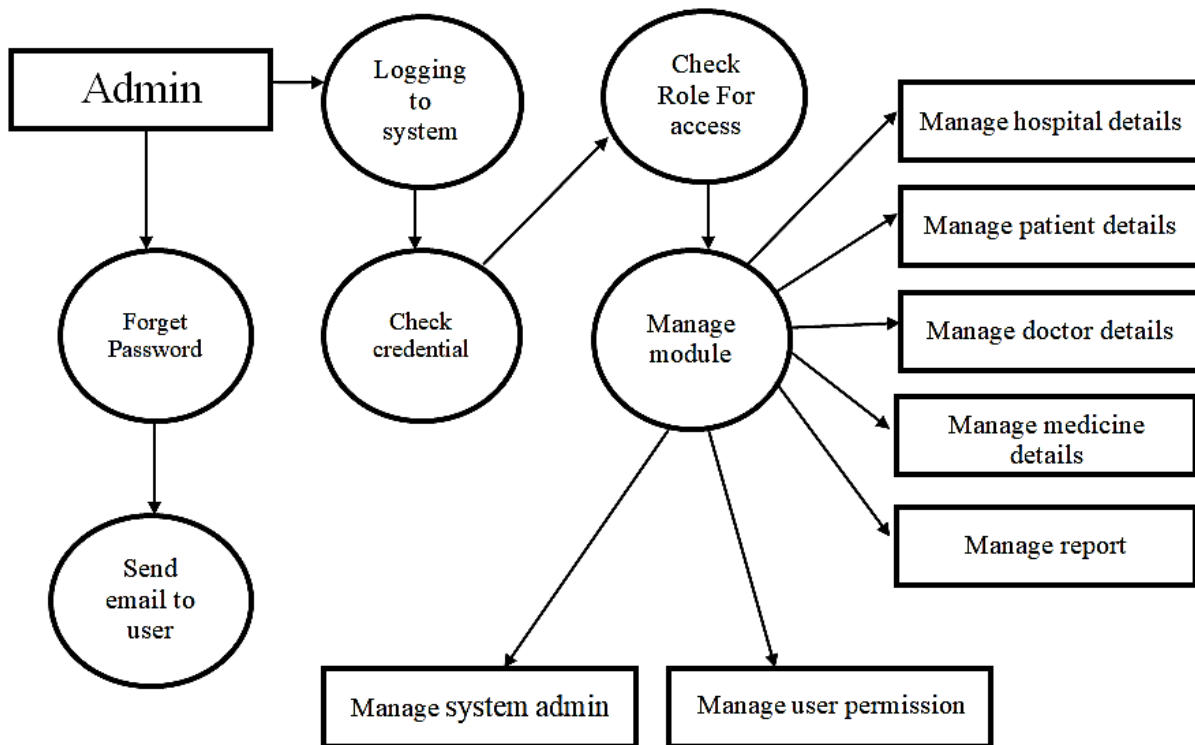


Figure (2-11) second level DFD-hospital dental system

2.4 Context diagram

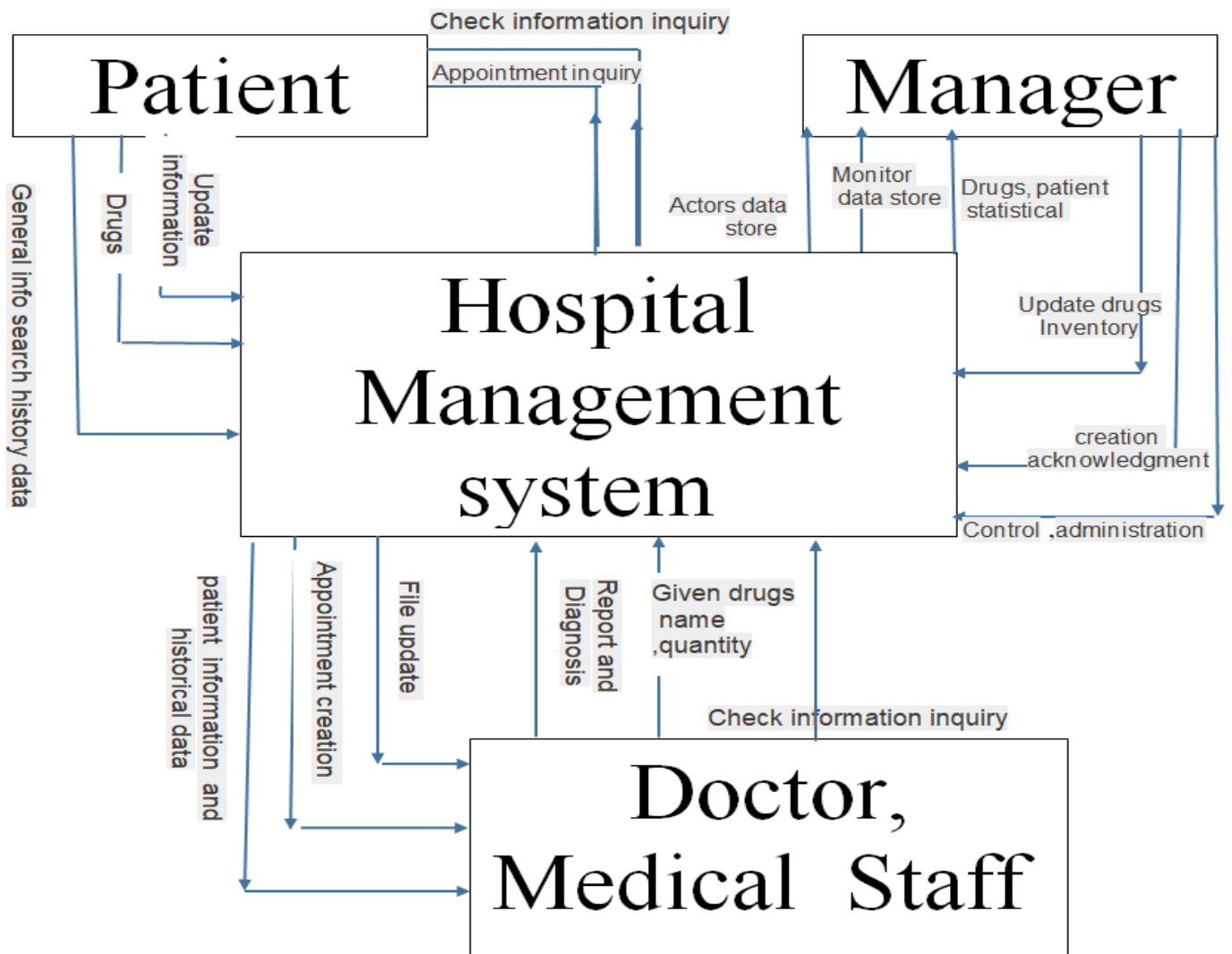


Figure (2-12) Context diagram

A system context diagram is a diagram that defines the boundary between the system, or part of a system, and its environment, showing the entities that interact with it. system context diagrams show a system, as a whole and its inputs and outputs from/to external factors.

Chapter 3: Logical and physical Design

3.1 Entity relationship diagram (ERD)

The purpose of using ER is to describe the structure of the databases and to create them later and to use them effectively without repeating the information.

What (ER) is:

Is a group of objects and their relationships with each other. The design phase and drawing of the entity model and the relationship are four steps:

1. Identifying Entities.
2. Identifying the Attributes or characteristics of these entities. At this stage, the character which is the key to this entity must be determined.
3. Entities relationships.
- 4 - determine the type of these relations.

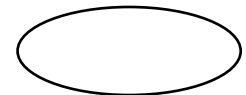
1. Identifying Entities.

It is a unit that represents a class or group of objects, objects or activities that have characteristics that describe them and revolve around a central theme that they collect. We call them a single name such as the patient, the manager, the employee. Symbolized by the symbol.⁽⁹⁾



2. Identifying the Attributes

Property or attribute is a description of the entity such as (Patient number) Each entity must have a special character distinguish it from the other and call it the key PK. Symbolized by the symbol.⁽¹⁰⁾

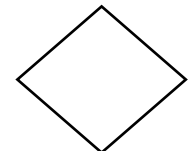


Therefore, the patient is considered an object and the first name of the patient is a field of the object whose name is sick and the patient Mohammed, for example, where the first name is considered a field of the patient.

3. Entities relationships.

The relationship is the inter-entity relationship and represents a link in the micro-world represented by the database. The databases are very concerned with inter-entity relationships because they reflect the links between the data in fact and the relationship is often represented by a present.

Symbolized by the symbol⁽¹¹⁾



4- determine the type of these relations

- I. One to One Relationship:
- II. One-to-Many Relationship
- III. Multi-to-Multiple Relationship

⁽⁹⁾Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company.

⁽¹⁰⁾Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company.

⁽¹¹⁾Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company.

3.2 Drawing ERD

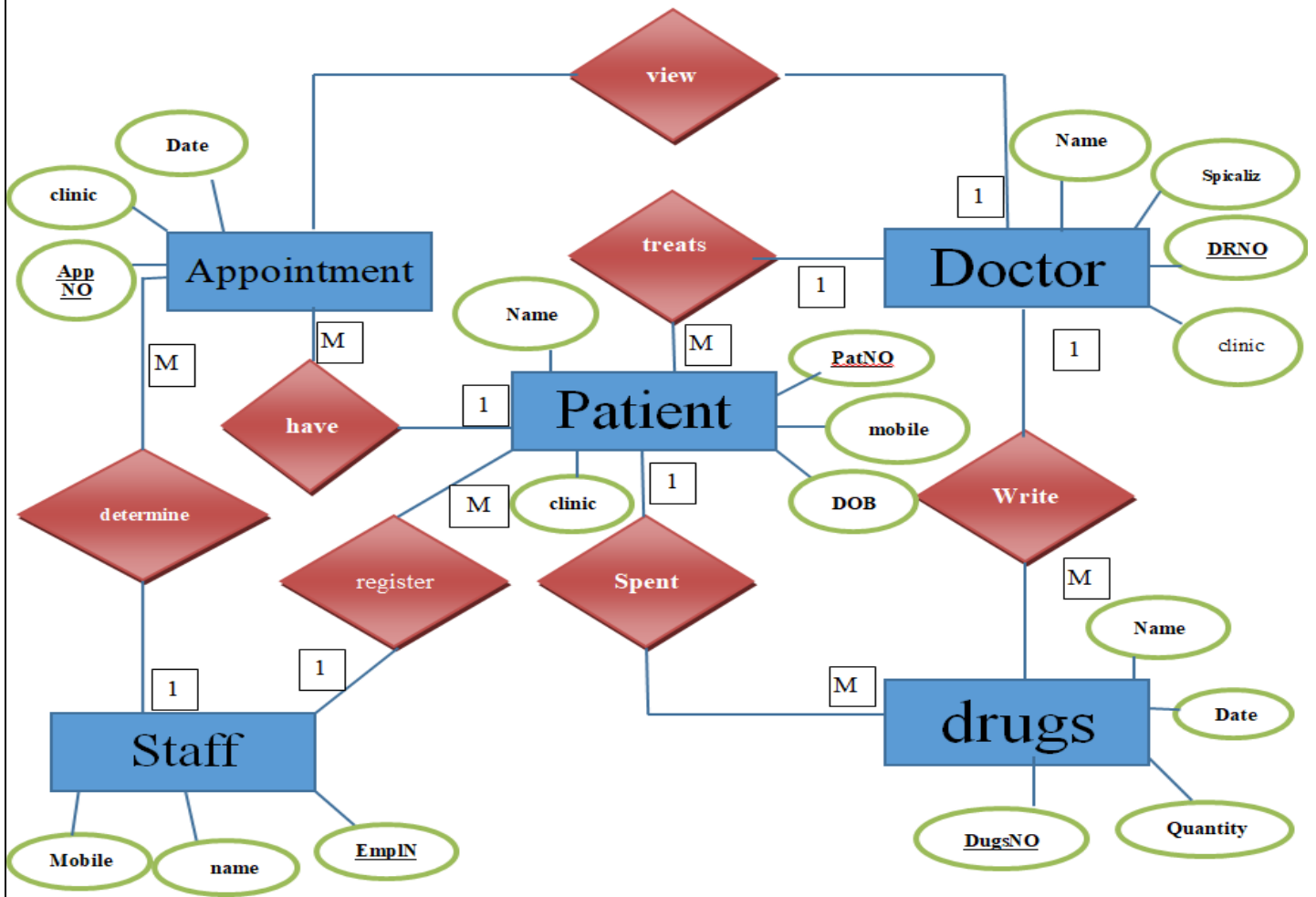


Figure (3-1) ERD

3.2.2 Data Schema

- Account (#Id, UserName ,Password ,Type , Creatdate)
- Patient (PatientNo, Name , DOB , mobile, nationaid, type)
- Drugs(#id , drugsname)
- Meeting(#id ,Clinic ,Day1, month1 ,year1 , Dr_name, Meat_stat, enterby, MATTYPE)
- Dr_clink(#id, Dr_no, dr_clinick)
- Clinic(ClinicNo,clinic_Name)
- classificationofdiseases(ID, Namedisease)
- diagnoses_table(PNO, DATE1MDiagnosis, DRUGS, REDUNCY, EVERYHOUR, DRUGSSTAT ,CLINKNAME ,drname)

