



College of engineering, technology,  
and computation science

## Department of Computer Science

# ONLINE PSYCHOTHERAPY AND MENTORSHIP SYSTEM

## FINAL PROJECT DOCUMENT

Submitted to department of Computer Science and MIS in partial fulfillment of  
the requirements for the degree of bachelor science in Computer Science

### Group Members

1. Andualem Bizuayehu
2. Blen Eskindr
3. Kaleab Yilma
4. Nebiyat Ahmed
5. Surafel Nigussie
6. Yeshe Mulugeta

### ID

UU69938R  
UU69869R  
UU71514R  
UU70182R  
UU70145R  
UU70100R

Advisor : Mr. Fikru Yemane

Examiner : \_\_\_\_\_

Signature \_\_\_\_\_

Signature \_\_\_\_\_

Section: CCS1R1N4/10

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# **Abstract**

The purpose of this online therapy and mentorship platform is to simplify our life by creating website which used to tell as information about the required purpose and get different services. The required information to this platform is that finding the nearest health care organization from the place where the user is. As human health is the primary thing to consider in life, the main problem that we find or the reason we wanted to develop this application is lack of information providers about nearest health care center, its treatment, location, schedule, diagnosis, arriving time, visiting time. To overcome these whole problems, we have investigated that which solution is more useful so we have designed a user-friendly interface, provided every information about the nearest hospital, its schedule, and ever information needed.

# **Acknowledgment**

First and foremost, praise thanks to God, almighty, for his showers of blessings throughout us research work to complete the research completely. We will like to express our sincere gratitude to our instructor Fikru Yemane for providing his invaluable guidance, comment, suggestion throughout the course of the project. Finally, we would also like to acknowledge the role played by each member, without whom all of this would not have been possible. Every member was very dedicated and organized in collaborating to complete this project. Key words

## List of abbreviations

- WBS - Work breakdown structure
- RMMM - Risk mitigation monitoring and management
- DB - Database
- FK - Foreign key
- PK - Primary key
- Br-business rule
- L-low
- M-medium
- H-high
- Uc-usecase
- Rmmm-risk mitigation monitoring management
- R001-risk number one
- R002-risk number two
- R003-risk number three
- R004-risk number four
- R005-risk number five
- R006-risk number six
- R007-risk number seven
- R008-risk number eight
- R009-risk number nine
- R010-risk number ten
- R011-risk number eleven
- R012-risk number twelve
- R013-risk number thirteen
- R014-risk number fourteen

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# CHAPTER ONE

## INTRODUCTION

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### 1.1 Background Information

**Psychotherapy**, or talk therapy, is a way to help people with a broad variety of mental illnesses and emotional difficulties. Psychotherapy can help eliminate or control troubling symptoms so a person can function better and can increase well-being and healing. Problems helped by psychotherapy include difficulties in coping with daily life; the impact of trauma, medical illness or loss, like the death of a loved one; and specific mental disorders, like depression or anxiety. There are several different types of psychotherapy and some types may work better with certain problems or issues. Psychotherapy may be used in combination with medication or other therapies.

Therapy may be conducted in an individual, family, couple, or group setting, and can help both children and adults. Sessions are typically held once a week for about 30 to 50. Both patient and therapist need to be actively involved in psychotherapy. The trust and relationship between a person and his/her therapists are essential to working together effectively and benefiting from psychotherapy.

Psychotherapy can be short-term (a few sessions), dealing with immediate issues, or long-term (months or years), dealing with longstanding and complex issues. The goals of treatment and arrangements for how often and how long to meet are planned jointly by the patient and therapist.

Confidentiality is a basic requirement of psychotherapy. Also, although patients share personal feelings and thoughts, intimate physical contact with a therapist is never appropriate, acceptable, or useful.

Psychotherapy is often used in combination with medication to treat mental health conditions. In some circumstances medication may be clearly useful and in others psychotherapy may be the best option. For many people combined medication and psychotherapy treatment is better than either alone. Healthy lifestyle improvements, such as good nutrition, regular exercise and adequate sleep, can be important in supporting recovery and overall wellness.

Research shows that most people who receive psychotherapy experience symptom relief and are better able to function in their lives. About 75 percent of people who enter psychotherapy show some benefit from it. Psychotherapy has been shown to improve emotions and behaviors and to be linked with positive changes in the brain and body. The benefits also include fewer sick days, less disability, fewer medical problems, and increased work satisfaction.

With the use of brain imaging techniques researchers have been able to see changes in the brain after a person has undergone psychotherapy. Numerous studies have identified brain changes in people with mental illness (including depression, panic disorder, PTSD and other conditions) as a result of undergoing psychotherapy. In most cases the brain changes resulting from psychotherapy were similar to changes resulting from medication.

To help get the most out of psychotherapy, approach the therapy as a collaborative effort, be open and honest, and follow your agreed upon plan for treatment. Follow through with any assignments between sessions, such as writing in a journal or practicing what you've talked about.

Psychotherapy can be provided by a number of different types of professionals including psychiatrists, psychologists, licensed social workers, licensed professional counselors, licensed marriage and family therapists, psychiatric nurses, and others with specialized training in psychotherapy. Psychiatrists are also trained in medicine and are able to prescribe medications.

A psychiatrist specializes in the diagnosis, treatment, and prevention of mental illness and substance abuse disorders. Psychiatrists are uniquely qualified to understand the complex interrelation between mental and physical health since their training includes four years of medical school and at least three additional years in a psychiatric residency.

In the 21st century problems in psychology have increased immensely. Due to the rise of social media and exposure to advanced technology, psychological problems have factored human psychology at the highest level. Here in Ethiopia, the same problems are occurring and affecting society. Despite the problem, there has not been a sufficient response to this epidemic.

Therefore, developing ***Online Psychotherapy and Mentorship System*** will be the best approach to solve the problem.



## 1.2 Statement of the problem

We have gathered information from trained professionals, distributed questionnaires, research on the web, our direct observations and we came up with these main problem statements listed below: -

- ***The current service is not sufficient.***
  - There is a limited number of institutes that give psychotherapy treatment. This problem will result in a huge imbalance of supply and demand.
- ***The current service does not address the majority.***
  - The majority of the Ethiopian population generates a low-level income therefore they can't afford to get the service.
- ***The problem is considered mild.***
  - The problem is not considered a threat. Therefore, people are ignorant of this problem.
- ***Some of the psychological problems are considered an indignity.***
  - The cultural norm in Ethiopia is very sensitive to some psychological problems. Therefore, people are looking for answers elsewhere.
- ***Society prefers cultural and traditional methods rather than professional service***
  - Ethiopians are more used to getting answers from traditional practice than professional help.
- ***Many psychological professionals are out of work.***
  - Even though there is a high demand for psychological aid in Ethiopia, there is a scares supply of professionals. Most of them are out of work.

