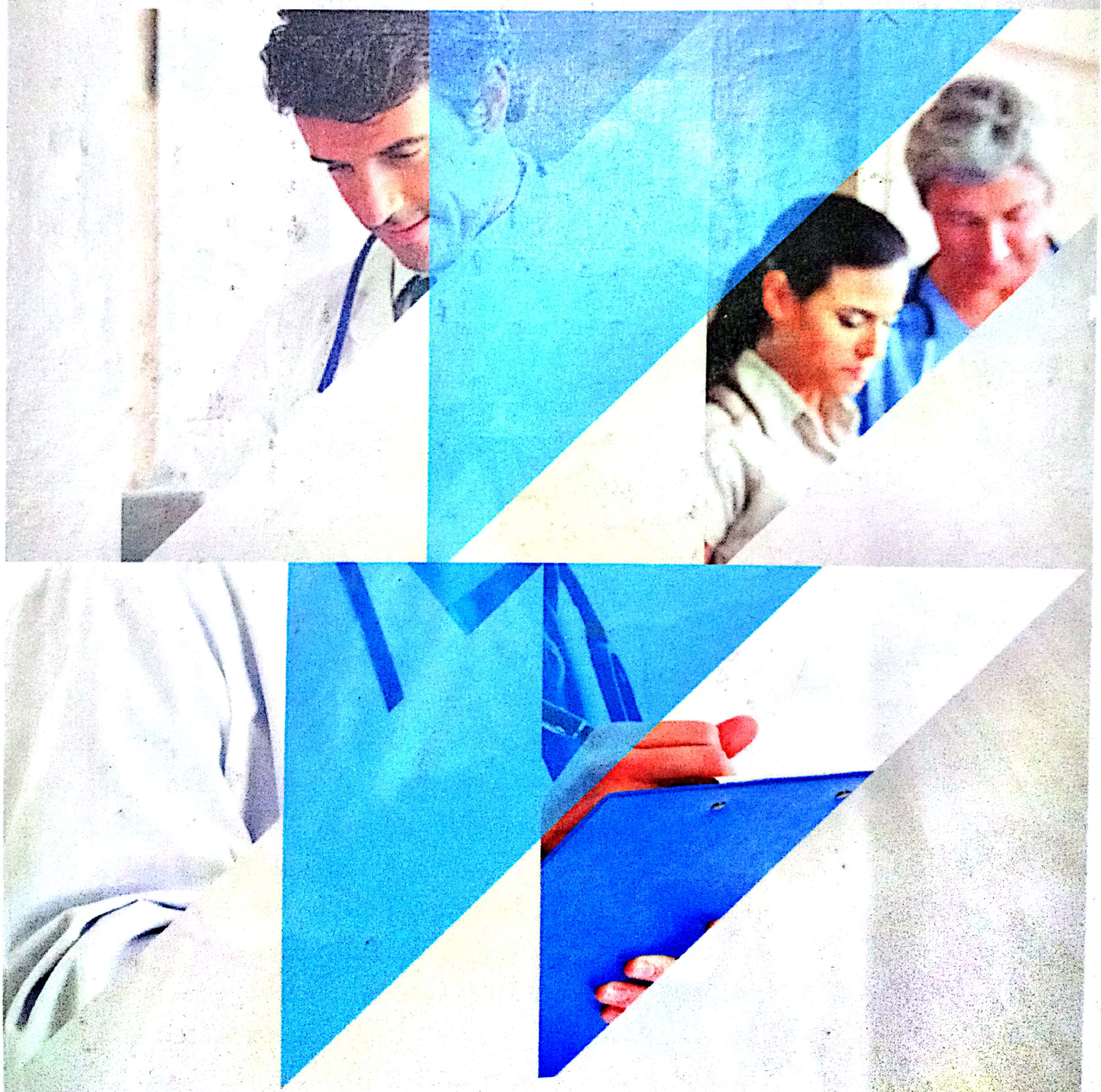
Zagazig University
Faculty of Computer & Informatics
Computer Science Department



RE_LIFE

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Thanks

We would like to thank :

Eng. Mahmoud Mahdi

Who directed us to this branch of science, guiding us through most of all our steps, providing us good resources and references for finishing this project.

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But as usual words not enough for expressing our thanks and gratitude to those people.

We hope we learned well as much as we can to be useful for every member in the society hoping Allah's satisfaction every time and everywhere..

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ABSTRACT

Re Life Project : the project helps patients search for the nearest hospital in their own country which have free beds for specific patients like heart, brain or chest patients.

If there are actually free beds in the hospital, the patient can book the empty bed before going to it by connecting with hospital admins.

It can also search for a specific medicine in pharmacies that are nearby this hospital.

This project can be very helpful in Egypt and other countries especially in the third world.

Countries that suffer from high rate of deaths usually because of the lack of beds in hospitals, the patient or the ambulance driver take a long time searching for hospitals with free bed and

at this long time the situation of the patient get worst.

CHAPTER I:

Introduction & Project

Re Life Project: Is a project which its goal is to aid patients to get the closest hospital with free beds for his case , to help relatives of the patient to get free beds for him if he can not speak or use application or to help ambulance driver .

some times the ambulance take the patient to a hospital then the hospital told them that there are no free beds, and then the ambulance take the patient again to another one which also to that there are no beds and so on until the ambulance find a hospital with beds and in this time the health condition of the patient get worst .

but now with this app the ambulance driver can get the closest hospital in just few seconds with this app and then go to it directly and reach the hospital before the health condition of the patient get worst .Also the project has an option to search about medicine ,sometimes the patient has to take rare medicine which available only in the pharmacies of the hospitals .

and instead of the taking long time search from to hospital to anotherthe patient can know closest hospital has the medicine . The project idea is to build a network of intensive care unit, the network will be built by the efforts of group of individuals who are working in the hospitals .Because without thesereliable network, searching for an intensive care unit will be difficult as we mentioned before and this difficulty may has cost equal a life We think about this project because Egypt is one of the third world countries which suffer from high rate of deaths because of the lack of beds in the hospitals , so we hope that this project can save people lives by locating the most appropriate intensive care unit In the shortest time possible so that quick access to these units can be improved and early treatment can be given to them .