3.2.3 Description Of Entity

Name Of Filed	Data Type	Properties
#id	int	PK
UserName	Varchar(50)	long 50
Password	Varchar(50)	long 50
Type	Varchar(50)	long 50
Createdate	Varchar(50)	long 50

Table(3-1) Account Table

Name Of Filed	Data Type	Properties
#PatNO	int	PK
Name	Varchar(150)	long 150
DOB	Varchar(50)	long 50
Mobile	Varchar(50)	long 50
nationaid	Varchar(50)	long 50
type	Varchar(50)	long 50

Table (3-2) Patient Table

Name Of Filed	Data Type	Properties
#id	int	PK
drugsname	Varchar(150)	long 150

Table (3-3) Drugs Table

Name Of Filed	Data Type	Properties
#id	int	PK
natinalid	Varchar(50)	long 50
clinic	Varchar(50)	long 50
Day1	Varchar(50)	long 50
Month1	Varchar(50)	long 50
Year1	Varchar(50)	long 50
Dr_name	Varchar(150)	long 150
Meat_stat	Varchar(50)	long 50
enterby	Varchar(50)	long 50
MATTYPE	Varchar(50)	long 50

Table (3-4) Meeting Table

Name Of Filed	Data Type	Properties
#id	Integer Number	PK
Dr_no	Varchar(50)	long 50
dr_clinick	Varchar(50)	long 50

Table (3-5) Dr_clink Table

Name Of Filed	Data Type	Properties
#clinckid	Int	PK
Clinckid_name	Varchar(150)	Long 150

Table(3-6) clinic Table

Name Of Filed	Data Type	Properties
#ID	Int	PK
Namedisease	Varchar(50)	Long 150

Table(3-7) ClassificationOfDiseases Table

Name Of Filed	Data Type	Properties
#ID	Int	PK
PNO	Varchar(50)	Long 50
DATE1	Varchar(50)	Long 50
Diagnosis	Varchar(max)	Long max
DRUGS	Varchar(50)	Long 50
REDUNCCY	Varchar(50)	Long 50
EVERYHOURE	Varchar(50)	Long 50
DRUGSSTAT	Varchar(50)	Long 50
CLINKNAME	Varchar(50)	Long 50
drname	Varchar(50)	Long 50
Qreception	Varchar(50)	Long 50
QDR	Varchar(50)	Long 50
QPHAr	Varchar(50)	Long 50
QHospital	Varchar(50)	Long 50
Qsat	Varchar(50)	Long 50

Table(3-8) diagnoses_table Table

3.4 Hardware and Software Requirement

2.4.1 Hardware:

Component	Requirement
Hard Disk	SQL Server 2014 requires a minimum of 6 GB of available hard-disk space.
Drive	A DVD drive, as appropriate, is required for installation from disc.
Monitor	Super-VGA (800x600) or higher resolution monitor.
Internet	Internet functionality requires Internet access (fees may apply).
Memory	Express Editions: 512 MB All other editions: 1 GB
Processor Speed	x86 Processor: 1.0 GHz , x64 Processor: 1.4 GHz
Processor Type	x64 Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support

Table (3-9) Hardware

2.4.2 Software:

Component	Requirement
Sql Server 2008	Windows Server 2008 R2 SP1 Standard, Enterprise, and Datacenter editions.
.NET Framework	.NET 3.5 SP1 is a requirement for SQL Server 2008
Management SQL studio	SQL Server Management Studio
visual studio 2010	visual studio 2010 or above

Table(3-10) Software

3.5 User interface prototype

The proposed User interface in the construction of the project

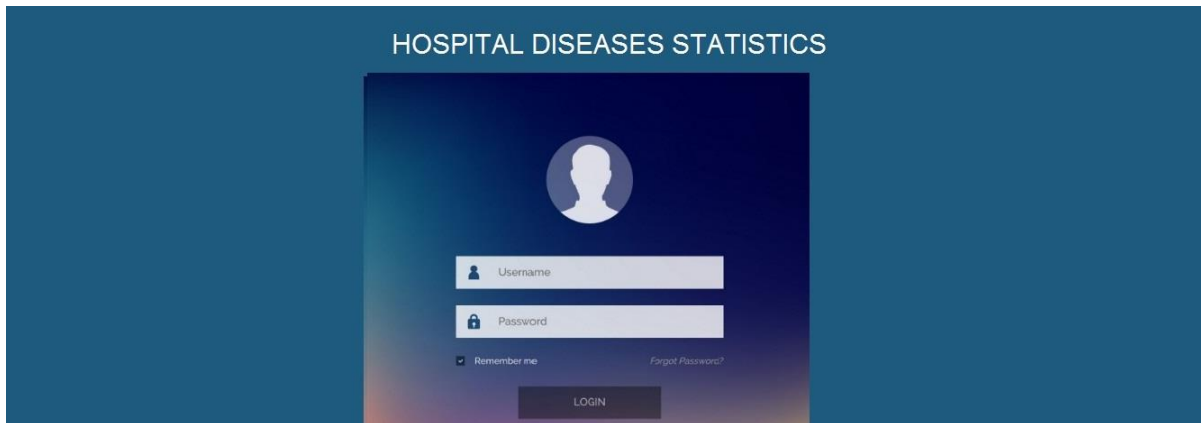


Figure (3-2) The sign-in screen

The sign-in screen (figure (3-2)) is the main screen where user types are selected:

- 1-DR
- 2-Employee
- 3-pharmacy

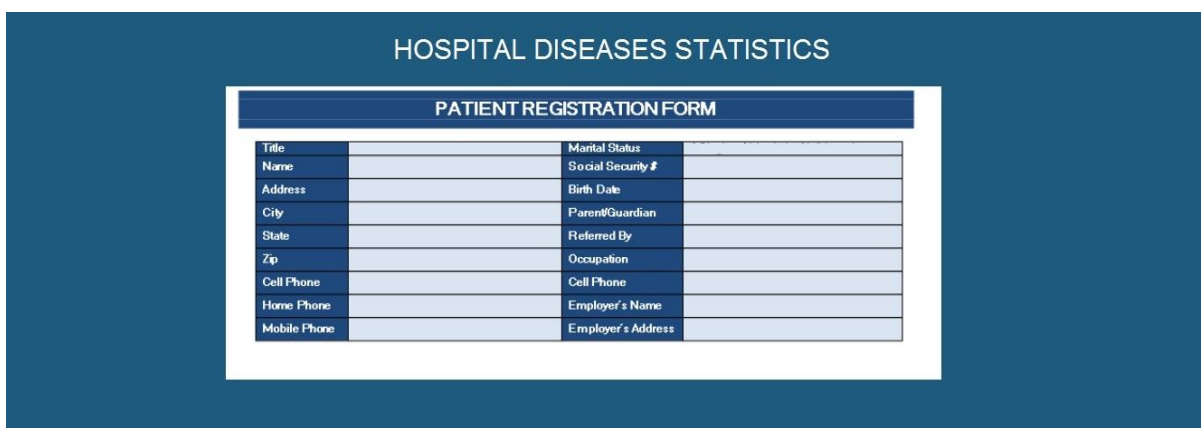


Figure (3-3) screen registration

A user of the type of employee (receptionist) can access screen registration figure (3-3) and register the patient data to create patient No .

HOSPITAL DISEASES STATISTICS

list of an appointment

1	natal id	Name	age gender	clienc	Date
2	101025466	ahemd mosa mtrafi	25 male	Internal Medicine Clinic	5/3/2018
3	101025476	naser rwaie anazi	30 male	Internal Medicine Clinic	5/3/2018
4	101025486	mousa mohammad	55 male	Internal Medicine Clinic	5/3/2018
5	101025496	abeer yousf nsair	20 female	Internal Medicine Clinic	5/3/2018
6	101025506	hssah ahmed mtrafi	45 male	Internal Medicine Clinic	5/3/2018

Figure (3-4) list of patients' names

Both employee user and doctor user figure (3-4) can access this screen

This screen contains a list of patients' names, numbers, date of appointment and referral clinic.

The employee user can view all of them, and the user of the doctor can only display his / her clinic.

HOSPITAL DISEASES STATISTICS

Patient NO		AGE	
GENDER		CLINEC	Doctor Note and Diagnose
Date		Dr-Name	

Diagnose	Note

figure (3-5) diagnosis or report

This screen figure (3-5) can access by doctor user and this screen contains information about the patient , and here the doctor writes the diagnosis or report of the patient

HOSPITAL DISEASES STATISTICS

Patient NO		AGE	
GENDER		CLINEC	
Date		Dr-Name	

Doctor Note and Diagnose

Diagnose	Note

Figure (3-6) write treatment

A user of the type of employee can access this screen figure (3-6) and also the patient can be accessed through the patient number to print the appointment sheet.

HOSPITAL DISEASES STATISTICS

Appointment letter

Patient NO		Name	
GENDER		CLINEC	
Date		Time	
Nationality		Mobile	

Note that

The patient must be present 15 minutes before the appointment time

Figure (3-7) view treatment

This screen figure (3-7) is used to write the prescription of treatment by the doctor and write the patient's treatment and details, and pharmacist can used to display the treatment and cannot write or modify it.

HOSPITAL DISEASES STATISTICS

sample of statistic

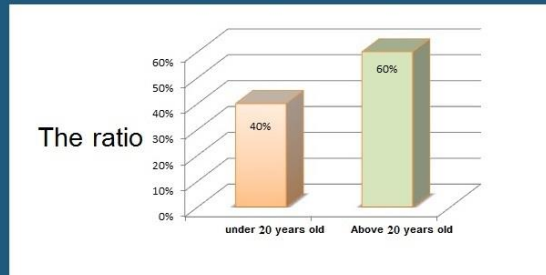


Figure (3-8) statistics

HOSPITAL DISEASES STATISTICS

sample of statistic

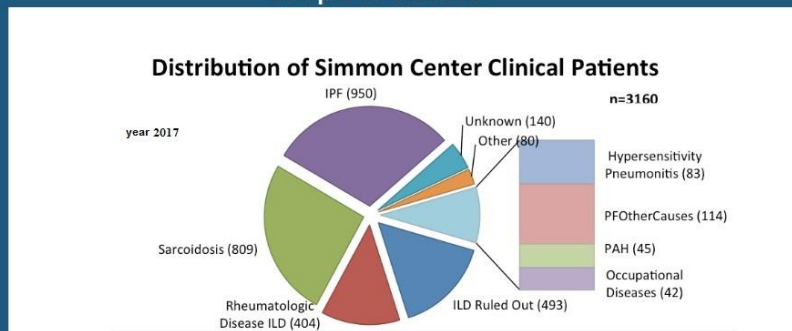


Figure (3-9) statistics

HOSPITAL DISEASES STATISTICS

sample of statistic

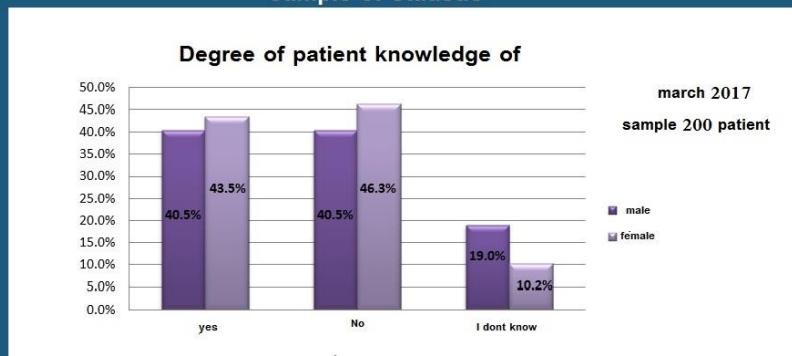


Figure (3-10) statistics

HOSPITAL DISEASES STATISTICS

The Most Drugs Spent in march -2017

drugs name	Quantity
Adrenaline	10
Atropine	5
Benztropine	100
Benzylpenicillin	50
Chlorpromazine	90
Dexamethasone sodium phosphate	10
Diazepam	111
Dihydroergotamine	11
Diphtheria and tetanus booster vaccine	50
Fruzemide	6
Glucagon	8
Glyceryl trinitrate	9
Haloperidol	9
Hydrocortisone sodium succinate	7
Lignocaine	2
Metoclopramide	52
Methoxyflurane	1
Morphine sulfate	14
Naloxone	19
Procaine penicillin	19
This should read	17
Corrected May 2013	12
Prochlorperazine	62
Promethazine hydrochloride	11
Salbutamol inhaler	24
Salbutamol nebuliser solution	29
Terbutaline	29
Tramadol	27
Verapamil	22

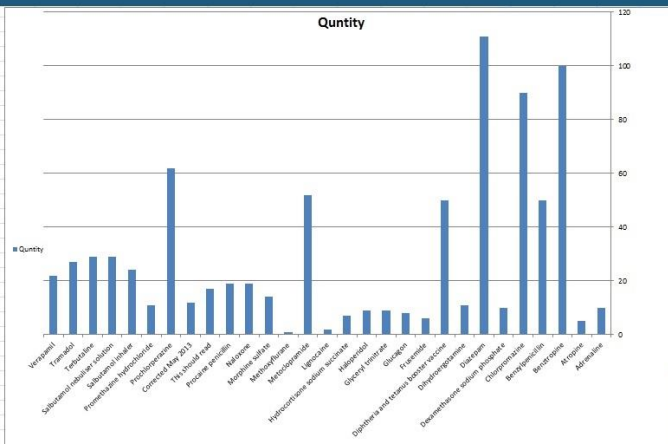


Figure (3-11) statistics

The screens figure (3-8 , 3-9, 3-10 ,3-11) are screens used to print statistics, which is one of the objectives of the project and can be extracted statistics more prevalent diseases and a period of time and more medicines that have been spent and there are .