## 1.3 Objectives

### 1.3.1 General Objective of the system

- ✓ Our general objective is to create a safe and convenient online platform for anyone who wants psychological assistance from certified professionals.

### 1.3.2 Specific Objective of the system

- ✓ Enables the users to get psychological treatment.
- ✓ Enables the users to get the service based on the given package.
- ✓ Enables the users to contact the trainers.
- ✓ Enables the trainers to give the requested treatment.

## 1.4 Scope of the Project

This project involves building a website that will be able to connect users with certified psychologists. The website will contain a set of packages. The packages will contain services that the website will offer and users can pick any one of the packages to get the service. The website will also include a booking system in which users can schedule an appointment with the psychologists. The website will provide every service in a confidential and convenient manner.

## 1.5 Tools and Methodologies

### 1.5.1 Data Collection Methodologies

- **Questionnaire:** This method will let us know the people's perspective.
- **Interview:** This method will let us know the professional's perspective.
- **Research:** This method will let us know the world's perspective.
- **Direct Observation:** This method will let our perspective take part in the data.

### 1.5.2 System Development Methodology

The system we are building uses an object-oriented approach. The system development methodology will be used in waterfall model. Because it is the ideal development methodology for our system.

### 1.5.3 Development Tools

Our system will be entirely web-based, and we will use the following programming languages:

- ✓ HTML
- ✓ CSS
- ✓ PHP
- ✓ WORDPRESS
- ✓ SQL
- ✓ XAMP

## 1.6 Beneficiaries

We have three major beneficiaries from the platform:

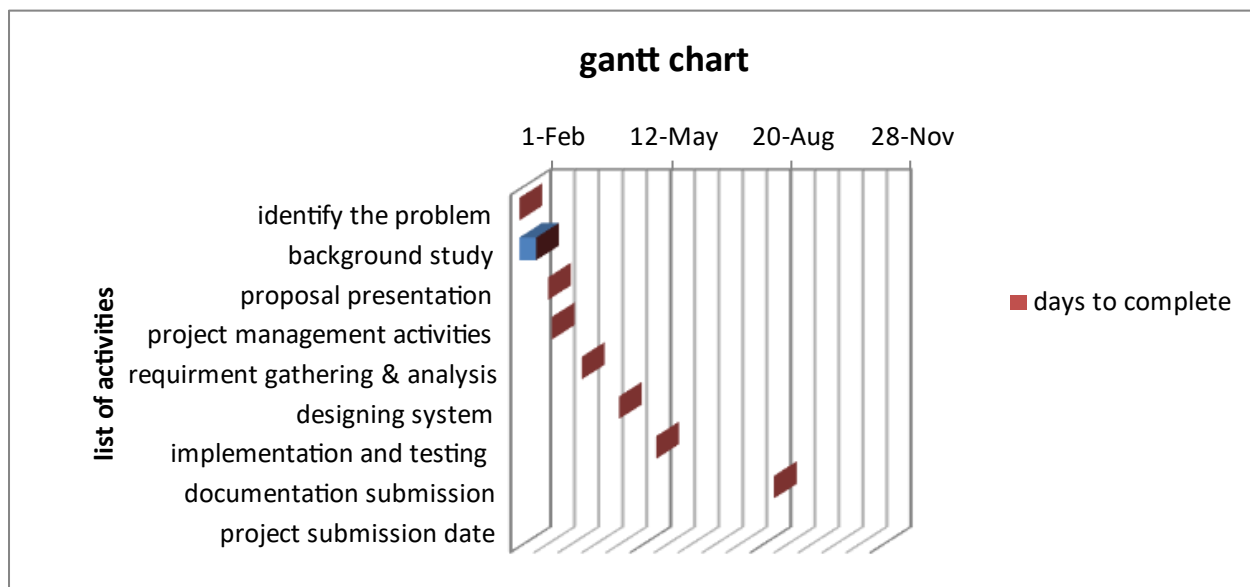
- ✓ Users who may need a service
- ✓ System developers
- ✓ Certified psychology professionals

## 1.7 Schedule

Our plan for this project is to launch the platform within 100 days.

Task	Start Date	Days to Complete
Identify the Problem	1 Feb	15 Days
Background Study	15 Feb	10 Days
Proposal Presentation	25 Feb	2 Days
Project Management Activities	28 Feb	20 Days
Requirement Gathering & Analysis	25 Mar	15 Days
Designing System	25 Apr	20 Days
Testing and Implementation	26 May	60 Days
Documentation Submission	1 Sep	1 Day
<b>Project Submission Date</b>	9/9/2021	

Project Gantt chart schedule



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# CHAPTER TWO

## PROJECT MANAGEMENT

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### 2.1 Introduction

***Online Psychotherapy and Mentorship System*** can provide the ability to better fit therapy into a busy schedule, especially if you work unconventional hours, have children, or don't have access to reliable transportation. It can also make mental health treatment more accessible.