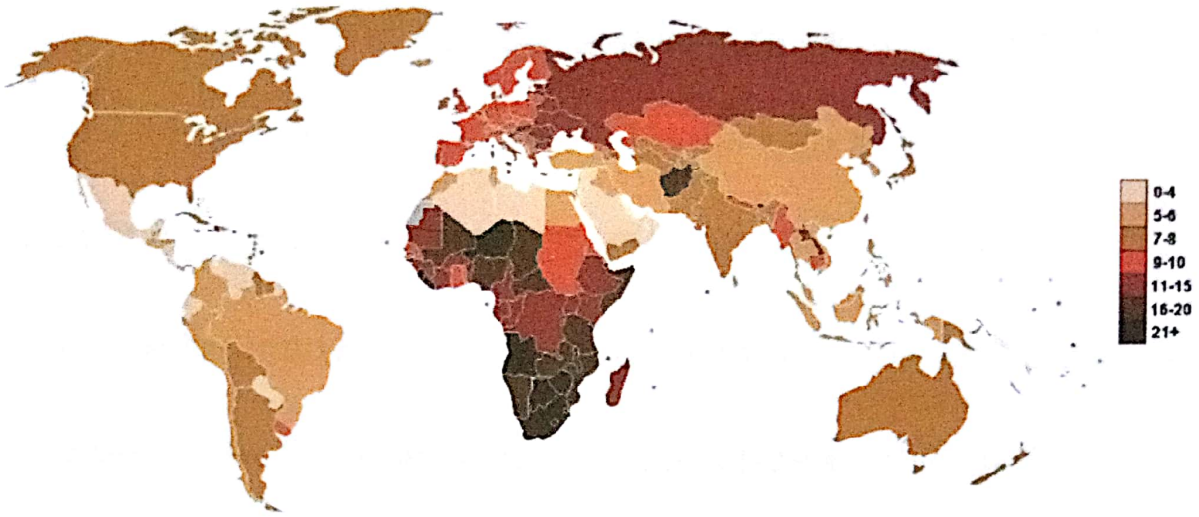


Figure 1: map of death rates of entire world

-In the **figure 1** we see the death rates of entire world we can see that the developing countries have higher rates of death included Egypt. But with our IT powered service , we are trying To reduce this rate by feeding users with valuable information by locating the intensive care unit in duration of eye blinking . our job is not to give you the care you look for , we show you to the right place where you can be cared and avoid delay . to maintain dynamicity and up to date service , doctors can update their hospitals intensive care units information through web and mobile applications , doctors are impatiently looking for

intensive care units to use our services to search and find proper intensive care units.We consider that the service is provided by a database of doctors assigned to hospitals , which can be managed by IT administrator in the hospitals , to make sure that the authorized person updates the right piece of information . the service includes expert system , to assess the patient" s case and then suggest proper intensive care unit and show the shortest path from patient to proper intensive care unit.

The project are divided into **4 parts:-**

First is part

for the user that will use our service to get the proper intensive care unit, it takes the city and the intensive care unit that the user want to search for it and then get the proper intensive care unit for him or take the intensive care unit that the user search for it and get the closest intensive care unit to the user , the system in this case doesn" t need to knew the city because it get

user's location by GPS , and also we have option to use expert system that get some information about the condition of the patient and then suggest proper intensive care unit and search for it in few seconds to the user and also search for medicines in the hospitals .

Second is part for doctor who is responsible of update free and busy beds in the intensive care unit periodically to make the service dynamicity and up to date ,every doctor is assigned to one or more intensive care unit and he login to the system by

username and password and then choose the intensive care unit he want to update and then update it .

Third part is for hospital administrator who is responsible of assign doctors to intensive care unit or delete doctor or add new intensive care unit and he is responsible of get the update history which made by specific doctor or by date , to detect if any mistake happen to detect who is responsible of it .

Forth part is for entire system administrator which responsible of assign hospital administrator to the hospitals ,add hospital and have control of the entire system.Fifth part is for pharmacy manager to make him to add medicines , delete it and update medicine data. All these projects we made it as web applications ,but the user and doctor we made also android application for them .

Why we choose to make mobile app for the user ?

We already have the web application and it works very well but why we choose to make mobile application we make the mobile application because we see that the future will be for mobile phone, the use of mobile phone increased in significant wayand the use of mobile phone is more easier than the web and can be used anywhere because the mobile is with us everywhere it become part of our life so we decided to make mobile application for doctor also to make updates for the service.

❖ Technologies and software used in the project

First we used MYSQL for design and implement database tables ,relations and procedures.

❖ For Mobile apps

- Android Studio as IDE and Android SDK
- Extensible Markup Language (XML) for the design
- Java programming language for the programming
- Google map service
- Restful Web Service

❖ For Web apps

- PHP & Ralavel as development tool
- HTML5 , CSS3 ,Bootstrap framework and javascript for the design.

CHAPTER II:

The Analysis of the project

The analysis of the project is in three phases

1. Use case diagram
2. Sequence diagram
3. Activity diagram

1- Use case diagram

Use case diagrams overview the usage requirements for a system. They are useful for presentations to management and/or project stakeholders, but for actual development you will find that use cases provide significantly more value because they describe the meat of the actual requirements.

Use cases: a use case describes a sequence of actions that provide something of measurable value to an actor and is drawn as ahorizontal ellipse.

Actors: an actor is a person, organization, or external system that plays a rolein one or more interactions with your system. Actors are drawn as stick figures

Associations: associations between actors and use cases are indicated in use case diagrams by solid lines. An association exists whenever an actor is involved with an interaction described by a use case. Associations are modeled as lines connecting use cases and actors to one another, with an optional arrowhead on one end of theline. The arrowhead is often used to indicating the direction of the initial invocation of the relationship or to indicate the primary actor within the use case. The arrowheads are typically confused with data flow and as a result I avoid their use.

System boundary boxes (optional): you can draw a rectangle around the use cases, called the system boundary box, to indicate the scope of your system. Anything within the box represents functionality that is in scope and anything outside the box is not. System boundary boxes are rarely used, although on occasion I have used them to identify which use cases will be delivered in each major release of a system.

Packages(optional): packages are UML constructs that enable you to organize model elements (such as use cases) into groups. Packages are depicted as file folders and can be used on any of the UML diagrams, including both use case diagrams and class diagrams.

I use packages only when my diagrams become unwieldy, which generally implies they cannot be printed on a single page, to organize a large diagram into smaller ones.