Also other statistics can be extracted such as the number of patients for a certain period, Each doctor treated a patient.

Preferably, make this screen only for a user-type (employee manager)

Chapter 4: Implementation and Testing

1.4 Introduction

The goal of modern systems to handle the work inside hospitals in a way that helps them to reach the best

The results are not limited to modern systems, but rather regulate business within the health sectors.

Based on the above, thank God, a website is created through this chapter and we will display the screens of the website of the hospital.

4.2 Procedures

1- For log in :

```
firstSql = "SELECT * FROM Acccounts where [username]='" + TextBox1.Text +
" and [password]='" + TextBox2.Text + "' and type ='" +
DropDownList1.SelectedValue + "' "
connection.Open()
```

```
command = New SqlCommand(firstSql, connection)
adapter.SelectCommand = command
adapter.Fill(ds, "User")
adapter.Dispose()
command.Dispose()
connection.Close()
```

2- for registration :

```
secondsql = "INSERT INTO [Acccounts]([username] ,[password] ,[type],[createdate])
VALUES ('" + TextBox1.Text + "','" + TextBox3.Text + "','" +
DropDownList1.SelectedValue + "','" + Label8.Text + "')"
firstSql1 = "SELECT * FROM [Acccounts] WHERE [username]='" + TextBox1.Text + "'"
secondsql2 = "INSERT INTO [Patient] ([mobile] ,[DOB] ,[Name] , [nationalid] )
VALUES ( '" + TextBox8.Text + "','" + Label6.Text + "','" + TextBox2.Text + "','" +
TextBox1.Text + "' ) "
connection = New SqlConnection(connetionString)
Try
```

```

connection.Open()  command = New SqlCommand(firstSql1, connection)
adapter.SelectCommand = command
adapter.Fill(ds, "User")
adapter.Dispose()
command.Dispose()

```

3- for modify :

```

secondsql = "update [Meeting] set [Clinic]=" + DropDownList5.SelectedValue + " , day1="
+ DropDownList2.SelectedValue + " ,[month1]=" + DropDownList3.SelectedValue +
",[year1]=" + DropDownList4.SelectedValue + " ,[Dr_name]=" +
DropDownList6.SelectedValue + " ,[MEATTYPE]=" + DropDownList8.SelectedValue +
",[enterby]=" + Label10.Text + " where id=" + DropDownList7.SelectedValue + ""
'firstSql1 = "SELECT * FROM [Accounts]  WHERE [username]=" + TextBox1.Text
+ "" "
'secondsql2 = "INSERT INTO [Patient] ([mobile] ,[DOB] ,[Name] ,[nationalid] )
VALUES ( " + TextBox8.Text + " , " + Label6.Text + " , " + TextBox2.Text + " , " +
TextBox1.Text + " ) "
connection = New SqlConnection(connetionString)

```

Try

```
connection.Open()
```

```
command = New SqlCommand(secondsql, connection)
```

```
command.ExecuteNonQuery()
```

```
connection.Close()
```

```
GridView1.DataBind()
```

```
Label7.Text = " تم التعديل بنجاح "
```

```
Button1.Enabled = False
```

```
Button3.Visible = True
```

```
Catch ex As Exception
```

```
End Try
```

4.3 Reports

Build the report on ASP.NET by crystal report for clinic .

Report of clinic on hospital	
18/11/18	
<u>clinckid</u>	<u>clinck name</u>
1	pediatrics عيادة الأطفال
2	obstetrics الولادة
3	orthopology العظام
4	psychiatry نفسي
5	radiology الأشعة
6	ophthalmology العيون
7	dentistry الأسنان
8	cardiology القلب
9	urology البولية
10	neurology الاعصاب
11	physiology علم الوظائف
12	anesthesiology التخدير
13	dermatology الجلد
14	nephrology الكلى
15	gynecology امراض النساء
16	pathology الامراض
17	histology الانسجة
18	cytology الخلايا
19	hematology الاورام
20	See

Figure (4-1) Clinic crystal report

Report of doctors in clinic		
18/11/18		
<u>id</u>	<u>Dr no</u>	<u>dr clinck</u>
1	1097777777	pediatrics عيادة الأطفال
2	1092345872	psychiatry نفسي
3	9087123765	anesthesiology التخدير
4	1093579832	ophthalmology العيون
5	1098726390	cardiology القلب
6	1098888888	dentistry الأسنان
7	9081276389	dentistry الأسنان
8	1093508677	neurology الاعصاب
11	1036489752	dermatology الجلد
12	1097823482	dentistry الأسنان
13	1067845214	ophthalmology العيون
14		cytology الخلايا
15	6954231035	orthopology العظام
16	1032541789	hematology الاورام
17	1032578200	nephrology الكلى
18	9081276389	pediatrics عيادة الأطفال

Figure (4-2) Doctor in clinic crystal report

Report of drgus	
18/11/18	
id	druqsnam
1	Apraclonidine (إبراكلونيد) (أمراض العيون)
2	Abarelix (أبرليكس) (أمراض المسالك البولية والتناسلية)
3	Atropine (أتروبين) (أمراض العيون)
4	Adapalene and Benzoyl peroxide (أديالين مع بيروكسيد البنزول) (الأمراض الجلدية)
5	Adrenaline (أدرينالين) (أمراض الجهاز التنفسي)
6	Iron Edetate (إديتات الحديد) (فيتامينات و معادن)
7	Lumefantrine & Artemether (أرتميتير مع لوميفانترين) (أمراض الجهاز الهضمي)
8	Azathioprine (أزاثيوبراين) (علم المناعة)
9	Azithromycin (أزيتروميسين) (الأمراض الجنسية)
10	astemizole (أستيميزول) (أمراض الجهاز التنفسي)
11	Aluminum Acetate (ألسيتات الألمنيوم) (الأمراض الجلدية)
12	Cortisone Acetate (ألسيتات الكورتيزون) (هرمونات)
13	Acetohexamide (أسيثوهيكساميد) (مرض السكري)
14	Acetylsalicylic Acid (أسيثيل ساليسيليك أسيد) (الأمراض الحساسية)
15	Acarbose (أكاربوز) (مرض السكري)
16	Oxymetholone (أوكسيمثولون) (هرمونات)
17	Albendazole (ألبندازول) (الأمراض الحساسية)
18	Alfuzosin (ألفازوسين) (أمراض المسالك البولية والتناسلية)
19	Allopurinol (ألوپورينول) (أمراض العضلات والمفاصل)
20	Aloe Vera (ألو فيرا / صبير) (الأمراض الجلدية)
21	Alendronate (ألبندرونات) (أمراض العضلات والمفاصل)
22	Ampicillin (أمبيسيلين) (الأمراض الجنسية)
23	Amoxicillin (أموكسيسيلين) (الأمراض المعدية)
24	Amoxicillin with clavulanic acid (أموكسيسيلين و كلافولانيك أسيد) (الأمراض المعدية)
25	Imipenem and Cilastatin (إميبينيم سيلاستاتين) (الأمراض الجنسية)
26	Abarelix (أبرليكس) (أمراض المسالك البولية والتناسلية)
27	Adapalene and Benzoyl peroxide (أديالين مع بيروكسيد البنزول) (الأمراض الجلدية)
28	Acarbose (أكاربوز) (مرض السكري)
29	Albendazole (ألبندازول) (الأمراض الحساسية)
30	Oxybuprocaine (أوكسيبوبروكاين) (أمراض العيون)
31	Oxybutynin (أوكسيبوتينين) (أمراض المسالك البولية والتناسلية)
32	Isosorbide Mononitrate (إيزوسوربيد أحادي النترات) (أمراض القلب و الشرايين)
33	Isosorbide Dinitrate (إيزوسوربيد ثنائي النترات) (أمراض القلب و الشرايين)

Figure (4-3) Drugs crystal report

Report of accounts on hospital				
18/11/18				
id	usemam	passwor	type	createdate
1	admin	admin	3	11/11/1440
9	1092345872	11	1	26/02/40
11	9087123765	11	1	26/02/40
12	1093579832	11	1	26/02/40
13	1098726390	11	1	26/02/40
14	1098888888	11	1	26/02/40
15	9081276389	11	1	26/02/40
16	1093508677	11	1	26/02/40
20	1098522222	22	6	26/02/40
24	1038745210	33	5	26/02/40
25	1037896520	33	5	26/02/40
26	1025555555	33	5	26/02/40
27	4876325104	33	5	26/02/40
28	1032544444	33	5	26/02/40
29	1036489752	11	1	27/02/40
30	1097823482	11	1	27/02/40
31	1067845214	11	1	27/02/40
32	1095847136	rec	4	03/03/40
33	1096874230	rec	4	03/03/40
34	1068475236	rec	4	03/03/40
37	1093585214	33	5	03/03/40
38	1063250145	33	5	03/03/40
39	1052039874	33	5	03/03/40
40	1023642010	33	5	03/03/40
41	1097777777	11	1	03/03/40
43	1093522222	33	5	03/03/40
44	1098523104	33	5	03/03/40
45	1036205874	33	5	03/03/40
46	1023541785	33	5	03/03/40
47	6954231035	11	1	03/03/40
48	1092544766	11	1	03/03/40

Figure (4-4) Account crystal report

Report of appointment

18/11/18

id	natinalid	Clinic	day1	month1	year1	Dr_name	meat_stat	enterby	MEATTYPE
36	1023642010	pediatrics عيادة الأطفال	11	11	2018	mai	تم الكشف	1095847136	عادي
38	1063250145	dentistry الأسنان	11	11	2018	noura	تم الكشف	1095847136	طارئ
39	1093585214	psychiatry نفسي	12	11	2018	abdullah	جديد	1095847136	عادي
40	1093585214	anesthesiology التخدير	14	11	2018	mustafa	جديد	1095847136	عادي
41	1093585214	psychiatry نفسي	20	11	2018	abdullah	جديد	1095847136	عادي
42	1037896520	dentistry الأسنان	11	12	2018	ashia	جديد	1095847136	عادي
45	1063250145	dentistry الأسنان	01	12	2018	noura	جديد	1096874230	عادي
46	1093585214	cardiology القلب	12	11	2018	reem	جديد	1096874230	طارئ
47	1038745210	nephrology الكلى	15	11	2018	kamal	جديد	1068475236	عادي
48	1037896520	dentistry الأسنان	29	11	2018	ashia	جديد	1068475236	عادي
49	1025555555	ophthalmology العيون	12	11	2018	mohmad	جديد	1095847136	طارئ
50	4876325104	pediatrics عيادة الأطفال	12	11	2018	mai	جديد	1095847136	طارئ
51	1032544444	neurology الاعصاب	11	11	2018	amal	تم الكشف	1095847136	عادي
52	1032544444	hematology الاورام	19	11	2018	emir	جديد	1095847136	عادي
53	1025555555	ophthalmology العيون	19	11	2018	abdalaziz	جديد	1095847136	طارئ
54	4876325104	pediatrics عيادة الأطفال	14	12	2018	mai	جديد	1096874230	عادي
55	1067845214	neurology الاعصاب	11	11	2018	amal	تم الكشف	1095847136	طارئ
56	1052039874	neurology الاعصاب	15	11	2018	amal	جديد	1095847136	عادي
57	1034213333	cardiology القلب	18	11	2018	reem	جديد	1095847136	عادي

Figure (4-5) Appointment crystal report

Report of Diseases on hospital

18/11/18

ID	Namedisea
1	Namedisease
2	أمراض الألف والأذن والحنجرة
3	أمراض القلب والدورة الدموية
4	الأمراض المعدية
5	أمراض الجهاز الحركي
6	أمراض الجهاز العصبي
7	أمراض الجهاز الهضمي
8	أمراض الدم
9	أمراض الخلد
10	داء السكري
11	أمراض العظام
12	أمراض العيون
13	الكلى والمسالك البولية
14	الأمراض الجلدية
15	الأمراض السرطانية
16	الأمراض الصدرية
17	الأمراض النفسية
18	الأمراض غير المعدية
19	أمراض الفم والأسنان