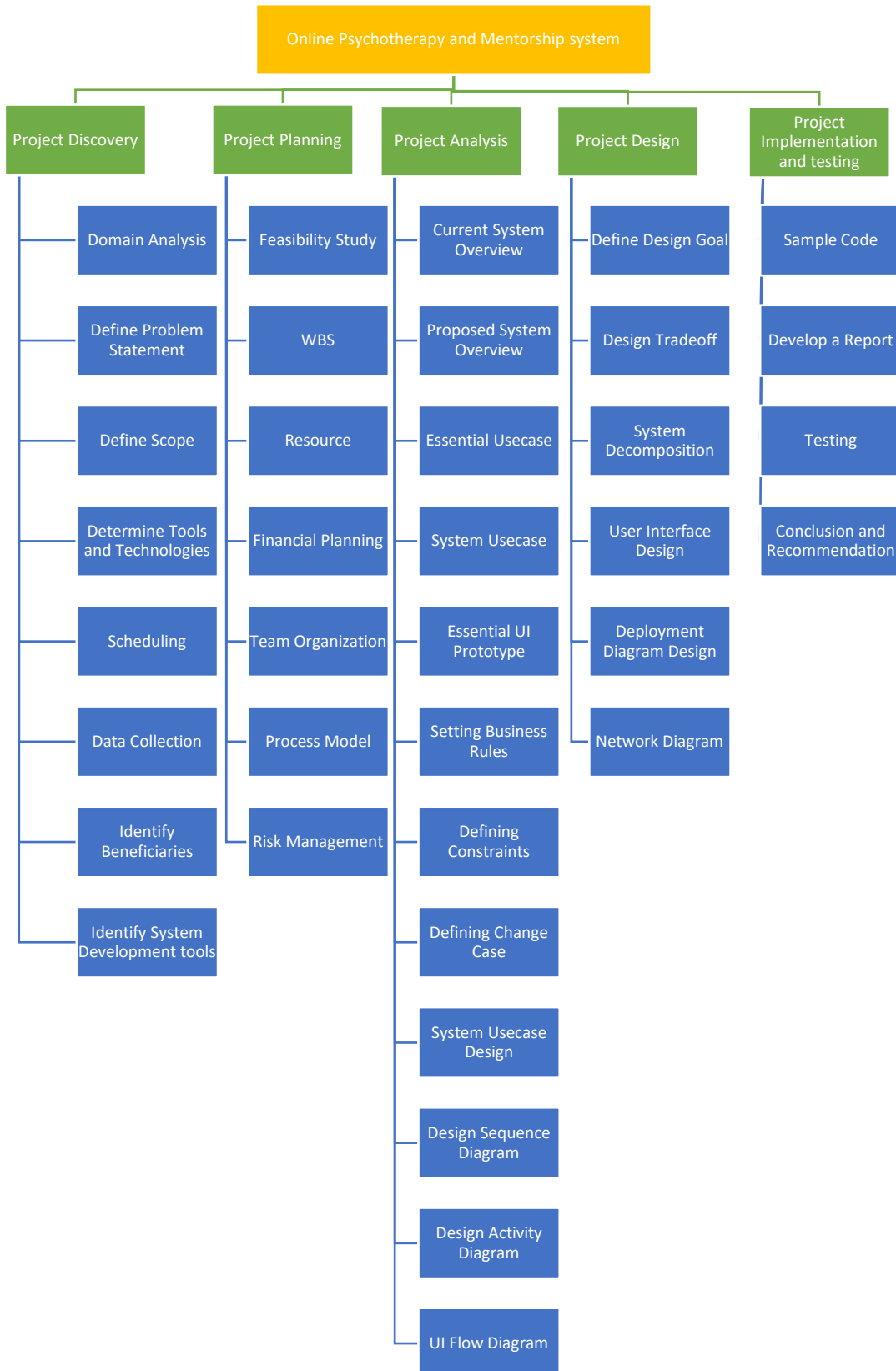
Research has shown that 70% of people do not have access to therapy because of where they live or because traditional therapy is too expensive. ***Online Psychotherapy and Mentorship System*** helps close this gap. It's also just a better fit for some people, depending on their personality, processing style, and financial situation.

The online therapy market has grown significantly over the last decade, with several large and small companies competing to offer the best virtual therapy. Some offer individual talk therapy only, while others specialize in couples therapy, group therapy, or providing mental health care to specific communities.

In this phase, we will be focusing on the breaking down of the activities into manageable tasks. Planning activities will be performed which includes resource planning, expected risks, and possible mitigation ways, financial planning along budget allocation. We have also created a process model that shows the flow of activities. We will briefly describe our general and specific delegation process. Our managerial roles and our delegated work breakdown structure will be discussed.

In this chapter, we will be focusing on the mainframe of the project design, The management process. As mention in the above paragraph, we will go through every step necessary that will enable us to get the kick start we need.

## 2.2 Work Breakdown Structure



## 2.3 Resource planning

### 2.3.1 Human resource planning

Human resource planning is about planning the use of human resource, organizing recruitment and placement of required staffs. Since we are doing a final project being organized as a team from class other expertise from are not needed. As a result, the HR planning is done only by considering the group members along with their duties to fulfill.

Name	Role	Justification
1. Andualem Bizuayehu	Project Leader	Manage deliverables according to the plan, lead and manage the project team, assign tasks to the team members.
2. Blen Eskindr	Human Resource Manager	Plan the use of HR, establish work schedule, and monitor performance.
3. Kaleab Yilma	Coordinator	Coordinate, manage and monitor the team to perform their task effectively.
4. Nebiyat Ahmed	System Analyst	Ensures project's objective solve existing problem, enhance performance and add value to the project, and also maximizing project deliverables.
5. Surafel Niguessie	Communicator	Monitor, manage and improve the communication system among team members, inform any updates and/or changes from/to the project manager and team member.
6. Yeshi Mulugeta	Finance Manager	Review financial statement and data, control operational budget.

### 2.3.2 Material/equipment planning

These lists of materials are equipment needed to successfully deploy the suggested system.

Materials	Quantity	Specification	Acquirement	Justification
1. Personal Computers	3	Processor corei3 and above	From team members	Used for editing, coding and writing our website's contents
2. Printer	1	Ink jet printers	From copy houses	To print out our woks in hard copy
3. Notebook	1	Single line notebook	By purchasing	To write down our discussion whenever we meet up to do the project.
4. Mobile Phones	6	Any phone	Form the team members	To communicate with each other and also to search data from the web.
5. Hard disk	1	1 terabyte	purchase	To store and retrieve works done and as backup for system failure risks
6. Research papers and reference books	As needed	About software development and  Researches on psychological problems	From library and www.	To refer pervious works, to get information about related works

## 2.4 Financial planning for online therapy and mentorship

Financial planning defines the project finance(money) needed to meet specific objectives. the finance plane defines all of the various types of expenses that a project will incur (labor, equipment, materials and administration cost) along with an estimation of the value of each expense.

Our Financial Planning has got many objectives to look forward to:

- a. **Determining capital requirements-** This will depend upon factors like our cost of current and fixed assets, promotional expenses and long- range planning. Capital requirements have to be looked with both aspects: short- term and long- term requirements.
- b. **Determining capital structure-** The capital structure is the composition of capital, i.e., the relative kind and proportion of capital required for our system. This includes decisions of debt- equity ratio- both short-term and long- term.
- c. **Framing financial policies** with regards to our cash control, lending, borrowings, etc.
- d. Our Finance manager **ensures that the scarce financial resources are maximally utilized in the best possible manner** at least cost in order to get maximum returns on investment.