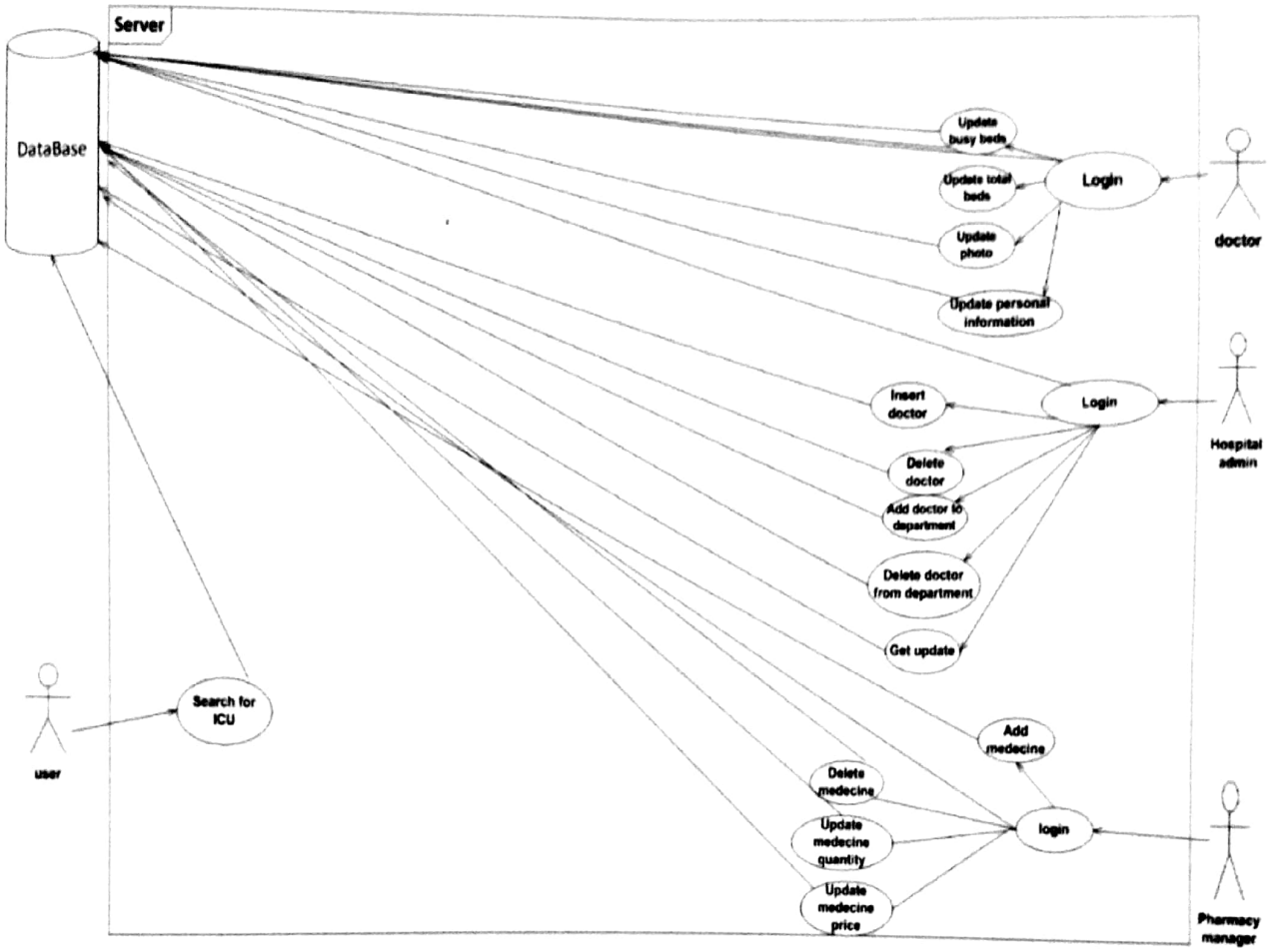


Figure 2: the flow chart of the use case diagram for the system without system admin

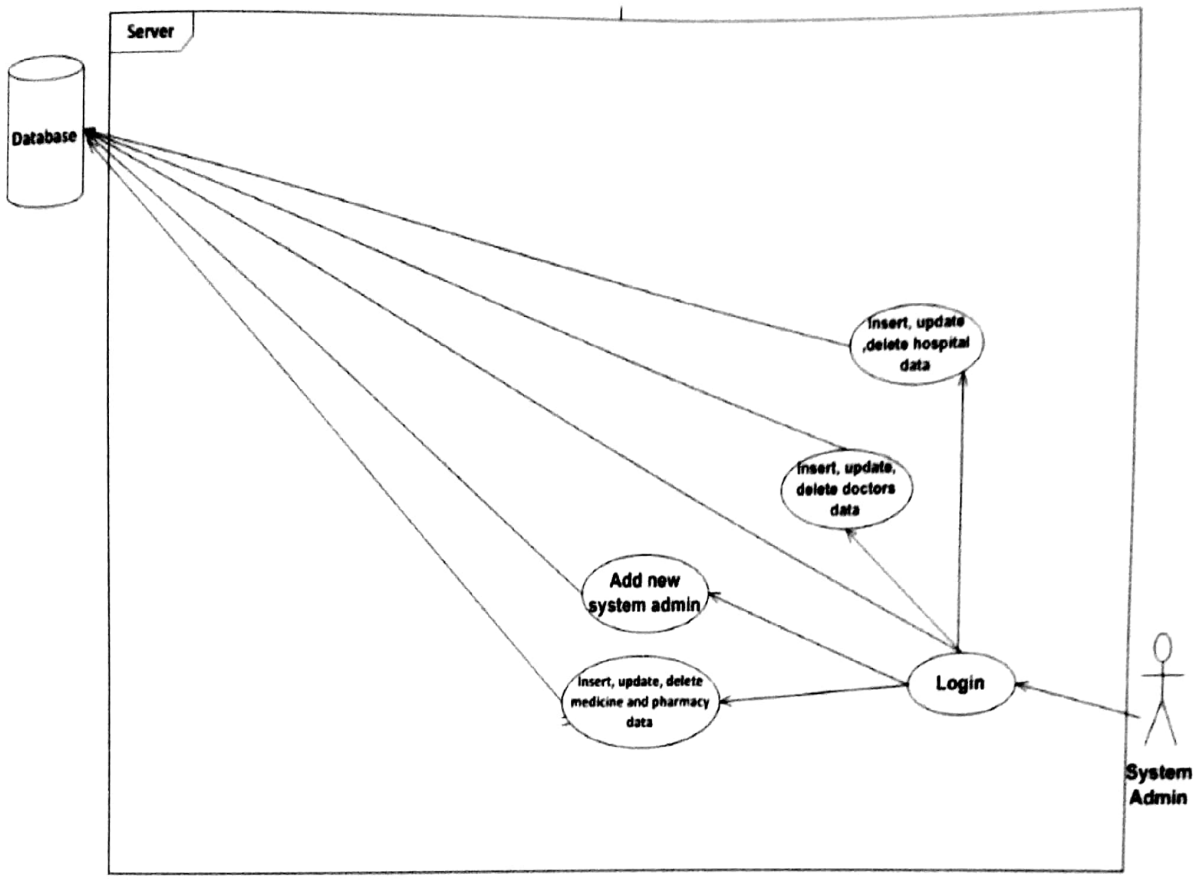


Figure 3: the flow chart of the use case diagram for the systemadmin

2- sequence diagram

- Sequence diagrams are interaction diagrams that detail how operations are carried out.
- Interaction diagrams model important runtime interactions between the parts that make up the system.

What do sequence diagram model?

- Capture the interaction between objects in the context of collaboration.
- show object instances that play the roles defined in the collaboration.
- show the order of the interaction visually by using vertical axis of the diagram to represent time what messages are sent and when.
- show elements as they interact over time, showing interactions or interaction instances.
- do not show the structural relationships between objects.

When to Use Sequence Diagrams?

- You should use sequence diagrams when you want to look at the behavior of several objects within a single use case.
- Sequence diagrams are good at showing collaborations among the objects.
- They are not so good at precise definition of behavior.

Now the flow chart of the sequence diagram for the system which is Consists of **five parts**

- **The first part**

- shows the user how search for intensive care unit or medicine.