Figure (4-6) Diseases crystal report

18/11/18

PatNO	mobile	DOB	Name	nationalid
5	0590752134	29/05/35	abdullah	1092345872
6	0598125892	01/02/40	mustafa	9087123765
7	0555128732	27/01/40	mohmad	1093579832
8	0555587123	05/02/40	reem	1098726390
9	0555588888	21/02/40	noura	1098888888
10	0598237091	06/02/40	sara	9081276389
11	0590854006	03/02/40	amal	1093508677
12	0556789123	06/02/40	mai	1097777777
13	0567912673	07/02/40	reema	1093678291
14	0976512897	12/02/40	ahmed	1092837509
15	0509211111	28/01/40	salman	1099999999
16	0505478931	03/02/40	waad	1035478962
17	0546982314	29/01/40	hadeel	1032547950
18	0254444444	28/01/40	ali	1034213333
19	0505369999	04/02/40	wadha	1038745210
20	0503642111	08/02/40	hana	1037896520
21	0555421876	13/02/40	asma	1025555555
22	0505014236	14/02/40	hasaan	4876325104
23	0505368888	13/02/40	mohaned	1032544444
24	0505463287	01/02/40	fahad	1036489752
25	0505428793	29/01/40	ashia	1097823482
26	0555148350	24/05/36	abdalaziz	1067845214
27	0569842310	13/03/40	Abdulrahman	1095847136
28	0505121212	08/03/40	Firas	1096874230
29	0555454545	26/02/40	Naser	1068475236
32	0536982410	06/03/40	aram	1093585214
33	0555321084	05/03/40	mshaal	1063250145
34	0505362000	27/03/40	wafa	1052039874
35	0555542013	27/02/40	sadeem	1023642010
37	0505122726	27/02/40	fozuah	1093522222
38	0505423698	17/03/40	hend	1098523104
39	0500014362	29/02/40	alia	1036205874
40	0555441239	12/03/40	omar	1023541785
41	0502111101	27/02/40	asad	6054221025

Figure (4-7) Patient crystal report

18/11/18

id	Diseases	clinic	Doctor	patient ID
5	أمراض الفم والأسنان	الاسنان dentistry	1098888888	1035478962
6	أمراض الجهاز العصبي	الاعصاب neurology	1092837509	4876325104
7	الأمراض الجلدية	الجلد dermatology	1036489752	1037896520
8	أمراض العيون	العيون ophthalmology	1067845214	1025555555
9	أمراض الفم والأسنان	الاسنان dentistry	1098888888	1063250145
10	أمراض الجهاز العصبي	الاعصاب neurology	1093508677	1032544444
11	داء السكري	عيادة الأطفال pediatrics	1097777777	1023642010
12	أمراض الجهاز العصبي	الاعصاب neurology	1093508677	1067845214

Figure (4-8) Diagnosis crystal report

4.4 Layouts

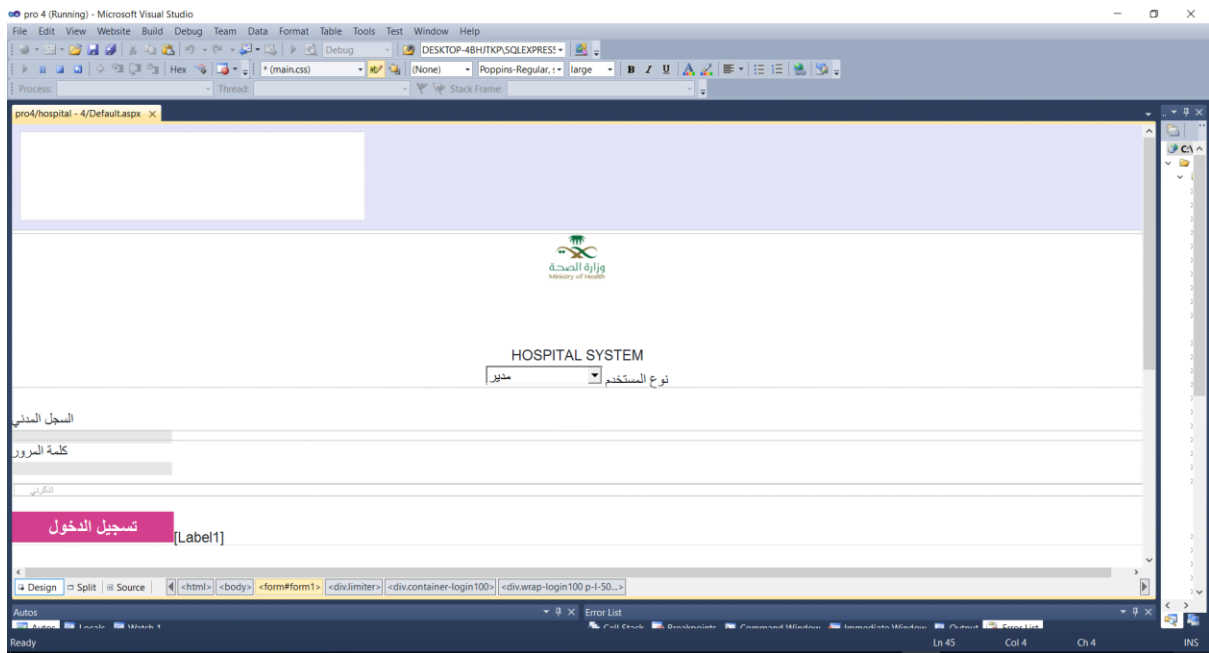


Figure (4-9) Log in before run

When the site is opened, this screen appears as the login screen of the admin, patient, pharmacist, doctor and reception employee. The required in this page the civil registry and password.

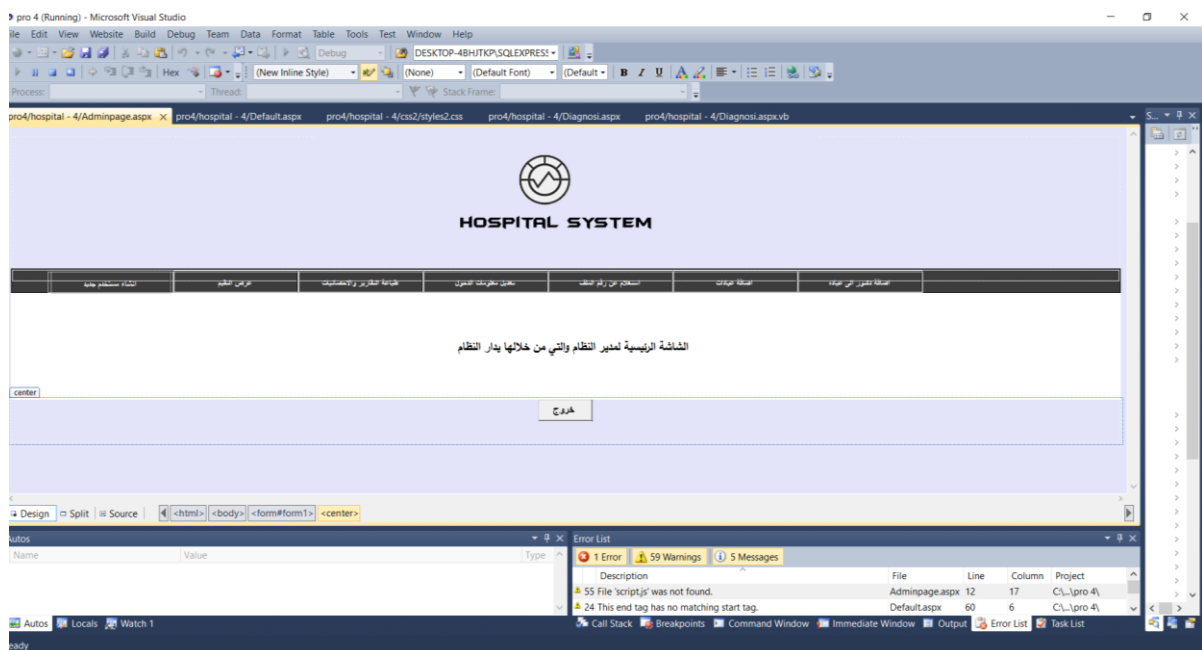


Figure (4-10) Admin interface before run

This is the admin interface and content : -Add doctor to clinic , Add a clinic, Query for a file number, Edit login information, Print reports and statistics, Create a new user (patient , Doctor , pharmacist and reception)

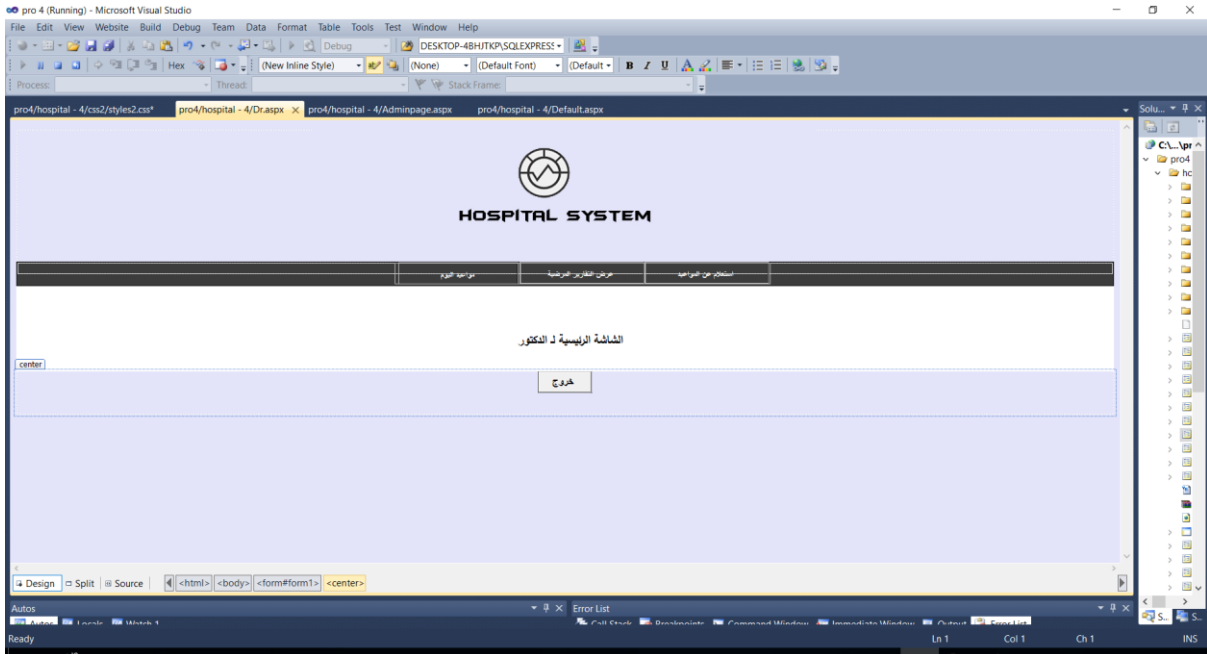


Figure (4-11) Doctor interface before run

This interface content: Appointment of today, Query about appointments (similar to reception), View sick reports

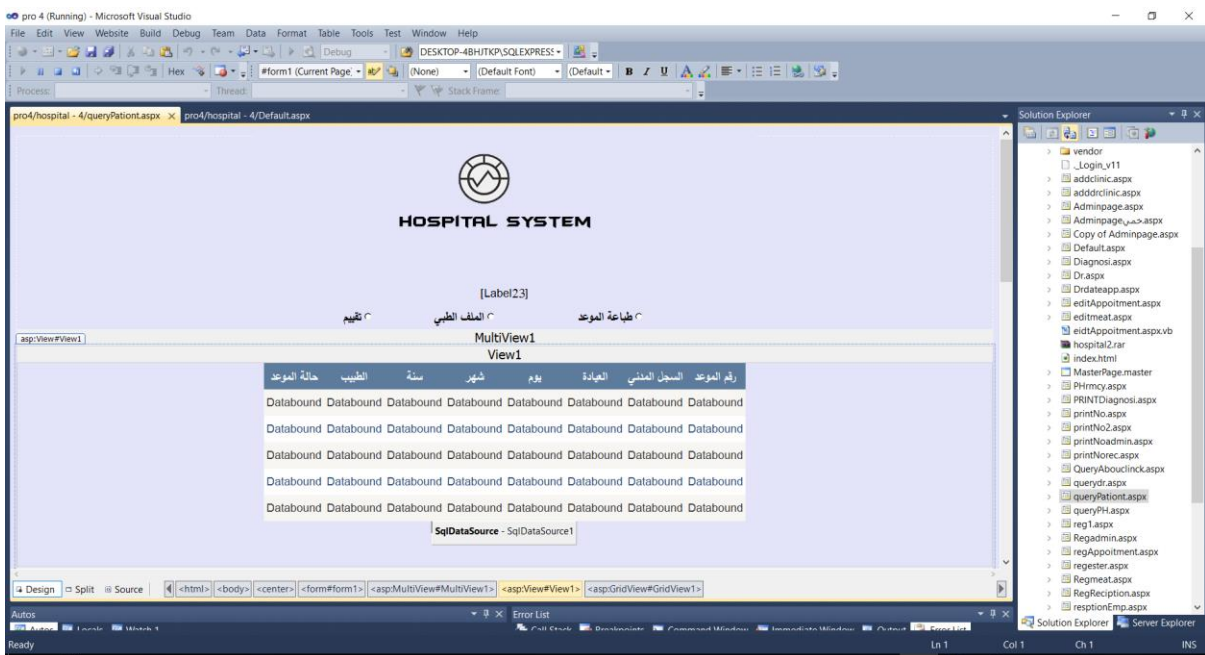


Figure (4-12) Patient interface before run

This interface content the print appointment, Medical file & evaluation.