In the online mentorship there are resources that are needed for our system

- Personal computer
- Scanner
- Printer
- Office
- Cell Phone
- Internet
- Book
- Note Book
- Hard Disk
- Research Pape



## 2.4 Financial Planning

### 2.4.1 Human resource financial planning

In this project plan total project budget which is estimated to complete the whole project activity is in between of 800,000 – 850.000 ETB. And the sponsor for this project will be Ethiopian Transportation Office Head Office.

#### Definitive Estimate

In the previous part, we have seen major material and software equipment's of the project work. For purchasing each material and software and also for human resources the total allocated budget must be distributed to each part and phase of resources. Therefore, in general manor we allocate each budget for each major tasks.

- **Human Resource:** For the development team of the project around 150, 000 Ethiopian birr is planned

Name	Quantity	Unit Price	Total Price
System Analyst	1	20,000 ETB	20.000 ETB
System Designer	2	20,000 ETB	40,000 ETB
System Developer	2	30,000 ETB	60,000 ETB
System Tester	1	20,000 ETB	20,000 ETB
Project Manager	1	20,000 ETB	20,000 ETB

**Table 2.2:** Human resource planning

### 2.4.2 Material /Equipment Financial Plan

Resource needed	Total item	Budget per birr	Total budget per birr
pc	3	15000	45000
Scanner	1	Acquire	-
Printer	1	Acquire	-
Office	1	1500	1500
Hard Disk	1	2000_	2000 _
Book	As needed	Acquire	-
Note Book	2	50	100
Mobile Phone	6	3000	18000
Internet	1GB	500/GB	500
Research	As needed	Acquire	-

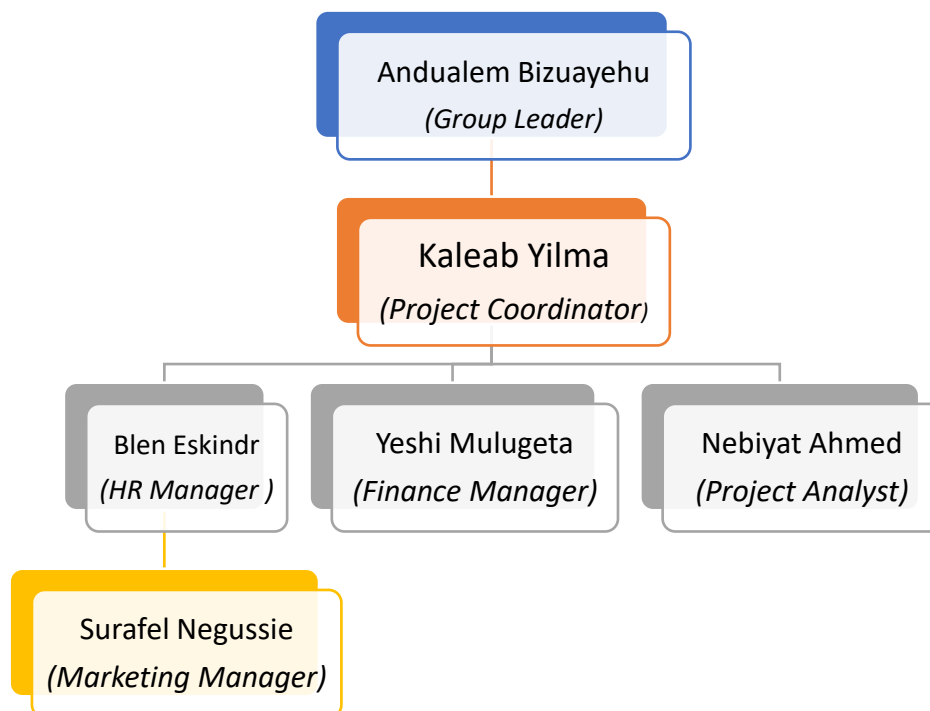
### 2.4.3 Project Budget

Case of expenditure	Budget per birr
Transport	2000
meal	2000
printing	5000
Mobile card	2000

## 2.5 Team Organization

Our Team-based organizations vary from traditionally hierarchical, directive organizations. Instead of having a supervisor or manager focus on facilitation, teams focus on achieving objectives together. This allows true collaboration in our workplace. Major characteristics of team-based organization include trust, empowerment, goal setting, autonomy, team accountability and shared leadership.

Based on our team organization we have appointed *Andualem Bizuayehu* as the group leader. He will have a responsibility to resolve major decision-making process in the team. Our project coordination will be handled by *Kaleab Yilma*. He will schedule meeting sessions and delegate tasks regarding to the project. He will also check on the progress made towards the completion of the project. Financial related subjects are handled by *Yeshi Mulugeta* along with project budgeting and the amount of expenditure required to finish the project. *Blen Eskindr* will serve the team as the Human resource manager. And the analysis of the project and the information gathered by the team will be documented and corrected by *Nebiyat Ahmed*. The one responsible for gathering paperwork needed from any office and handling all the communication will be handled by *Surafel Nigussie*.



## 2.6 Process Model

In this project we have the following phases we will be following.

**User requirement (UR)** – The phase where we gather user requirement. written requirements, usually put into a single document and used for verification of each stage, are composed alongside constraints and functional and non-functional needs of the project. Cost is described, as are assumptions, risks, dependencies, success metrics, and timelines for completion.

**Design (D)** - In this phase, a high-level design (HLD) is created to describe the purpose, the scope of the project, the general traffic flow of each component, and the integration points (the topology), followed by a detailed design, which allows subject matter experts (SMEs) to implement the HLD design to precise details.

**Implementation / Coding (I)** - Implementation teams work to the design to create, , implement, and test the solution. It is crucial that the single written document be as clear as possible, as the team who designs the system may or may not be the same. If changes are required during the implementation phase (due to unforeseen issues with the design, integrations, or even changes to the intended function of the system), this necessitates that a new design be created and signed off on before the implementation is completed.

**Testing (T)** - It helps create better software quality by getting the team thinking about the models. It reduces test suite maintenance. It allows for flexibility to generate many tests using different algorithms (smoke, regression, integration, end-to-end, and targeted testing for new/modified features).

**Deployment (DP)** - deployment is one of the most difficult processes of gaining value from machine learning. It requires coordination between data scientists, IT teams, software developers, and business professionals to ensure the model works reliably in the organization's production environment.

The waterfall model is a breakdown of project activities into a linear sequential phase where each phase depends on the deliverables of the previous one and corresponds to specialization of tasks. The waterfall Model illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete. In this waterfall model, the phases do not overlap.