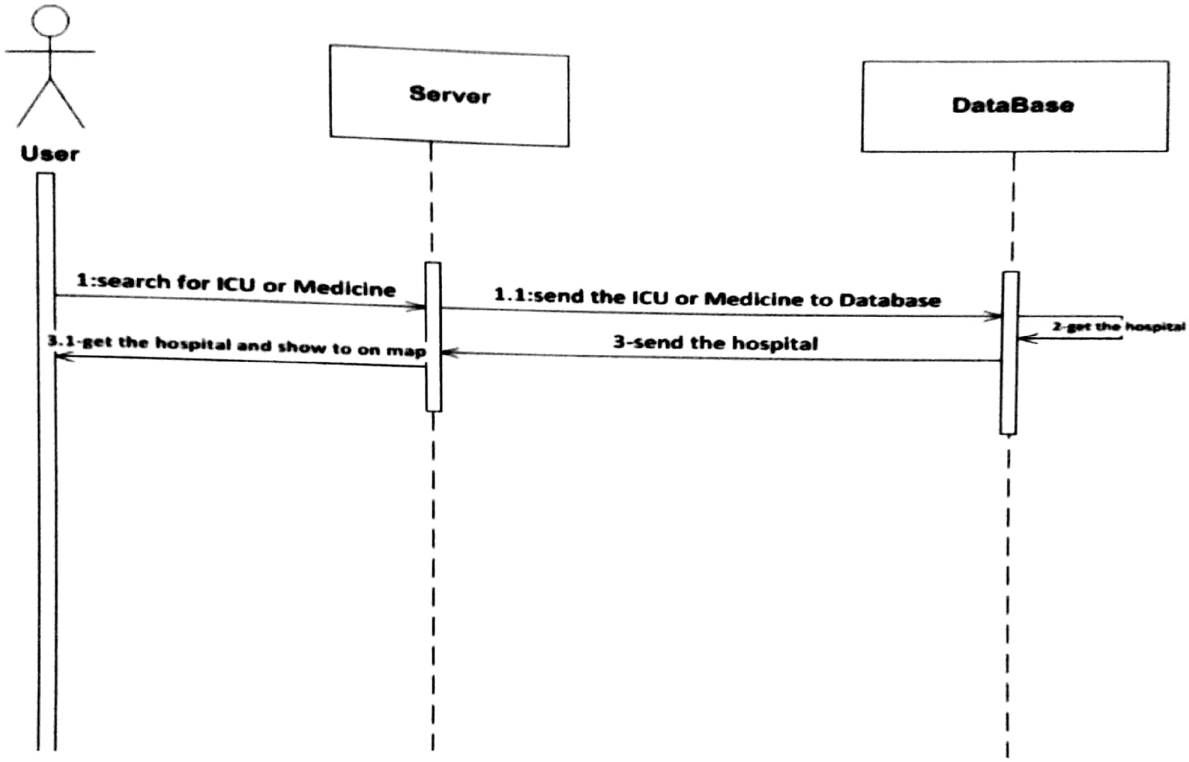


Figure 4: the flow chart of the sequence diagram of how user search for intensive care unit or medicine

-**The second part** shows how the doctor logs in and updates its personal data , photo or busy and total beds

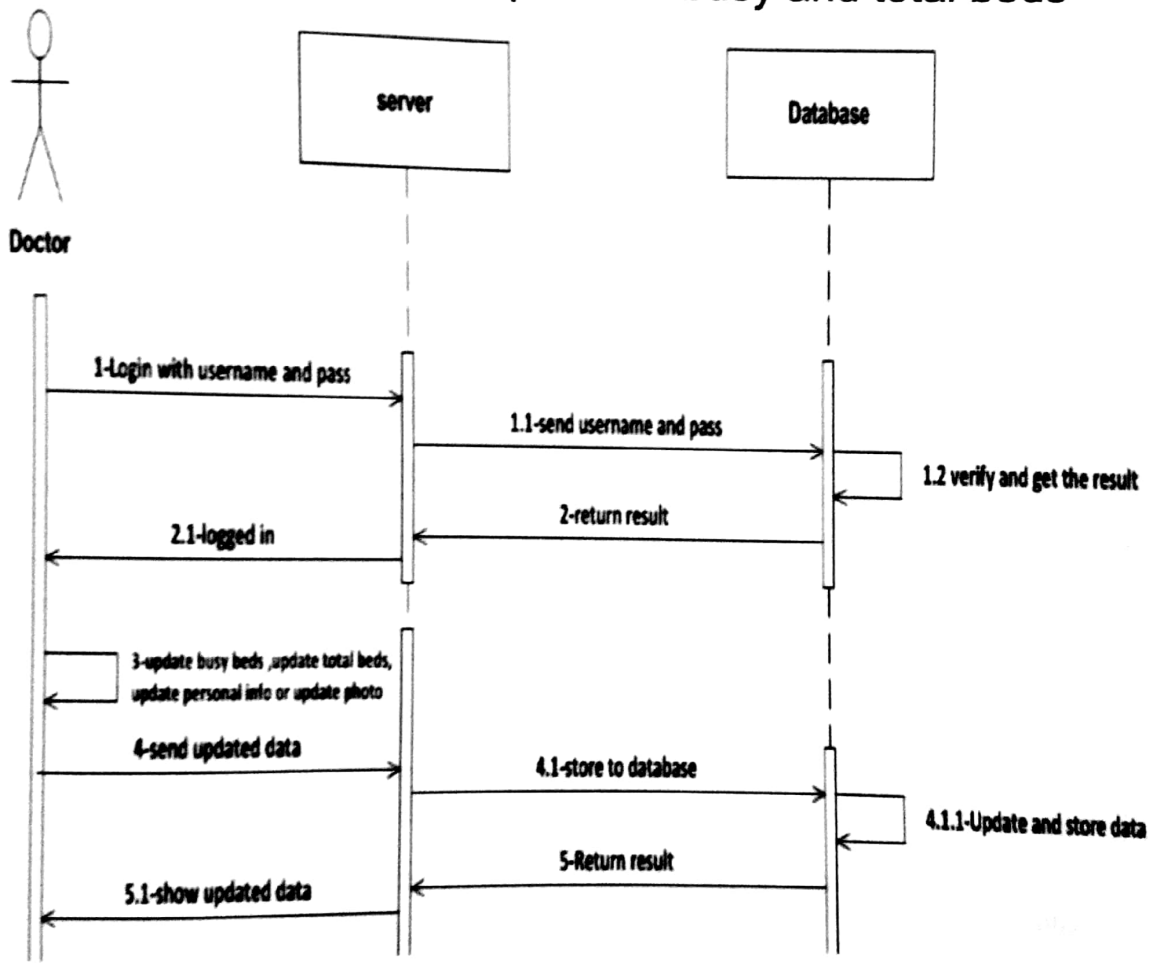


Figure 5: the flow chart of the sequence diagram of how doctor log in and updates its personal data, photo or busy and total beds

-**The third part** shows how the hospital admin log in and insert,delete ,get updates or update his personal data.