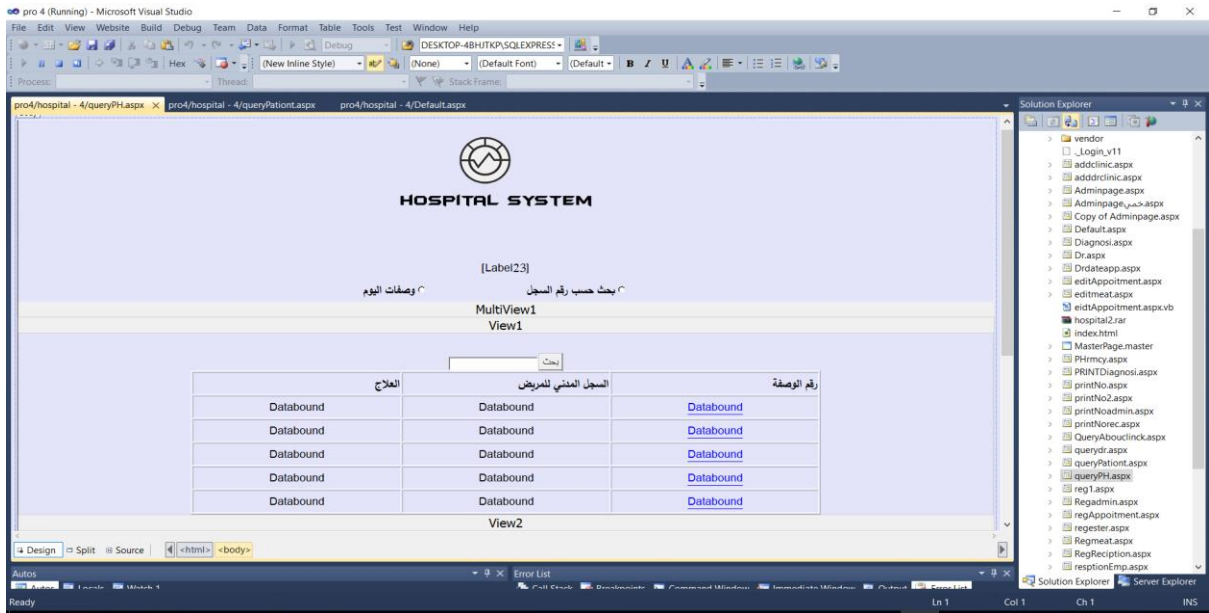


Figure (4-13) Pharmacist interface before run

This interface is for pharmacist he can Search by the civil and the recipe of today



Figure (4-14) Reception interface before run

Here the employee can do the operation for patient like Register patient, query of appointment, Modify appointment, print appointment & Appointment booking.