## Why Waterfall?

- **Uses Clear Structure:** Teams must complete an entire step before moving onto the next one, so if there are roadblocks to completion, they're brought to light right away.
- **Determine the End Goal Early:** One of the defining steps of Waterfall is committing to an end product, goal, or deliverable at the beginning, and teams should avoid deviating from that commitment.
- **Transfers Information Well:** Waterfall's approach is highly methodical, so it should come as no surprise that the methodology emphasizes a clean transfer of information at each step.
- **Has good documentation**
- **Useful if the team is with less experience**

## 2.7 Risk MMM Plan

### Identification of risks (check list)

In our system (online therapy and mentorship) the following risks may occur through process and we classified in to four categories technical, organizational, quality management risks

1. Personal computer failure
2. System acceptance
3. Covid 19 (corona virus pandemic) it may happen lockdown
4. Lack of Internet access
5. Conflict between group members (team members)
6. Lack of time management
7. Financial problem
8. Project purpose and need is not well defined
9. Project design and deliverable definition is incomplete
10. Project schedule is not clearly defined or understand
11. Project scope and need is not well defined
12. Shortage of man power
13. Lack of expertise
14. Network cable installation

The goal of the risk mitigation, monitoring and management plan is to identify as many potential risks as possible. In our project plan the risk of the project is clearly identified and stated bellow and we will use different scientific and traditional techniques to solve the problems.

Among form the risk which is expected form the project activity is: -

### Risk Category

- i. **Market Risk:** In our project plan we expect that we didn't see market related risk.
- ii. **Financial Risk:** this risk will be happened on our project. As we say before our budget for this project is 1,500,850.00 Ethiopian birr, this amount of money is estimated based on the current market price of the products. But in some cases there will be the condition which total market price will rise.
- iii. **Technical Risk:** This risk is not that much sensitive issue for us, because the whole team members are already computer scientist. But in case there is some difficulties on the network installation process and other conditions. This is because of
  - The physical structure of the office building is difficult to install the cable
  - The Network cable installation may require additional cost
  - The Server computer requires its own room, but there is no free class in the organization.
  - Technological Changes and ...etc.
- iv. **People Risk:** The main risk of our project are: -
  - Shortage of man power
  - Lack of technical support
  - Lack of experts in the development of database and web development process

## 2.7.1 Risk Item Table

Project name: online therapy and mentorship system

Risks identified	Risk categories	Type of risk	Probability in %
Financial problem risk	Financial	Budget	0.75%
Lack of time risk	Organizational	performance	0.5%
Personal computer failure	Technical	Performance or technological	0.5%
System acceptance	Organizational r	Technology	0.75%
Lack of internet access	Technical r	Technology	0.4%
Covid (corona virus pandemic)	External	External risk	50%
Conflict between team members	people	performance	0.2%
Project purpose and need is not well defined	Organizational	Performance	0.8%
Project design and deliverable definition is incomplete	Organizational	Performance	0.3%
Project scope and need is not well defined	Organizational	Performance	0.4%
<ul style="list-style-type: none"> <li>Shortage of man power</li> </ul>	people	performance	0.25%
<ul style="list-style-type: none"> <li>Lack of expertise</li> </ul>	people	performance	0.5%
<ul style="list-style-type: none"> <li>Network cable installation</li> </ul>	technical	technology	0.2%

## 2.7.2 RMMM Plan (Risk mitigation, monitoring and management)

Risk id	Risk description	Likelihood of the risk occurring	Impact if the risk occurs	Severity Rating based on impact and likelihood	Owner Person who will manage the risk	Mitigating Action Actions to mitigate the risk
R001	Project purpose and need is not well defined	M	H	H	Project team members	Complete a business case if not already provided and ensure purpose is well defined on project charter
R002	Project design and deliverable definition is incomplete	L	H	H	Project team members	Define the scope in details via design workshops with input from subject matter experts.
R003	Project schedule is not clearly defined or understand	L	M	M	Project manager	Hold scheduling workshops with the project team so they understand the plan and likelihood for missed tasks is reduced
R004	Personal computer failure	M	H	H	Project leader	Taking backup for the works that is done
R005	System acceptance	L	H	M	System analyst	Understand user requirement
R006	Financial problem	m	m	m	Financial manager	Predefine the financial plan properly
R007	Internet access problem	L	M	H	Group coordinator	Assign time to contact in person with team members
R008	Conflict between team members	L	L	M	Team leader	Leader will take mediation
R009	Covid 19(corona virus pandemic)	m	H	h	Its external risk	Virtual meeting will be assigned like zoom
R010	Project scope and need is not well defined	L	H	H	Project manager	Put a well-defined scope
R011	Shortage of man power	m	h	h	Project team members	project team will try to cover all necessary jobs but if shortage occurs, outsourcing is an option
R012	Lack of expertise	m	h	h	Team members	We will try to have a broader knowledge on specific project areas
R013	Network cable installation	low	h	h	Steam leader will	- system analyst will try to handle small scale



					handle such issues	installation but hiring is also an option
R014	Server room related problem	m	m	m	sponsors	Finding sponsors who can help us server room related problems

Table 2.18: Risk analysis table

Probability	H		R001	R002
	M	R006	R007	R005
	L	R003	R004	
		L	M	H
	Impact of the risk			

Key	
H	High
M	Medium
L	Low

Based on the above analysis the first four prioritized risks are R005, R011, and R012. Those risks are the most sensitive risks than the rest. Next to this risk R007 and R006 are medium levels. The rest risks are low level risk impact and have low chance of happening. Therefore, we focus on the above high rank and medium level ranks.

## Risk Responses

As we stated in the above topics, those are the major risks for our project activity and for the success of the project. The first and most prioritized risk is R005 and to solve this risk the project team will create a short session self-improvement program. This program will be supported by our advisor Mr. Fikru.

The second prioritized risk of the project is R010. This risk will be reduced by bidding many suppliers for the products. Using of these techniques we can buy the materials form the winner vender. The quality of the product also considers in this phase.

Shortage of man power (R011), also the 3rd prioritized risk and to solve this the team members will work hard in different positions and there will be internal job changes in the team to complete the whole activity on the time line.

Lack of expertise (R012) is also another problem of the project team. To solve this problem the team will work with our instructor Mr. Fikru. And we believe that he will support the project team by giving and managing the project work.

Server room related problem (R014) will be also solved by the sponsor company. This might be done by exchanging or by giving a new room for the server computer and related devices. And the sponsor company must secure the room properly.