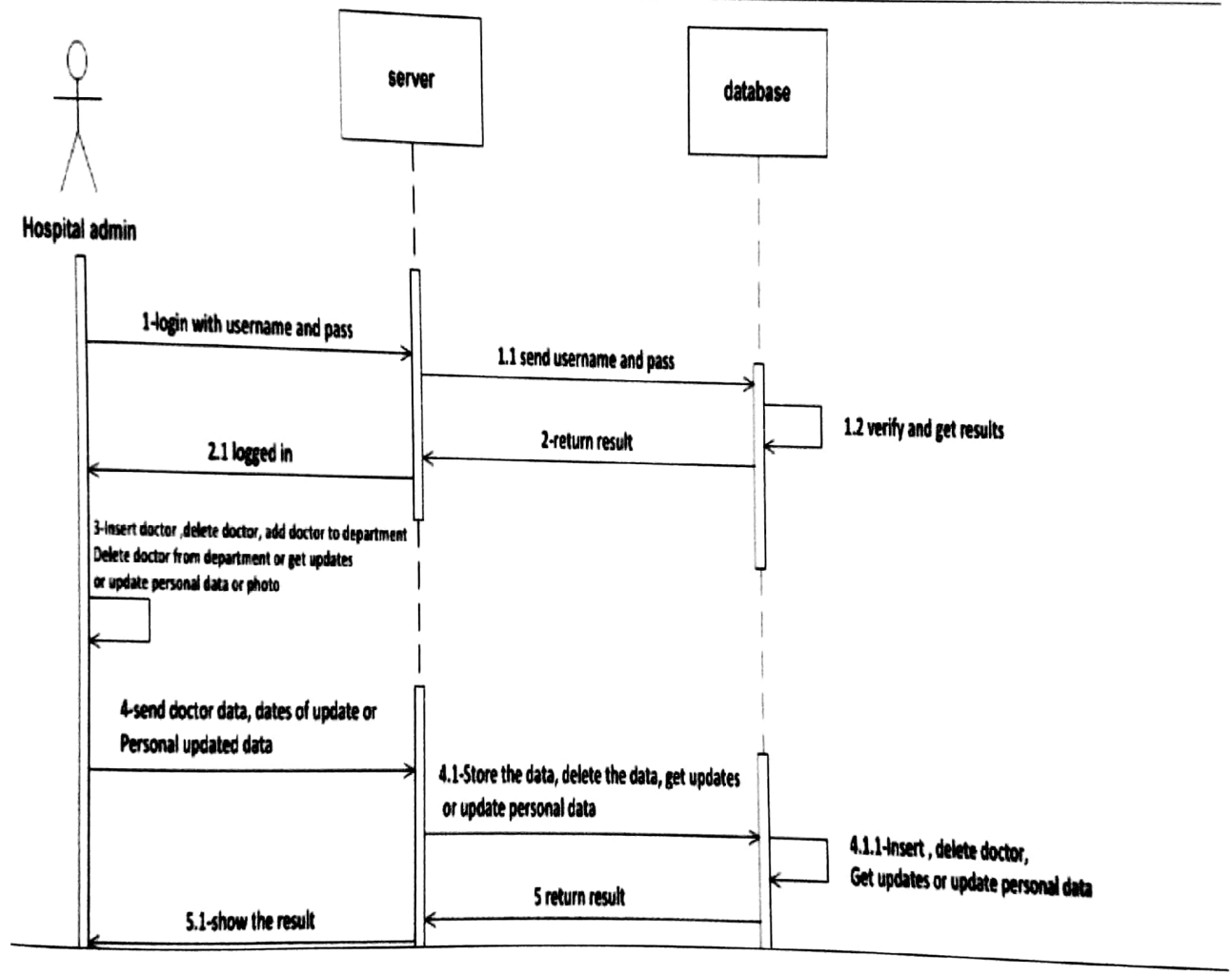


Figure 6: the flow chart of the sequence diagram of how hospital admin log in and inser,delete,get updates or update his personal data.

-**The forth part** shows how the pharmacy manager logs in and insert, delete, update medicine.

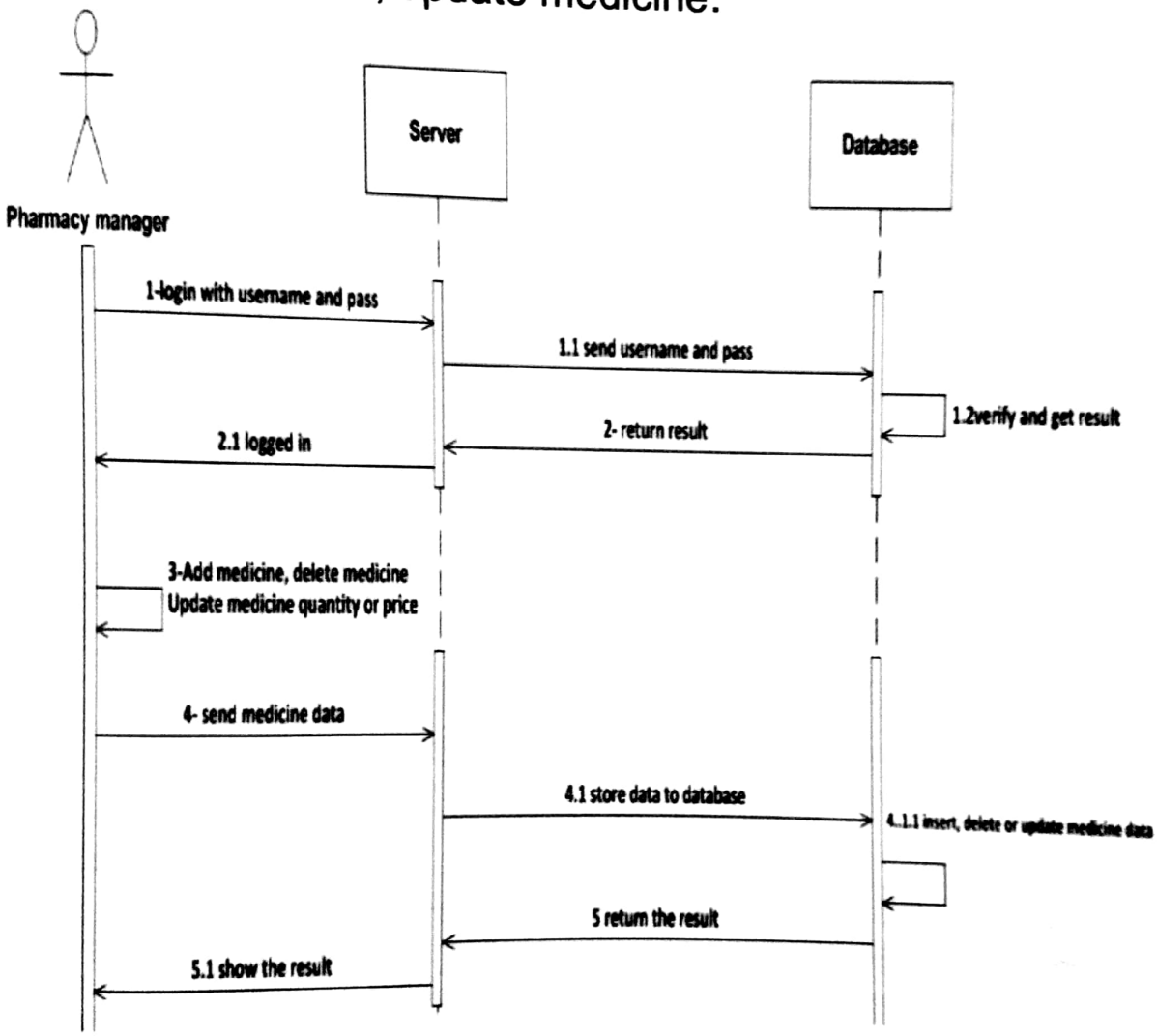


Figure 7: the flow chart of the sequence diagram of how the pharmacy manager logs in and insert, delete, update medicine.