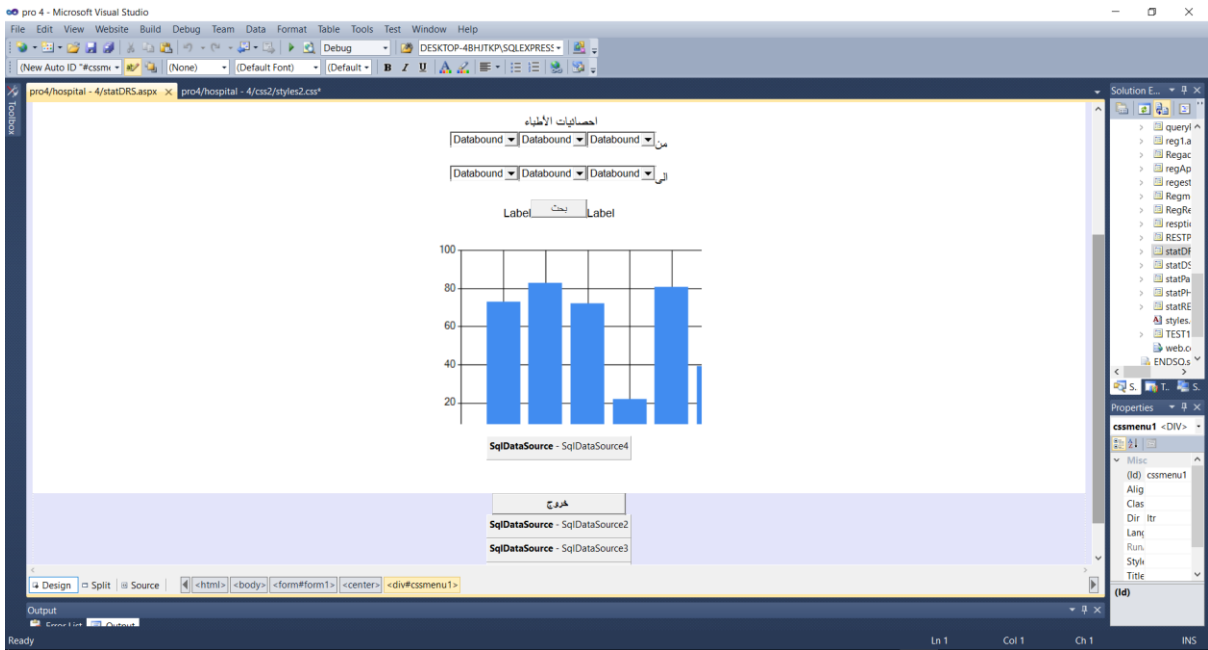


Figure (4-15) Statistics Doctors before run

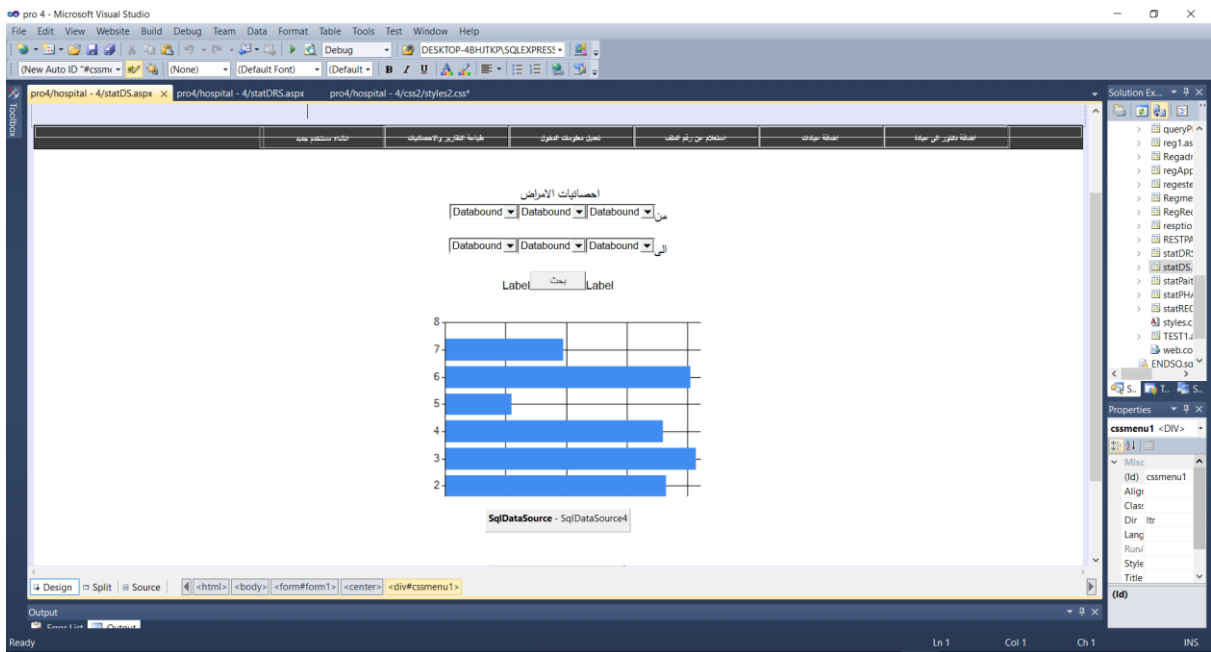


Figure (4-16) Statistics Diseases before run

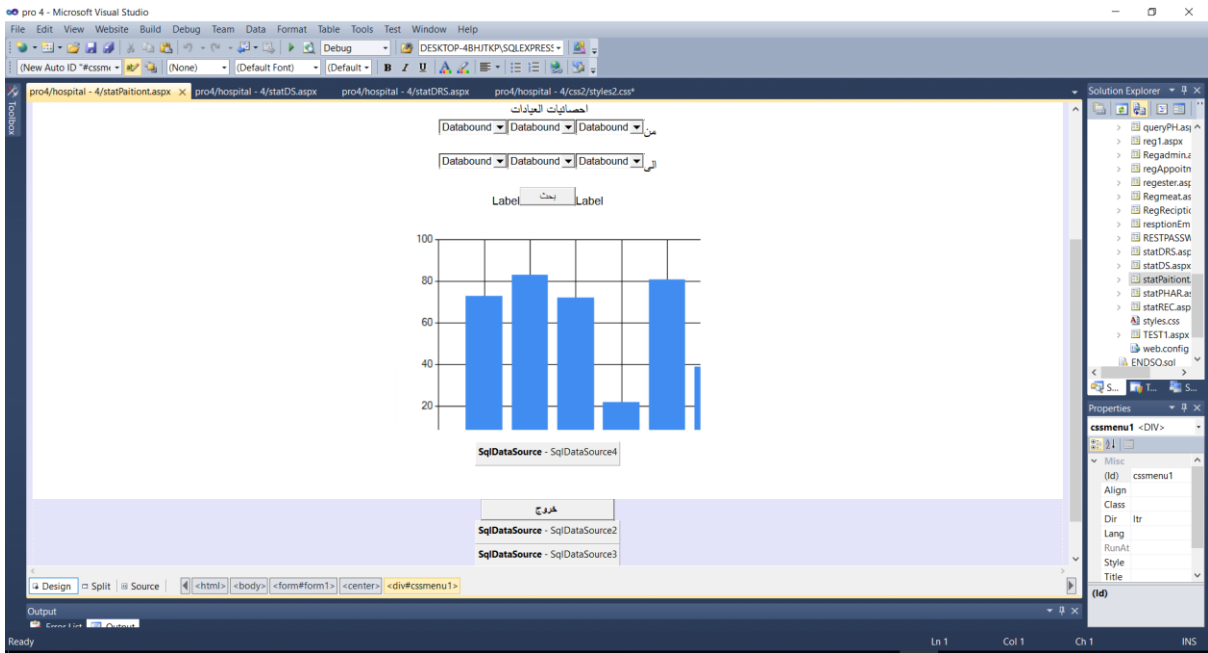


Figure (4-17) Statistics Clinic before run

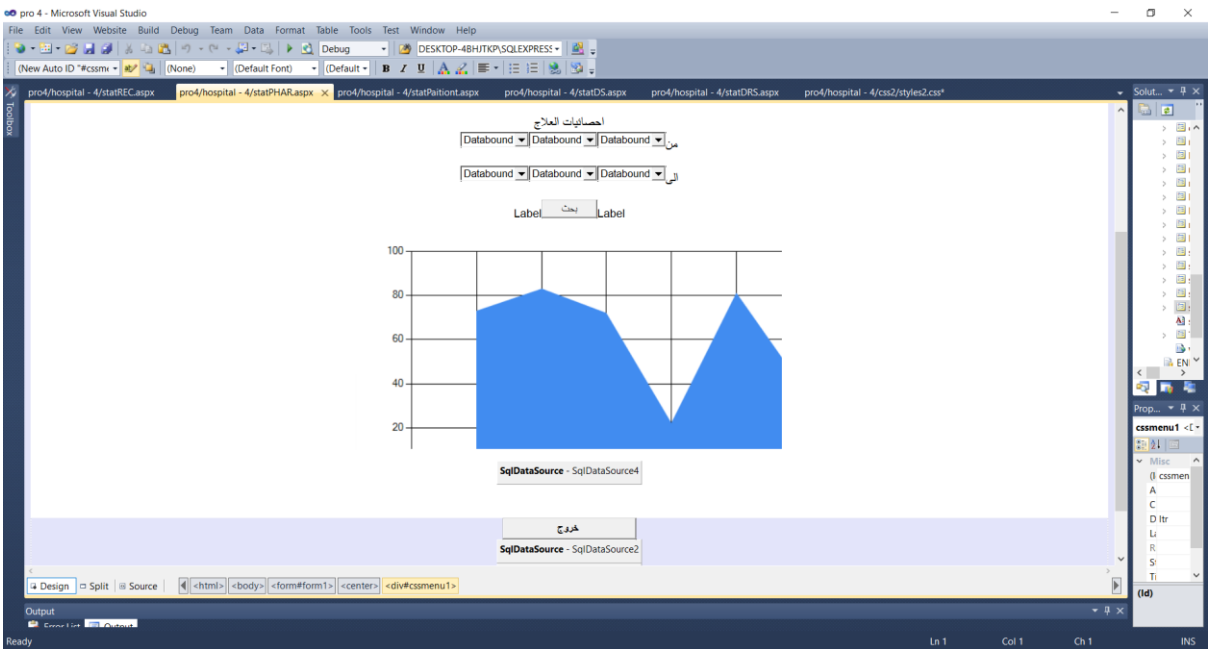


Figure (4-18) Statistics Drugs before run

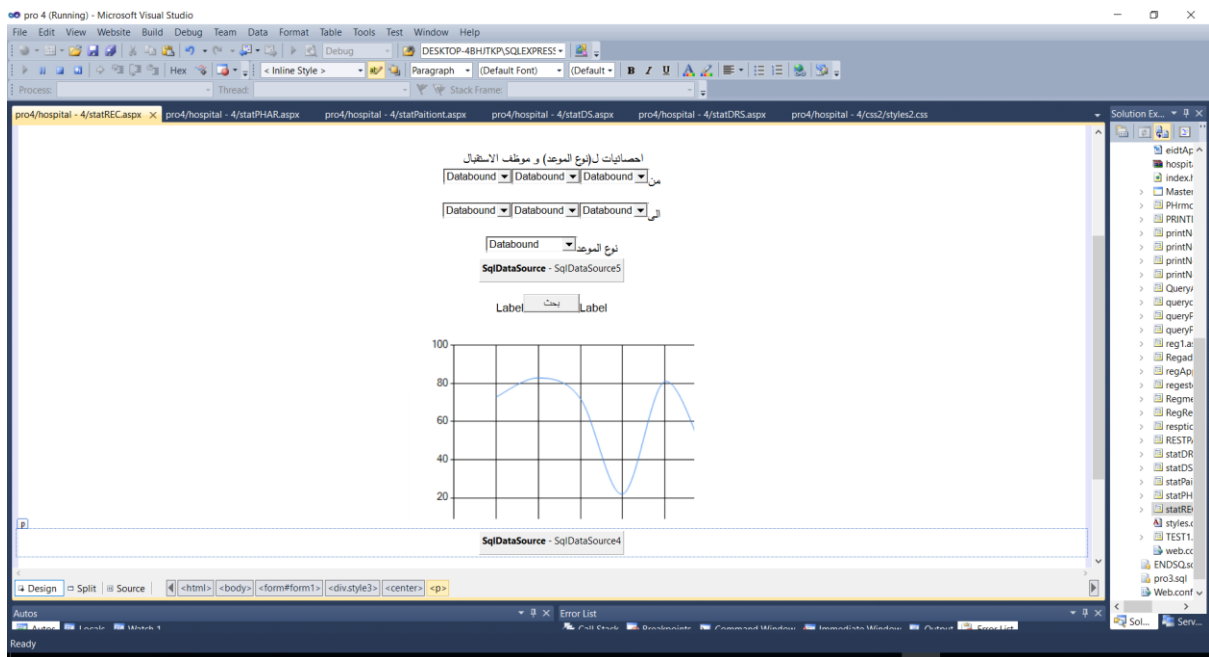


Figure (4-19) Statistics reception & type of appointment before run

4.5 Report Layouts

User interfaces are what the user sees either from the manager, patient, doctor, pharmacist or receptionist, which enables him to perform tasks within.



Figure (4-20) Admin interface


HOSPITAL SYSTEM

09:02:40

<input type="text" value="noura"/>	<input type="text" value="109367863"/>	التسجيل المدني
<input type="password" value="****"/>	<input type="password" value="****"/>	كلمة المرور
<input type="text" value="noura@gmail.com"/>	<input type="text" value="050527432"/>	الجوال

26/09/36 تاريخ الميلاد

≤		شوال 1436		≥	
الأحد	الاثنين	الثلاثاء	الأربعاء	الخميس	الجمعة
2	1	29	28	27	26
2	8	7	6	5	4
16	15	14	13	12	11
23	22	21	20	19	18
30	29	28	27	26	25
2	6	5	4	3	2

Figure (4-21) New registration.

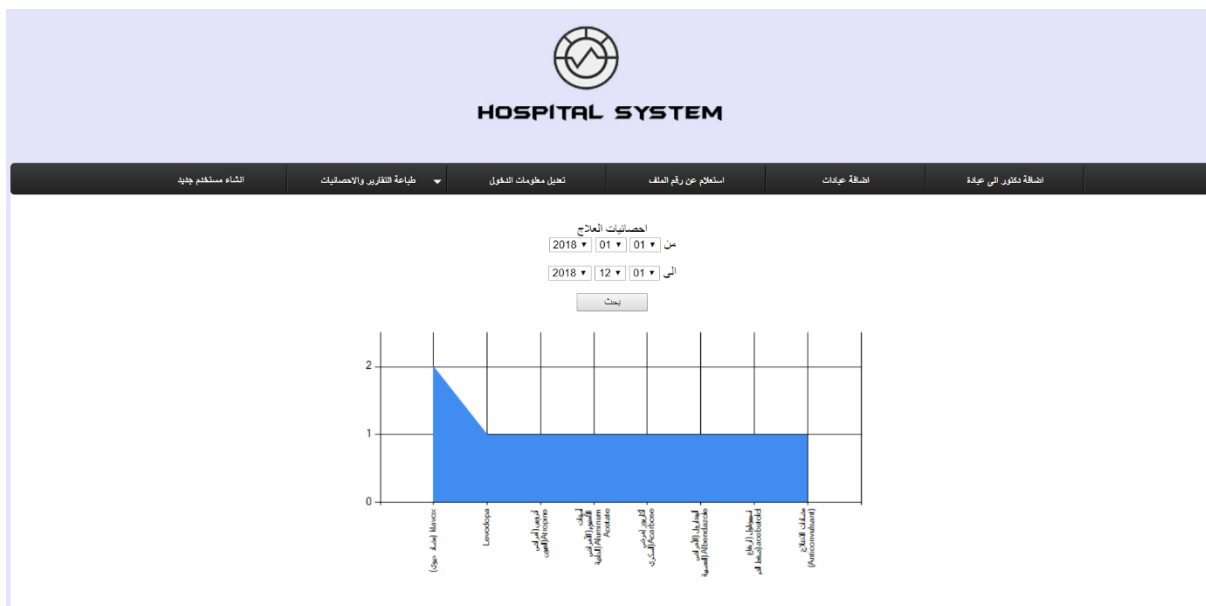


Figure (4-22) Drugs Statistics

Medical Statistics is the percentage of medication used is most commonly used.

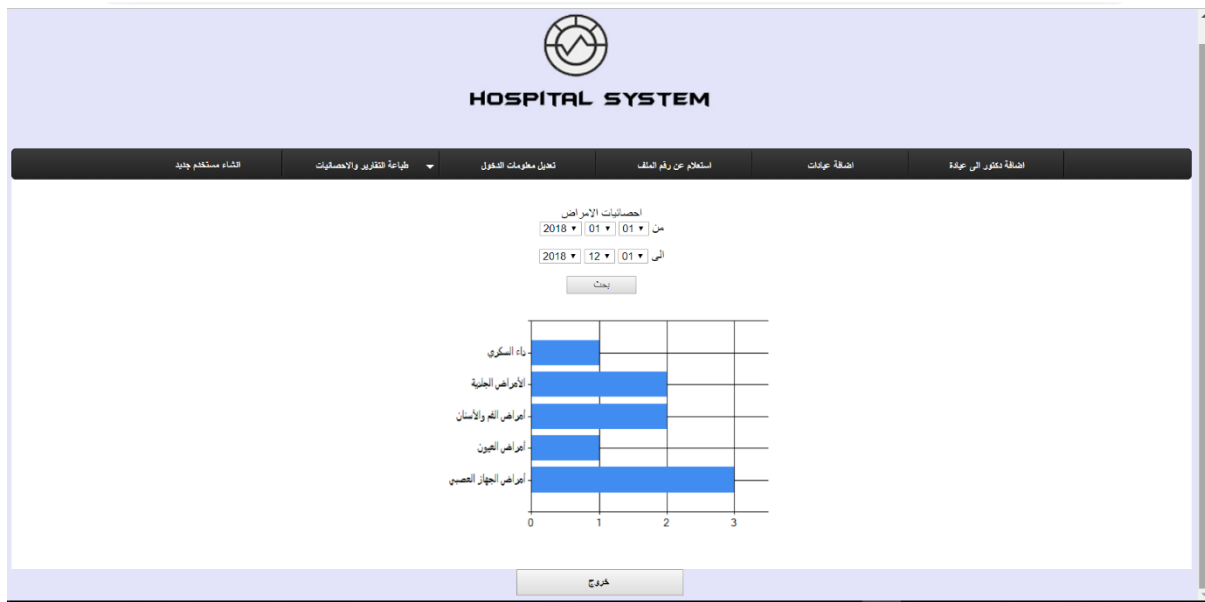


Figure (4-23) Disease Statistics

Disease Statistics is explain the most common diseases.

الاسم	تاريخ الميلاد	السجل المدني
amal	03/01/40	10933333

Figure (4-24) search.

When the civil register was searched, we can see the civil register, date of birth and name.

HOSPITAL SYSTEM

1025555555

رقم الملف	تاريخ الميلاد	الاسم	السجل المعني
21	13/02/40	asma	1025555555

نوع الموعد

الدكتور العيادة

اليوم الشهر السنة

السجل	العيادة	يوم	شهر	سنة	اسم الطبيب	حالة الموعد
1025555555	العيون ophthalmology	12	11	2018	mohmad	جديد
1025555555	العيون ophthalmology	19	11	2018	abdalaziz	جديد

تم التسجيل بنجاح

Figure (4-25) Appointment Booking.

First, the type of appointment - emergency or ordinary. Second, the clinic and the doctor in the clinic and the day, month and year in which we want the appointment, Finally click on the appointment booking.

HOSPITAL SYSTEM

بحث حسب التاريخ
 بحث حسب الطبيب
 بحث حسب العيادة

اسم الطبيب

السجل المعني للمريض	اليوم	الشهر	السنة	اسم الطبيب المعالج
1052039874	11	11	2018	ahmed
1052039874	30	11	2018	ahmed

Figure (4-26) Search by Doctor.



Figure (4-27) Diagnostic page.

Diagnostic page the doctor can see previous diagnoses of the patient and develop the current diagnosis and classification of the disease and the description of the drug with the duration of use of the patient.



Figure (4-28) Medical file.

Chapter 5: Conclusion and Future Work

In the end of project that can be conclude that the goal of the project is to obtain statistics for the most common diseases and drugs used most electronically through the introduction of medical information for the patient hope this project that we can get the results required .After we have presented in this project the idea of the project and its importance and objectives and the reasons that led to.

Thankfully , we have finished putting our last drops In this chapter, a detailed view of the program screens was displayed after it was programmed using a language Vb.net , And use a database sql, which included screens manager and receptionist, doctor, pharmacist and patient and reviewed the tasks that can be implemented through the program and how to use.The

future work :

- Work on developing the system so that it is linked to mobile devices, so that it reminds you of appointments and other tasks.
- Maintain diversity and innovation in the materials provided on the site to maintain user confidence of the system. Add English and some other languages .
- See the manager of the receptionist who has made a patient appointment to save the rights of the patient.
- Make patient to booking has appointments

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4. Carames Elmasri & land Shamkant B. Navathe (2009) "Fundamentals of Database System " Pearson Education, 3rd Edition (Addison-Wesley).
5. Microsoft Visual Basic 2010 Step by Step Michael Halvorson.
6. Nred, R.McFadden; Jeffrey, A Hoffer , and Mary, B. Prescott (2009) "Modern Database Management" Pearson Education 5 th Edition (Addison- Wesley).
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9. Turban, Efrain. (2010) "Decision Support and Expert Systems: Manage Support System", Macmillan Publishing Company. New york.
10. Turban, Efrain. (2006) "Decision Support and Expert Systems: Managerial Perspectives", Macmillan Publishing Company. U.S.A.

Appendix (A)

Peace, mercy and blessings of God

Director / employee . Respected

After Greetings ,,,

The research team at the Department of Computer Science and Information Zulfi -
University of Majmaah conducted an applied study entitled

"HOSPITAL SYSTEM "

To complete the graduation requirements. This questionnaire was designed to identify the opinions and attitudes of employees, managers and patients towards the health information systems used in the hospital and the impact of information systems on the quality of patients in the hospital.

Your participation in presenting the true picture has a positive effect in getting the graduation project research to the required level. With great pride, we would like to thank you for choosing the answer that you think is suitable for each question, knowing that the information will be confidential and scientific.

Thank you for your good response ,,,

We wish you success in your business.