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# CHAPTER THREE

## SYSTEM ANALYSIS

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### 3.1 Introduction

In this phase of our project, we will be discussing on how the current system operates and describe the functional and non-functional features of the proposed system. We will also be focusing on determining the user requirements using modern requirement gathering method which is use case and draw use case diagrams. User interface prototyping, listing out supplementary specifications, drawing sequence diagram and activity diagram are also the activities to be performed under this phase of the project.

### 3.2 Current system

The current system operates /provides service for users in a way of direct physical contact with the psychiatrist. The way of treating user is only one way that is direct contact to psychiatrist. Users visit the psychiatrist through appointment and some resolution action/solution forwarded to user at the end the user pays for the service provided to him/her.

### 3.3 proposed system

The proposed system is the web-based system. There are different kinds of service that are available for the user. The users access the service through online with the psychiatrist. In the website there are different packages to wide up user's option. To access the service the users must have account or create a new account by register online entering email and password. In addition, user can surf the website for other service like motivational speech. Every person who visits our website can access the home page of website.

### 3.3.1 Functional Requirement

It is an *aspect of what the proposed system must do/the feature that the system must have*. Any user who knows our website address or a person who visit the website can view the website of home page with no registered or login the requirement is only having the website address. The home page is viewed by any person who visits the web. In the home page there will be articles, motivational speech, video, simple way of self-treatment as a gift. If user wants special service can register and access the service.

- Allow any user to surf the home page of the website to motivational speech, video, audio and image.
- New users will be registered into the system
- Surf website
- When the user is registered, they will have basic information: First Name, Father Name, Grand Father Name, Sex, age, Phone (mobile), and Email.
- User Login to the system by using Email and password if the user is registered.
- Psychiatrist login using password and email.
- For a user who has logged in
  - Record data
- The system records the user and the psychiatrist information or data
  - online therapy
- Allow user to contact with the psychiatrist on online and user speak his problem to the psychiatrist, the psychiatrist recommend different ways of treatments based on the customer's problem.
  - Reserve appointment
- User can reserve appointment with their therapist for short or long period based on in what change they are?
  - get packages
- invite user to use additional or special services
- for both customers who know his problem and doesn't know his problem
  - to contact experts
  - to have to their own time

- Customer gets the expertise and talk then recommendation from expertise as usual and to spend/have special time for them this event will be coordinated by us.

### 3.3.2 Non-Functional Requirements

The following are the non-functional requirements of the system to be developed:

- ✓ **Interoperability**

- This web-based application is viewable and fit with any standard web browsers, various operating systems such as Windows, Linux, Macintosh and on devices like personal computers, PDAs, mobile phones and tablets.

- ✓ **Availability**

- Online mentorship web based is accessible 24/7, anywhere and via PC, PDAs (Personal Digital Assistances), mobiles devices and tables with an internet connection.

- ✓ **Usability**

- The system will have a user-friendly user interface which requires little to no time of training. It includes many icons and common symbols that can be easily identified by users.

- ✓ **Speed**

- Within an hour one or two customers can serve. Compare to the existing system this is more time saving and speedy. number of customers cannot wait long time to get the service. Therefore, the system we are going to develop is faster.

- ✓ **Maintainable and Testable**

- The website will be simple, consistent and developed with Angular JavaScript Framework, which encourages modularity and separation of patterns.

## 3.4 System models-requirement determination

- Use cases are a standard technique for gathering requirements in many modern software development methodologies.
- The Use case diagram is used to identify the primary elements and processes that form the system.

Use case Modeling could be

➤ Essential Use Case Diagram

- Used at requirement elicitation stage
- Technology free
- Just to understand what users need to see on the system from functions point of view

➤ System Use Case Diagram

- Is a continuation of essential use case
- Adding implementation related details

### 3.4.1 Essential use case modeling

Use case identification is essential for simplifying the system and better understands it in simple terms as a result it will help us during the development of the system.

- ✓ Register
- ✓ Login
- ✓ Get online therapy
- ✓ Reserve appointment
- ✓ Packed therapy
- ✓ Alert Notification
- ✓ Logout

#### **Actor Identification and Description**

The following actors have their own role in our system

1. User

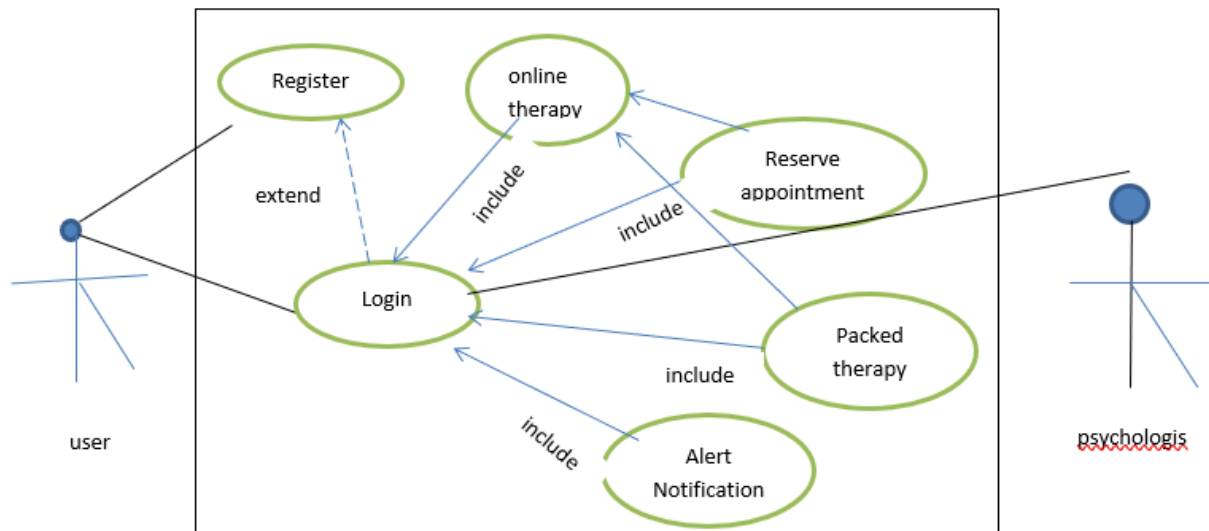
- ✓ Log in to system
- ✓ Access motivational speech
- ✓ Use package
- ✓ Reserve appointment
- ✓ Get online therapy