-**The fifth part** show how system admin logs in and add new hospital and its admin.

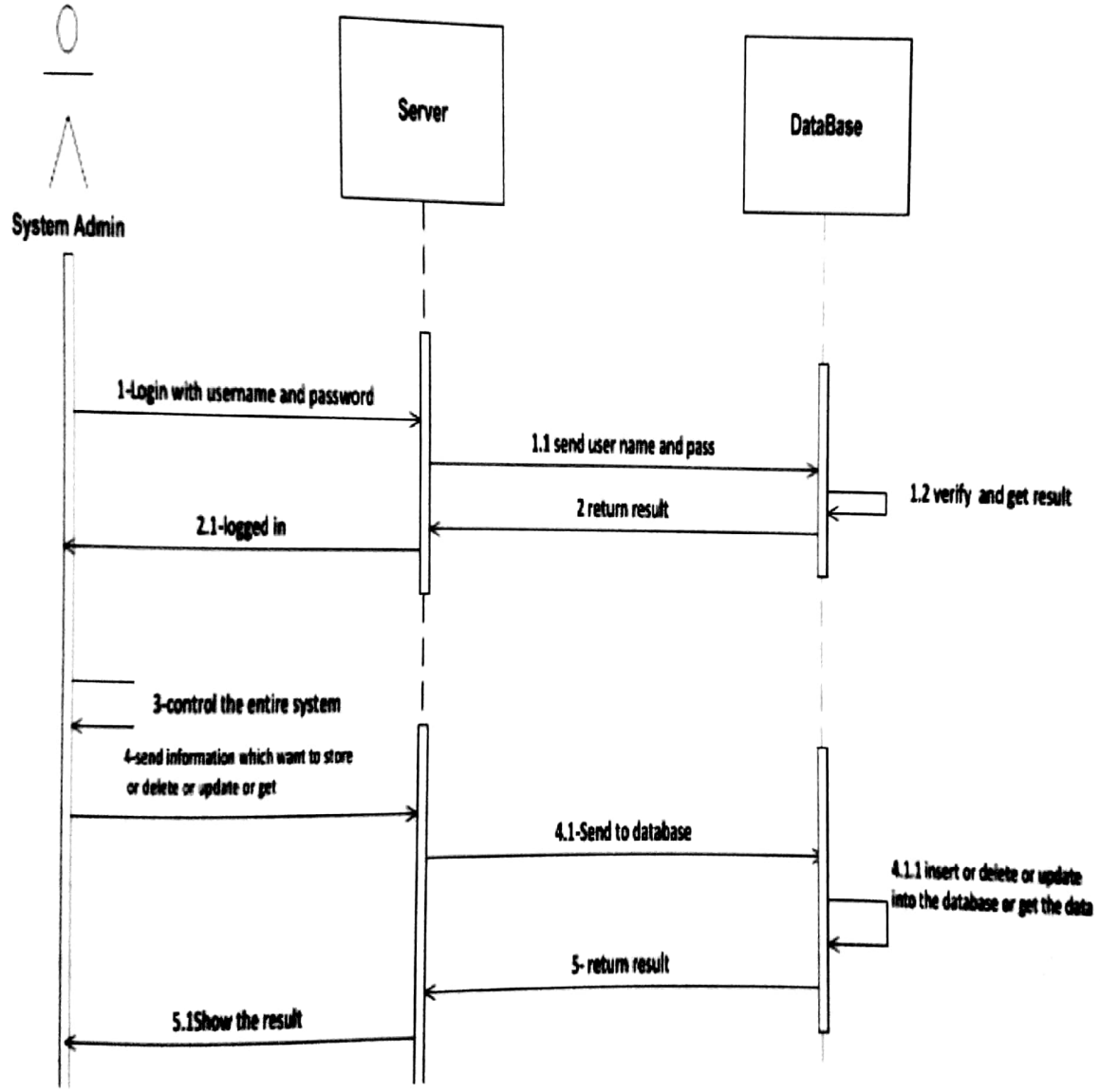


Figure 8: the flow chart of the sequence diagram of how the system admin logs in and add new hospital and its admin.

3-Activity diagram

- An Activity diagram is similar to a flowchart.
- Activity diagrams and State chart diagrams are related.
- While a State chart diagram focuses attention on an object undergoing a process (or on a process as an object), an Activity diagram focuses on the flow of activities involved in a single process.

The Activity diagram shows how these

- Single-process activities depend on one another.
- Activity diagrams can be divided into object swim lanes that determine which object is responsible for an activity.

Activity diagrams are helpful in the following phases of a project:

- Before starting a project, you can create activity diagrams to model the most important workflows.

- During the requirements phase, you can create activity diagrams to illustrate the flow of events that the use cases describe.

- During the analysis and design phases, you can use activity diagrams to help define the behavior of operations.

Now the flow chart of the activity diagram for the system which is Consists of **five parts** .

-**The first part** shows the user activity of searching

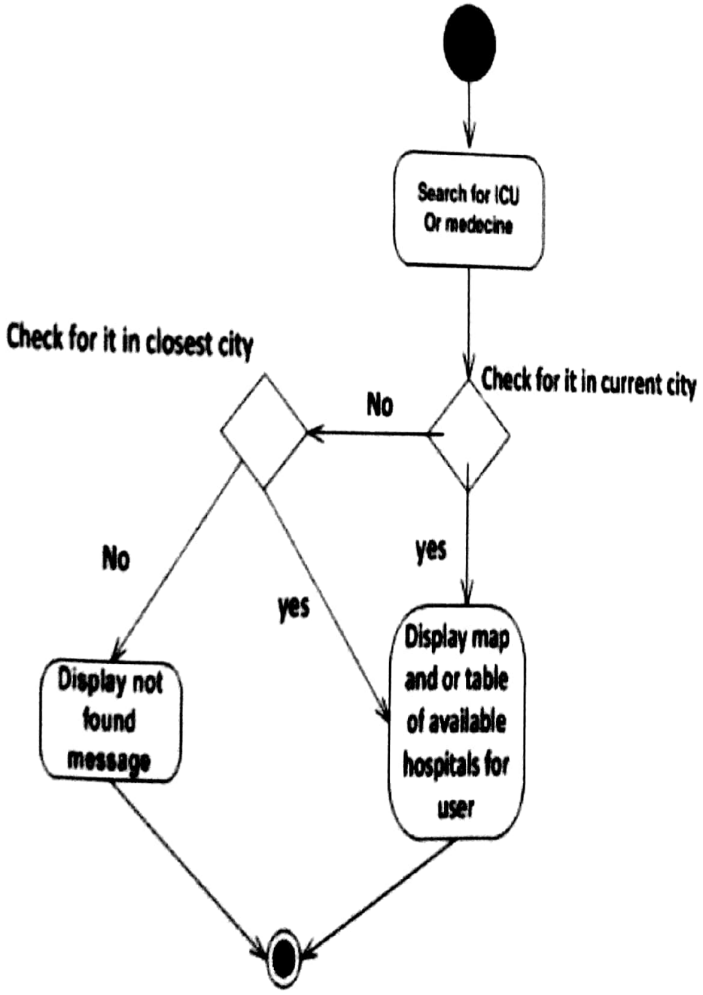


Figure 9: the flow chart of the activity diagram of user activity of searching.