Research Team Graduation Project

Department of Computer and Information Sciences

First : The availability of material resources for the use of computerized management information systems at Zulfi Hospital

NO	Paragraph	Degree of approval				
		Strongly Agree	Agree	neutral	not agree	Strongly Not agree
1	The appropriate computers are available to complete the required work.					
2	Data entry is available to suit the needs of the hospital					
3	The available network is commensurate with the needs of the hospital					
4	Helps analyze data as needed					
5	Fit the speed of the hardware required workload					
6	The network is characterized by efficient and fast delivery of information					

Second: the availability of the software capabilities to use computerized management information systems in Zulfi

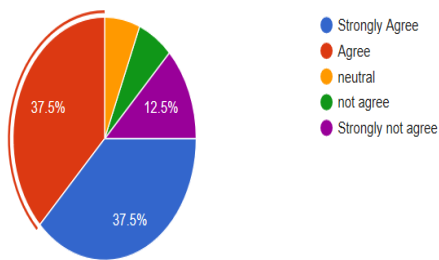
NO	Paragraph	Degree of approval				
		Strongly Agree	Agree	neutral	not agree	Strongly Not agree
1	The software used is compatible with existing devices					
2	The software used keeps pace with the change and the evolution of work					
3	Software provides the ability to handle bugs at a decent pace					
4	The software facilitates the retrieval of information as quickly as possible					
5	The software provides detailed information and statistics when needed					
6	It facilitates the identification of the most common diseases					
7	The software makes it easier to identify the most used drugs					

Appendix (B)

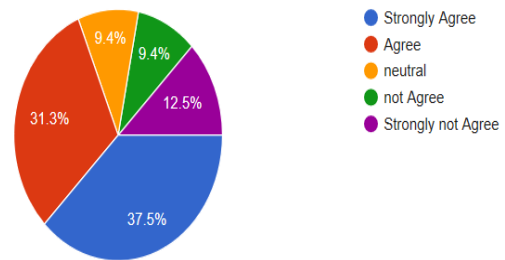
1.1 Questions and answers to the questionnaire form

1.1.1 First : The availability of material resources for the use of computerized management information systems at Zulfi Hospital

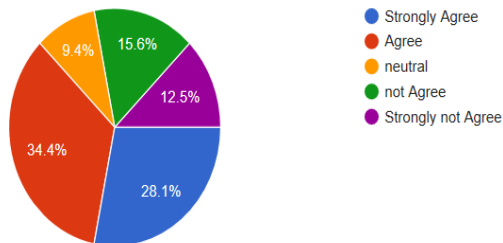
The appropriate computers are available to complete the required work



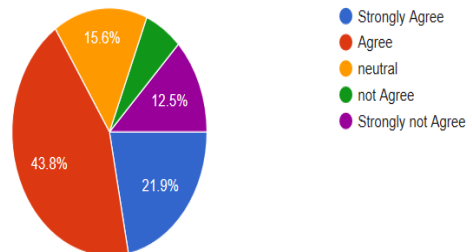
Data entry is available to suit the needs of the hospital



The available network is commensurate with the needs of the hospita

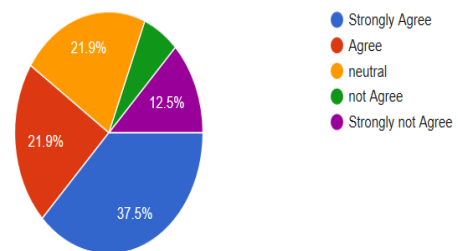
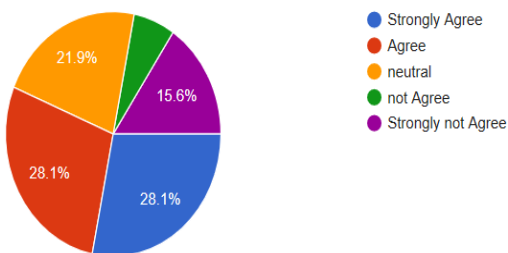


Helps analyze data as needed



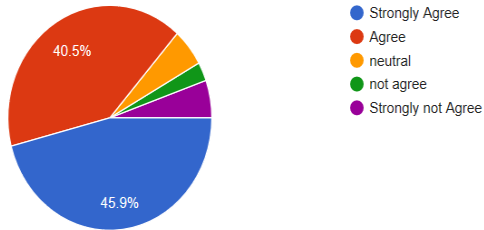
Fit the speed of the hardware required workload

The network is characterized by efficient and fast delivery of information

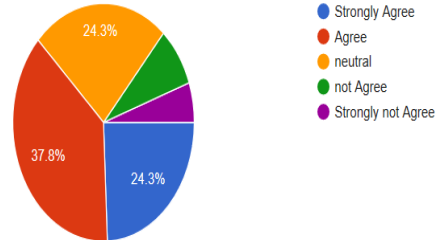


1.1.2 Second: the availability of the software capabilities to use computerized management information systems in Zulfi

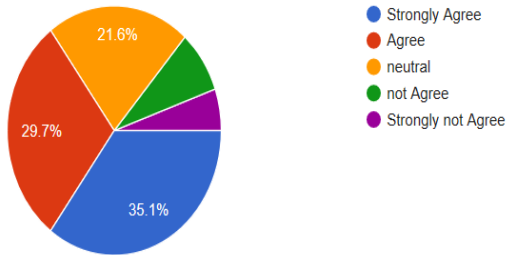
The software used is compatible with existing devices



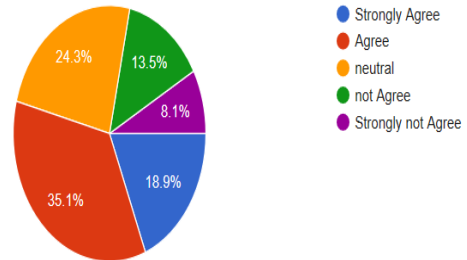
The software used keeps pace with the change and the evolution of work



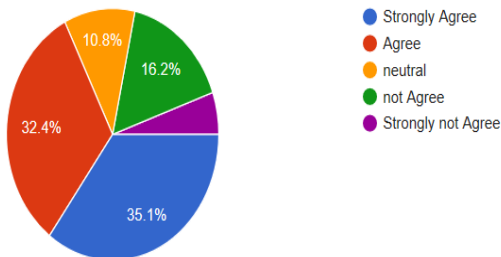
Software provides the ability to handle bugs at a decent pace



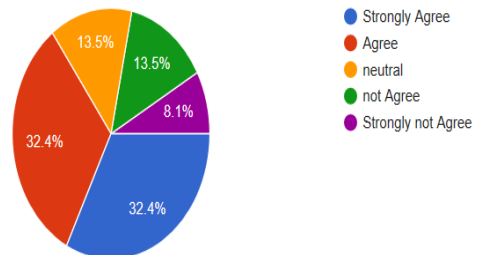
The software facilitates the retrieval of information as quickly as possible



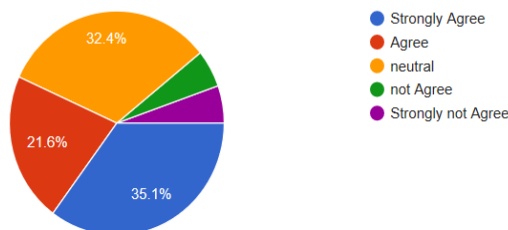
The software provides detailed information and statistics when needed



It facilitates the identification of the most common diseases



The software makes it easier to identify the most used drugs



Appendix(c)

Database on (sql)

id	username	password	type	createdate
3	admin	admin	3	11/11/1440
9	1092345872	11	1	26/02/40
11	9087123765	11	1	26/02/40
12	1093579832	11	1	26/02/40
13	1098726390	11	1	26/02/40
14	1098888888	11	1	26/02/40
15	9081276389	11	1	26/02/40
16	1093508677	11	1	26/02/40
20	1098522222	22	6	26/02/40
24	1038745210	33	5	26/02/40
25	1037896520	33	5	26/02/40
26	1025555555	33	5	26/02/40
27	4876325104	33	5	26/02/40
28	1032544444	33	5	26/02/40
29	1036489752	11	1	27/02/40
30	1097823482	11	1	27/02/40
31	1067845214	11	1	27/02/40
32	1095847136	rec	4	03/03/40
33	1096874230	rec	4	03/03/40
34	1068475236	rec	4	03/03/40
37	1093585214	33	5	03/03/40
38	1063250145	33	5	03/03/40
39	1052039874	33	5	03/03/40
40	1023642010	33	5	03/03/40
41	1097777777	11	1	03/03/40
43	1093522222	33	5	03/03/40
44	1098523104	33	5	03/03/40
45	1036205874	33	5	03/03/40
46	1023541785	33	5	03/03/40
47	6954231035	11	1	03/03/40

drckid	clinic_name
1	pediatrics عيادة الأطفال
2	obstetrics الولادة
3	orthopology العظام
4	psychiatry نفسى
5	radiology الاشعة
6	ophthalmology العيون
7	dentistry الاسنان
8	cardiology القلب
9	urology البولية
10	neurology الاعصاب
11	physiology علم وظائف
12	anesthesiology التخدير
13	dermatology الجلد
14	nephrology الكلى
15	gynecology امراض النساء
16	pathology الامراض
17	histology الانسجة
18	cytology الخلايا
19	hematology الاورام
20	Sas
*	NULL

ID	Namedisease
1	Namedisease
2	أمراض الأنف والأذن والحنجرة
3	أمراض القلب والدورة الدموية
4	الأمراض المعدية
5	أمراض الجهاز الحركي
6	أمراض الجهاز العصبي
7	أمراض الجهاز الهضمي
8	أمراض الدم
9	أمراض العنق
10	داء السكري
11	أمراض العظام
12	أمراض العيون
13	الكلية والمسالك البولية
14	الأمراض الجلدية
15	الأمراض السرطانية
16	الأمراض الصدرية
17	الأمراض النفسية
18	الأمراض غير المعدية
19	أمراض العم والأسمان
*	NULL

PNO	DATE1	Diagnosis	DRUGS	REDUNCY	EVERYHOUR	DRUGSSTAT	CLINNAME	drname	Qreption	QDR	QPHr	Qhospital	Qsat
1034213333	20181111	استيولون(ارتفاع	1	اسبوع	لم يصر	1092345872	psychiatry	نفسى	NULL	NULL	NULL	NULL	NULL
1035478962	20181111	Hb... (ضاد حيوي)	3	اسبوع	لم يصر	1098888888	dentistry	الاسنان	NULL	NULL	NULL	NULL	NULL
4876325104	20181111	...أبيدازول(أنترا	3	شهر	لم يصر	1092837509	neurology	الاعصاب	NULL	NULL	NULL	NULL	NULL
1037896520	20181111	...أسمان الأسيوم	1	اسبوع	لم يصر	1036489752	dermatology	راضى بشدة العلد	راضى بشدة	راضى بشدة	راضى بشدة	راضى بشدة	تم التقويم
1025555555	20181111	...أروين(أعراض الع	3	اسبوع	لم يصر	1067845214	ophthalmology	...	NULL	NULL	NULL	NULL	NULL
1063250145	20181111	التهاب في اللثة	Hb... (ضاد حيوي)	3	اسبوع	لم يصر	1098888888	dentistry	راضى بشدة الاسنان	راضى بشدة	راضى	راضى	تم التقويم
1032544444	20181111	مرض باركنسون	Levodopa	3	شهر	تم الصر	1093508677	neurology	الاعصاب	NULL	NULL	NULL	NULL
1023642010	20181111	مرض السكري	...أكريل(مرض الس	3	شهر	تم الصر	1097777777	pediatrics	راضى بشدة ...عبادة	راضى بشدة	راضى بشدة	راضى بشدة	تم التقويم
1067845214	20181111	...ضادات الاضلاع	الام العصبى	3	شهر	لم يصر	1093508677	neurology	الاعصاب	NULL	NULL	NULL	NULL
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

id	natinalid	Clinic	day1	month1	year1	Dr_name	meat_stat	enterby	MEATTYPE
36	1023642010	pediatrics	11	11	2018	mai	تم الكشف	1095847136	عادي
38	1063250145	dentistry	11	11	2018	noura	تم الكشف	1095847136	طارئ
39	1093585214	psychiatry	12	11	2018	abdullah	جديد	1095847136	عادي
40	1093585214	anesthesiology	14	11	2018	mustafa	جديد	1095847136	عادي
41	1093585214	psychiatry	20	11	2018	abdullah	جديد	1095847136	عادي
42	1037896520	dentistry	11	12	2018	ashia	جديد	1095847136	عادي
45	1063250145	dentistry	01	12	2018	noura	جديد	1096874230	عادي
46	1093585214	cardiology	12	11	2018	reem	جديد	1096874230	طارئ
47	1038745210	nephrology	15	11	2018	kamal	جديد	1068475236	عادي
48	1037896520	dentistry	29	11	2018	ashia	جديد	1068475236	عادي
49	1025555555	ophthalmology	12	11	2018	mohmad	جديد	1095847136	طارئ
50	4876325104	pediatrics	12	11	2018	mai	جديد	1095847136	طارئ
51	1032544444	neurology	11	11	2018	amal	تم الكشف	1095847136	عادي
52	1032544444	hematology	19	11	2018	emir	جديد	1095847136	عادي
53	1025555555	ophthalmology	19	11	2018	abdalaziz	جديد	1095847136	طارئ
54	4876325104	pediatrics	14	12	2018	mai	جديد	1096874230	عادي
55	1067845214	neurology	11	11	2018	amal	تم الكشف	1095847136	طارئ
56	1052039874	neurology	15	11	2018	amal	جديد	1095847136	عادي
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