2. Psychologist

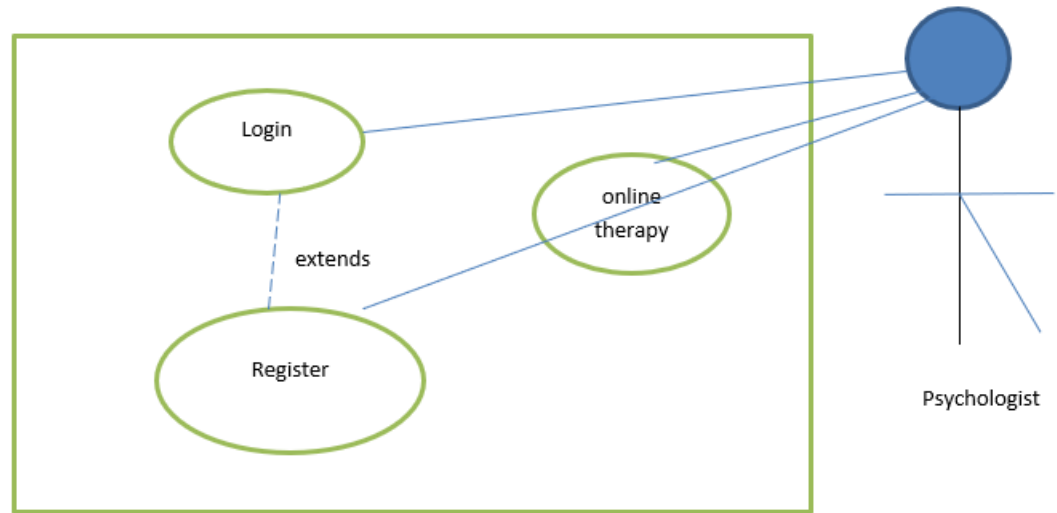
- ✓ Manage schedule
- ✓ Give online therapy
- ✓ Access user information

### 3.4.1.1 Use case diagram

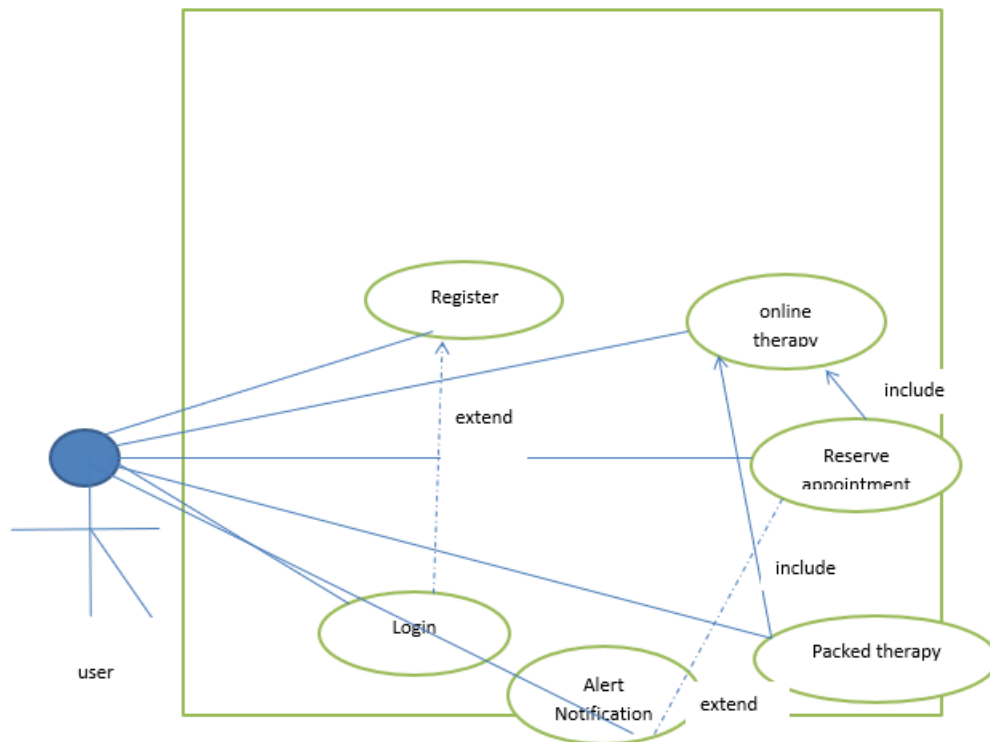
3.4.1.1 Use case diagram



Use Case Diagram for psychologist



Use Case Diagram for user





### 3.4.1.2 Use case documentation

#### Use Case Description for Register

Use-case Name	Register	
Brief Description	After opening the website and going in to the registration page, the actor requests the system to be registered	
Used use-case		
Actors	User and psychologist	
Pre-condition		
Post-condition	1. Password and other identification number will be generated that are used to access the system. 2. Actor will have access to the system	
Flow of Events		
ACTOR		SYSTEM
1. Actor opens the website 2. Actor inputs email and password.		1. Actor will verify entry. 2. System will display user's home page.
Exception	1. if the actor enters invalid information, ✓ registration will be denied, ✓ the actor will be notified about the situation, ✓ the actor will be asked to retry 2. if the actor is already registered,  ✓ the actor will be notified about the situation ✓ redirected to the login page.	

#### Use Case Description for login

Use-case Name	Login
Brief Description	Actor already familiar to the system and have its own information on the system so when actor visit site must login to its account
Used use-case	Include: Register
Actors	User and psychologist
Pre-condition	Actor must first register to the system

Post-condition	1. Actor will have access to the system	
Flow of Events		
ACTOR		SYSTEM
1. Actor opens the website 2. Actor inputs email and password.		1. System will display user's home page.
Exception	1. if the actor enters invalid information, ✓ login will be denied, ✓ the actor will be notified about the situation, ✓ the actor will be asked to retry ✓ redirected to the register page. 2. if the actor forget email and password, ✓ system will verify entry.	

#### Use Case Description for Get online therapy

Use-case Name	Get online therapy	
Brief Description	user see if there is online available psychologist and contact psychologist	
Used use-case	Include: Register	
Actors	User and psychologist	
Pre-condition	1. Actor must first login to the system 2. User and psychologist must be online	
Post-condition	1. user will get therapy	
Flow of Events		
Scenarios		1. user open home page 2. user check available psychologist 3. user send request for therapy 4. psychologist help user
Exception	1. if the psychologist is not online, ✓ the user will be notified about the situation, ✓ the user will be asked to retry ✓ redirected to the reserve appointment page.	