-**The second part** shows activity of how the doctor logs in and updates its personal data , photo or busy and total beds.

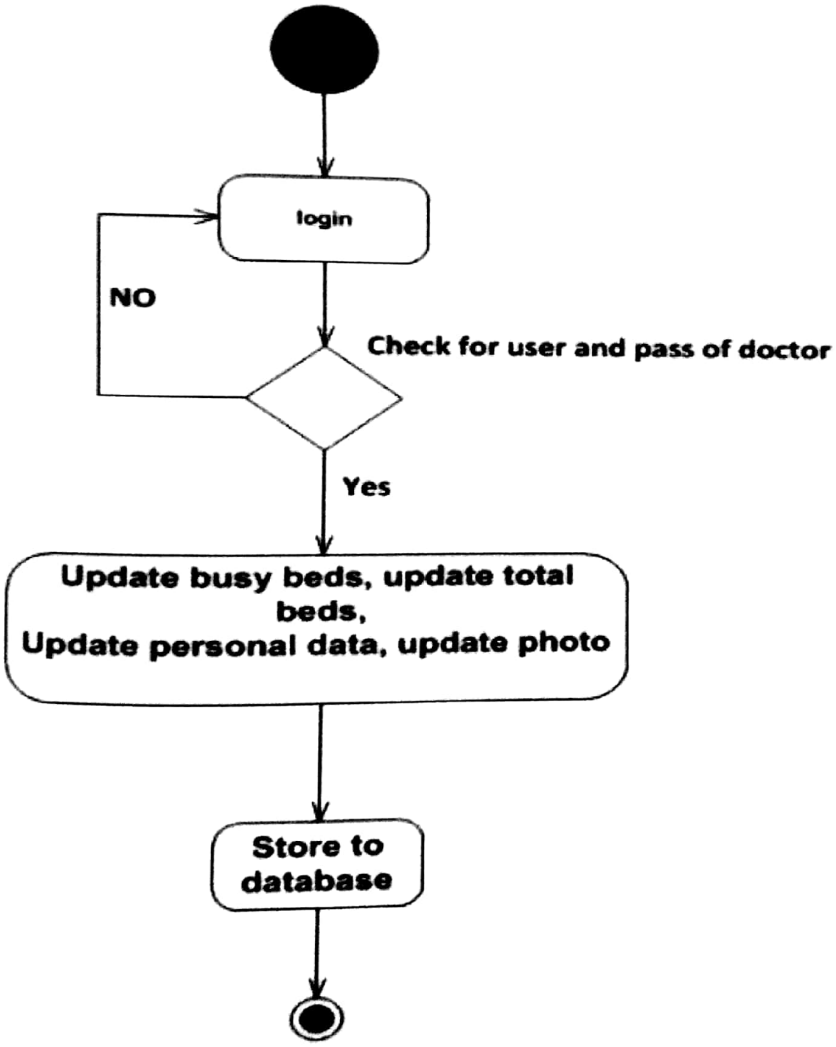


Figure 10: the flow chart of the activity diagram of doctor activity of log in and updating

-**The third part** shows activity of how the hospital admin log in and insert, delete, get updates or update his personal data.

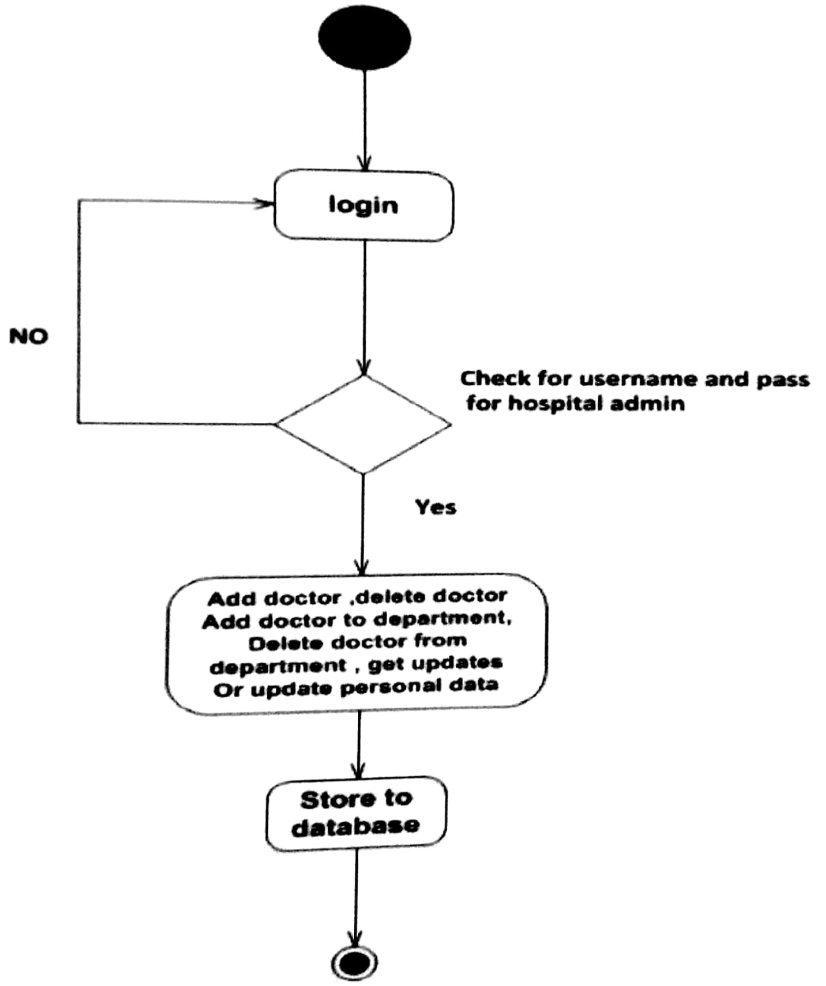


Figure 11: the flow chart of the activity diagram of hospital admin activity of log in and update his data, add doctor, delete doctor and get data.

- **The forth part** shows activity of how the system admin logs in and insert, delete, and perform any task on the system.