id	Dr_no	dr_clinck
1	109777777	pediatrics عيادة الأطفال
2	1092345872	psychiatry نفسى
3	9087123765	anesthesiology التخدير
4	1093579832	ophthalmology العيون
5	1098726390	cardiology القلب
6	1098888888	dentistry الاسنان
7	9081276389	dentistry الاسنان
8	1093508677	neurology الاعصاب
11	1036489752	dermatology الجلد
12	1097823482	dentistry الاسنان
13	1067845214	ophthalmology العيون
14		cytology الخلايا
15	6954231035	orthopology العظام
16	1032541789	hematology الاورام
17	1032578200	nephrology الكلى
18	9081276389	pediatrics عيادة الأطفال
*	NULL	NULL

id	drugsname
1	Apradonidine أبراكلونديد (أمراض العيون)
2	Abarelix أبرليكس (أمراض المسالك البولية والتناسلية)
3	Atropine أتروبين (أمراض العيون)
4	Adapalene and Benzoyl peroxide أدابالين مع بيروكسيد البنزول (الأمراض الجلدية)
5	Adrenaline أدريالين (أمراض الجهاز التنفسي)
6	Iron Edetate آديتات الحديد (فيتامينات و معادن)
7	Lumefantrine & Artemether لوميفانترين مع ثوميفانترين (أمراض الجهاز الهضمي)
8	Azathioprine أزابيوبراين (علم المناعة)
9	Azithromycin أزيثروميسين (الأمراض الجنسية)
10	Astemizole أستيميذول (أمراض الجهاز التنفسي)
11	Aluminum Acetate ألومنيوم أسيتات (الأمراض الجلدية)
12	Cortisone Acetate كورتيزون أسيتات (هرمونات)
13	Acetohexamide أسيتوهيكساميد (مرض السكري)
14	Acetylsalicylic Acid أسينيل ساليسيليك أسيد (الأمراض العصبية)
15	Acarbose أكاربوز (مرض السكري)
16	Oxymetholone أوكسي ميثولون (هرمونات)
17	Albendazole ألبيندازول (الأمراض العصبية)
18	Alfuzosin ألفازوسين (أمراض المسالك البولية والتناسلية)
19	Allopurinol ألوپورينول (أمراض العضلات والعظام والمفاصل)
20	Aloe Vera آلو فيرا / صبر (الأمراض الجلدية)
21	Alendronate ألبندرونات (أمراض العضلات والعظام والمفاصل)
22	Ampicillin أمبيسيلين (الأمراض الجنسية)
23	Amoxicillin أموكسيسيلين (الأمراض المعدية)
24	Amoxicillin with clavulanic acid أموكسيسيلين و كلافلانيك أسيد (الأمراض المعدية)
25	Impenem and Cilastatin إيمبينيم سيلاستاتين (الأمراض الجنسية)
26	Abarelix أبرليكس (أمراض المسالك البولية والتناسلية)
27	Adapalene and Benzoyl peroxide أدابالين مع بيروكسيد البنزول (الأمراض الجلدية)
28	Acarbose أكاربوز ، مرض السكري
29	Albendazole ألبيندازول (الأمراض العصبية)
30	Oxybuprocaine أوكسيبيبروكاين (أمراض العيون)

id	desnam	desdick	desdr	date1	patonbd	temp
5	أمراض الفم والأسنان	dentistry الأسنان	1098888888	20181111	1035478962	NULL
6	أمراض الجهاز العصبي	neurology الاعصاب	1092837509	20181111	4876325104	NULL
7	الأمراض الجلدية	dermatology الجلد	1036489752	20181111	1037896520	NULL
8	أمراض العيون	ophthalmology العيون	1067845214	20181111	1025555555	NULL
9	أمراض الفم والأسنان	dentistry الأسنان	1098888888	20181111	1063250145	NULL
10	أمراض الجهاز العصبي	neurology الاعصاب	1093508677	20181111	1032544444	NULL
11	داء السكري	pediatrics عمادة الأطفال	1097777777	20181111	1023642010	NULL
12	أمراض الجهاز العصبي	neurology الاعصاب	1093508677	20181111	1067845214	NULL
* NULL	NULL	NULL	NULL	NULL	NULL	NULL

PatVO	mobile	DOB	Name	nationalid	type	temp
5	0590752134	29/05/35	abdullah	1092345872	NULL	NULL
6	0598125892	01/02/40	mustafa	9087123765	NULL	NULL
7	0555128732	27/01/40	mohmad	1093579832	NULL	NULL
8	0555587123	05/02/40	reem	1098726390	NULL	NULL
9	0555588888	21/02/40	noura	1098888888	NULL	NULL
10	0598237091	06/02/40	sara	9081276389	NULL	NULL
11	0590854006	03/02/40	amal	1093508677	NULL	NULL
12	0556789123	06/02/40	mai	1097777777	NULL	NULL
13	0567912673	07/02/40	reema	1093678291	NULL	NULL
14	0976512897	12/02/40	ahmed	1092837509	NULL	NULL
15	0509211111	28/01/40	salman	1099999999	NULL	NULL
16	0505478931	03/02/40	waad	1035478962	NULL	NULL
17	0546982314	29/01/40	hadeel	1032547950	NULL	NULL
18	0254444444	28/01/40	ali	1034213333	NULL	NULL
19	0505369999	04/02/40	wadha	1038745210	NULL	NULL
20	0503642111	08/02/40	hana	1037896520	NULL	NULL
21	0555421876	13/02/40	asma	1025555555	NULL	NULL
22	0505014236	14/02/40	hasaan	4876325104	NULL	NULL
23	0505368888	13/02/40	mohaned	1032544444	NULL	NULL
24	0505463287	01/02/40	fahad	1036489752	NULL	NULL
25	0505428793	29/01/40	ashia	1097823482	NULL	NULL
26	0555148350	24/05/36	abdalaziz	1067845214	NULL	NULL
27	0569842310	13/03/40	Abd.rahman	1095847136	NULL	NULL
28	0505121212	08/03/40	Firas	1096874230	NULL	NULL
29	0555454545	26/02/40	Naser	1068475236	NULL	NULL
32	0536982410	06/03/40	aram	1093585214	NULL	NULL
33	0555321084	05/03/40	mshaal	1063250145	NULL	NULL
34	0505362000	27/03/40	wafa	1052039874	NULL	NULL
35	0555542013	27/02/40	sadeem	1023642010	NULL	NULL
37	0505122726	27/02/40	fozuah	1093522222	NULL	NULL

Appendix (D)

(Code for log in)

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Default.aspx.vb"
Inherits="Login_v11_Default" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title> مشروع تخرج </title>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <!--=====-->
  <link rel="icon" type="image/png" href="images/icons/favicon.ico"/>
  <!--=====--> <link rel="stylesheet" type="text/css"
href="vendor/bootstrap/css/bootstrap.min.css">
  <!--=====--> <link rel="stylesheet" type="text/css"
href="fonts/font-awesome-4.7.0/css/font-awesome.min.css">
  <!--=====--> <link rel="stylesheet" type="text/css"
href="fonts/Linearicons-Free-v1.0.0/icon-font.min.css">
  <!--=====--> <link rel="stylesheet" type="text/css"
href="vendor/animate/animate.css">
  <!--=====-->
  <link rel="stylesheet" type="text/css" href="vendor/css-hamburgers/hamburgers.min.css">
  <!--=====--> <link rel="stylesheet" type="text/css"
href="vendor/select2/select2.min.css">
  <!--=====-->
  <link rel="stylesheet" type="text/css" href="css/util.css">
  <link rel="stylesheet" type="text/css" href="css/main.css">
  <!--=====--> <title></title>
  <style type="text/css">
    .style1
    {
      font-size: x-small;
    }
    .style2
    {
      font-size: large;
    }
  </style>
</head>
<body bgcolor="red">
  <form id="form1" runat="server">
    <div class="limiter">

      <div class="container-login100">
        <div class="wrap-login100 p-l-50 p-r-50 p-t-77 p-b-30">
          <form class="login100-form validate-form">
            <span class="style1">
<center>
  <br /><br /> <br /> <br />
  HOSPITAL SYSTEM </span></center></strong>

  <center> <DIV>
  <asp:DropDownList ID="DropDownList1" runat="server" Height="35px" Width="185px">
    <asp:ListItem Value="3"> مدير </asp:ListItem>
    <asp:ListItem Value="5"> مراجع </asp:ListItem>
    <asp:ListItem Value="1"> دكتور </asp:ListItem>
    <asp:ListItem Value="6"> صيدلي </asp:ListItem>
    <asp:ListItem Value="4"> الاستقبال </asp:ListItem>
  </asp:DropDownList>
  </center>
  </div>
  </form>
  </div>
  </form>
  </body>
</html>
```



```

        </asp:DropDownList> &nbsp;المستخدم نوع </DIV>
    </center>
<div class="wrap-input100 validate-input m-b-16" > <br />
    السجل المدني<asp:TextBox ID="TextBox1" runat="server" Class="input100" ></asp:TextBox>
<span class="focus-input100"></span>
<%--<span class="symbol-input100">--%>
<%--<span class="lnr lnr-envelope"></span>--%>
</span></div> <div class="wrap-input100 validate-input m-b-16" data-validate = "Password is required">
    كلمة المرور <asp:TextBox ID="TextBox2" runat="server" Class="input100" Text="PASSWORD "
    TextMode="Password"></asp:TextBox>
<span class="focus-input100"></span>
<%-- <span class="symbol-input100">--%>
<%-- <span class="lnr lnr-lock"></span>--%>
    </span></div>

<div class="contact100-form-checkbox m-l-4">
<input class="input-checkbox100" id="ckb1" type="checkbox" name="remember-me">
    <label class="label-checkbox100" for="ckb1">
        نتذكرني</label>
    </div> <div class="container-login100-form-btn p-t-25"> <h5>
<asp:Button ID="Button1" runat="server" Text="الدخول تسجيل" class="login100-form-btn"/>
    <asp:Label ID="Label1" runat="server"></asp:Label> </h5> <%-- <button ><br
/>Login</button> --%>
<div class="text-center w-full p-t-115">
    </div></form> </div></div></div>

<!--=====-->
    <script src="vendor/jquery/jquery-3.2.1.min.js"></script>
<!--=====-->
    <script src="vendor/bootstrap/js/popper.js"></script>
    <script src="vendor/bootstrap/js/bootstrap.min.js"></script>
<!--=====-->
    <script src="vendor/select2/select2.min.js"></script>
<!--=====-->
    <script src="js/main.js"></script>
<div> </div></form></body></html>

```

```

<code when press on button>
Imports System.Data.SqlClient
Imports System.Data
Partial Class Login_v11_Default
    Inherits System.Web.UI.Page
    Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs) Handles Me.Load
    End Sub
    Protected Sub Button1_Click(ByVal sender As Object, ByVal e As System.EventArgs) Handles
Button1.Click
        Dim connectionString As String
        Dim connection As SqlConnection
        Dim command As SqlCommand
        Dim adapter As New SqlDataAdapter
        Dim ds As New DataSet
        Dim firstSql As String
        connectionString = "Data Source=DESKTOP-4BHJTKP\SQLEXPRESS ;Initial Catalog=hospital;Integrated
Security=True"
        firstSql = "SELECT * FROM Accounts where [username]='" + TextBox1.Text + "' and [password]='" +
TextBox2.Text + "' and type ='" + DropDownList1.SelectedValue + "'"
        connection = New SqlConnection(connectionString)
        Try
            connection.Open()
            command = New SqlCommand(firstSql, connection)
            adapter.SelectCommand = command
            adapter.Fill(ds, "User")

```

```

adapter.Dispose()
command.Dispose()
connection.Close()
Dim row_count As Integer = ds.Tables(0).Rows.Count
If row_count > 0 Then
    Dim username1 As String = ds.Tables(0).Rows(0).Item("username")
    Dim typeuser As Integer = ds.Tables(0).Rows(0).Item("type")
    Dim type1 As String = ds.Tables(0).Rows(0).Item("dept")
    If typeuser = 3 Then
        Session("admin") = TextBox1.Text
        Response.Redirect("Adminpage.aspx")
    ElseIf typeuser = 1 Then
        Session("Dr1") = TextBox1.Text
        Response.Redirect("DR.aspx")
    ElseIf typeuser = 6 Then
        Session("pah") = TextBox1.Text
        Response.Redirect("queryPH.aspx")
    ElseIf typeuser = 5 Then
        Session("PATIENT") = TextBox1.Text
        Response.Redirect("queryPatiant.aspx")
    ElseIf typeuser = 4 Then
        Session("user") = TextBox1.Text
        Response.Redirect("resptionEmp.aspx")
    End If
Else
    Label1.Text = " لقد أدخلت اسم مستخدم او كلمه مرور خطأ "
End If
Catch ex As Exception
End Try
End Sub
End Class

```

(Code for admin interface)

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Adminpage.aspx.vb" Inherits="Adminpage"
%>

```

```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

```

```

<html xmlns="http://www.w3.org/1999/xhtml">
<head >
<meta charset='utf-8'>
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="css2/styles2.css">
<script src="http://code.jquery.com/jquery-latest.min.js" type="text/javascript"></script>
<script src="script.js"></script>
<title>CSS MenuMaker</title>
<title>النظام مدير شاشة</title>
<style type="text/css">
    .style3
    {
        background-color: #FFFFFF;
    }
</style>
</head>
<body bgcolor="E3E4FA">

```