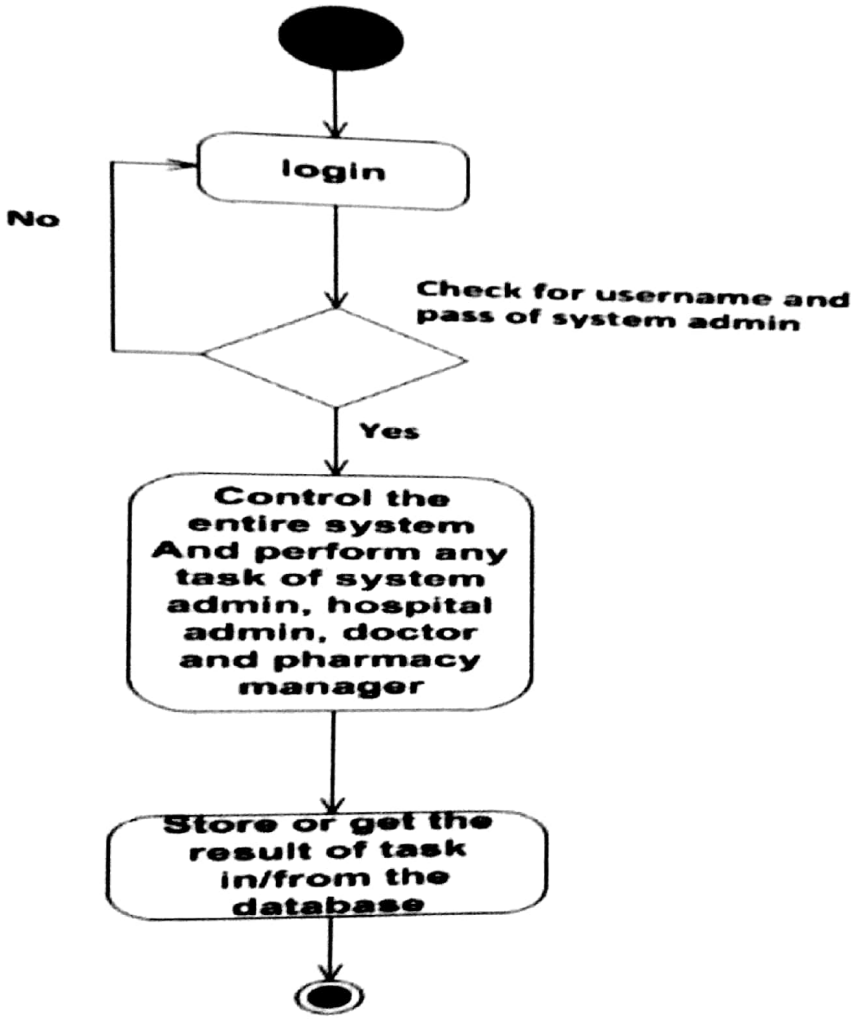


Figure 12: the flow chart of the activity diagram of system admin activity of log in and perform any task on the system

-**The fifth part** shows activity of how the pharmacy manager logs in and insert, delete, update medicine.

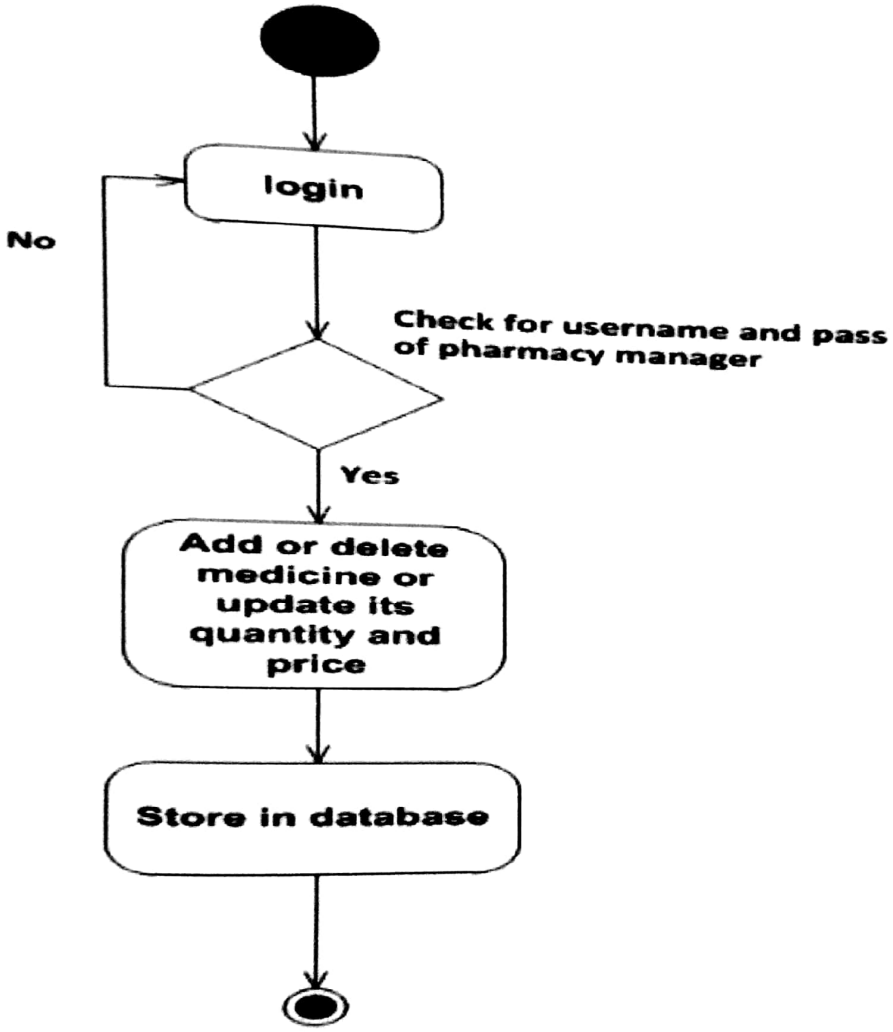
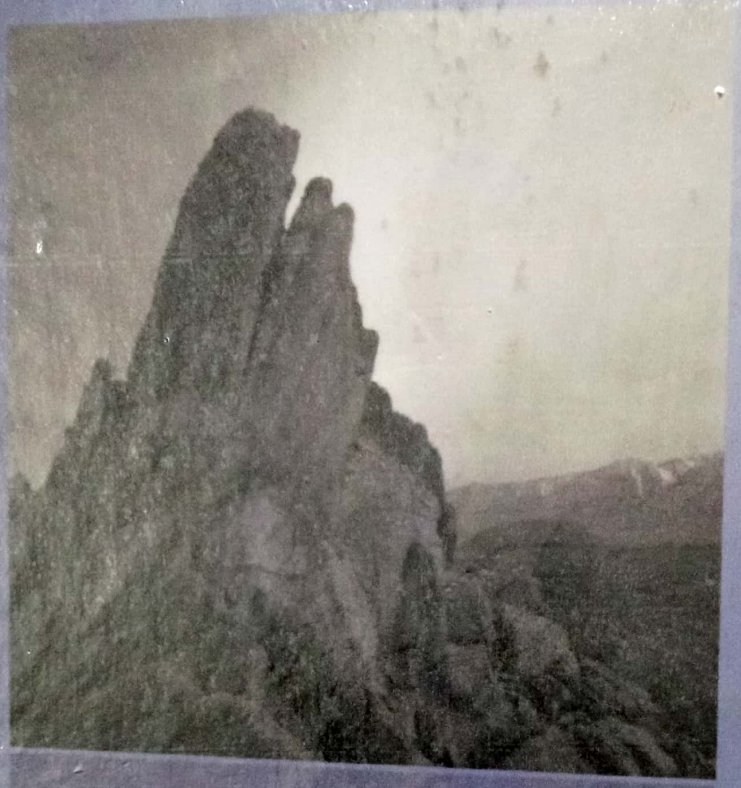


Figure 13: the flow chart of the activity diagram of pharmacy manager activity of log in and add, delete or update medicine data.



2017

Project Documentation

Relife_Project

[About the struggle that people suffer in searching for the nearest hospital in critical cases .]