#### Use Case Description for Reserve appointment

Use-case Name	Reserve appointment	
Brief Description	user want to appoint to get psychologist based on users schedule or if user wants special psychologist user must reserve appointment	
Used use-case	Include: Register	
Actors	User	
Pre-condition	1.Actor must first login to the system 2.User must fulfill appointment form	
Post-condition	1.user will get email notification in appointment day 2.get online therapy	
Flow of Events		
Scenarios		1. user open home page 2 user goes to appointment page 3. user fill appointment page 4. system will send email notification on appointment day
Exception	1. if the user not fulfill appointment form ✓ the user will be notified about the situation, ✓ the user will be asked to retry	

### Use Case Description for Packed therapy

Use-case Name	Packed therapy
Brief Description	User can get additional features of the system and additional special phycologist on their own issue
Used use-case	Include: Register

Actors	User
Pre-condition	1.Actor must first login to the system
Post-condition	user will get User can get additional features of the system and additional special psychologist
Flow of Events	
Scenarios	<ol style="list-style-type: none"> <li>1. user open home page</li> <li>2 user goes to package page</li> <li>3. user choose suitable condition based on user issue</li> <li>4. package will be available to the user based on choose of user</li> </ol>
Exception	

### Use Case Description for Alert Notification

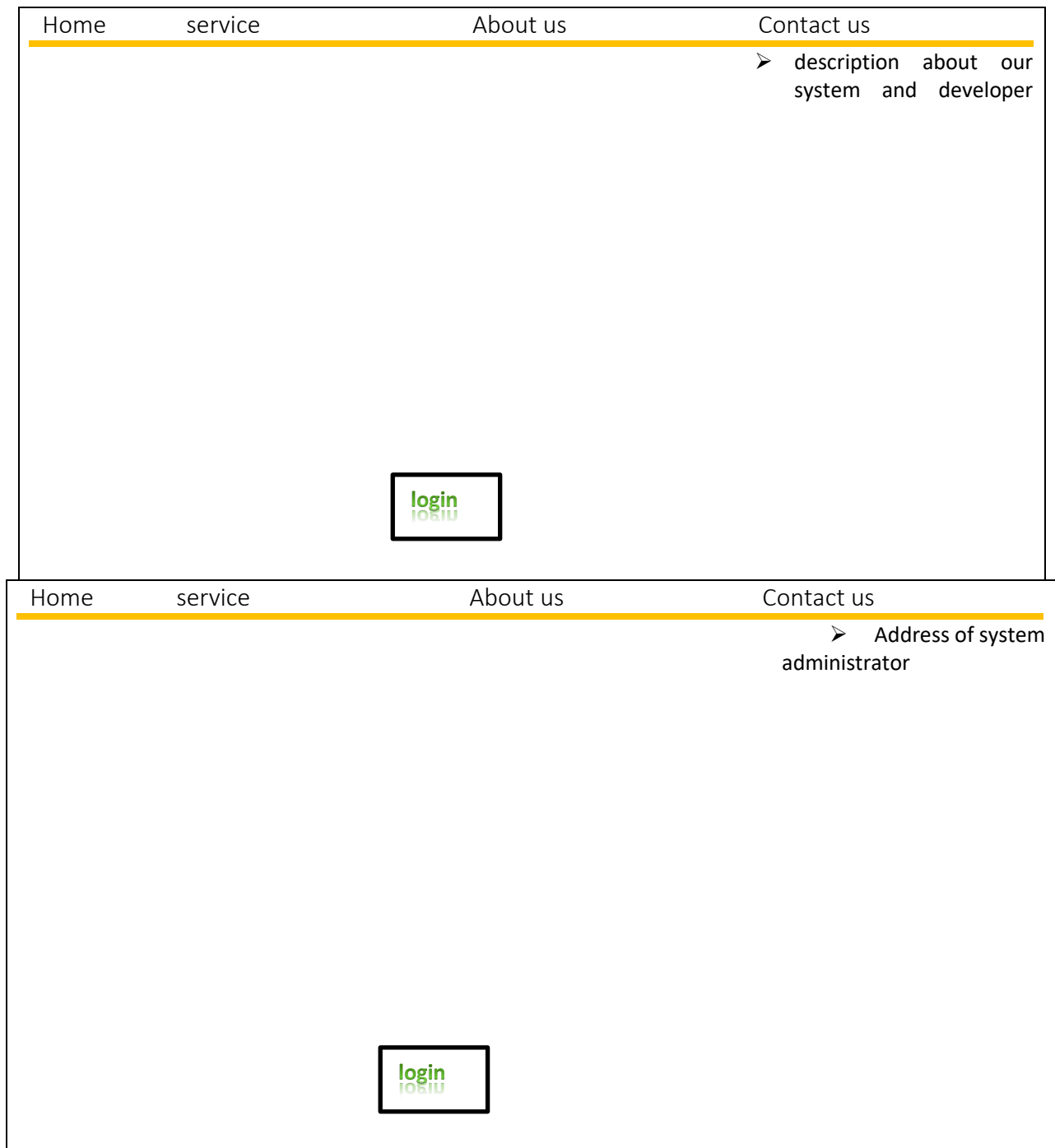
Use-case Name	Alert Notification
Brief Description	Actor get email notification
Used use-case	Include: Register , extend: reserve appointment
Actors	User and psychologist
Pre-condition	<ol style="list-style-type: none"> <li>1.Actor must first register to the system</li> <li>2.User must fulfill appointment form</li> <li>3. user must allow the system to send email</li> </ol>
Post-condition	<ol style="list-style-type: none"> <li>1.user will get email notification in appointment day</li> <li>2. user will get motivational speech by users email</li> </ol>

Flow of Events	
Scenarios 1	1.user must login to system 2.user allow the system to send email notification 3. user will get motivational speech by users email
Scenarios 2	1.user must login to system 2.user allow the system to send email notification 3. user fill appointment page 4. system will send email notification on appointment day
Exception	1. if the user delay the system to send email notification ✓ the user will not get motivational speech, ✓ the system not send email at users appointment date.

### Use Case Description for logout


Use-case Name	Logout	
Brief Description	Actors can log out of the system.	
Used use-case	Include: Register	
Actors	User and psychologist	
Pre-condition	Account should be logged in.	
Post-condition	Leave the system and close the session.	
Flow of Events		
	ACTOR	SYSTEM
	1. Actor opens website. 2. Actor inputs email and password. 3. Actor will click on Logout Icon.	1. System will presents login page. 2. After validation system will display actor's home page. 3. System will delete all logged in actor session data.
Exception		

### 3.4.2 Essential UI prototype



### 3.4.3 User Interface Flow Diagram

Home	service	About us	Contact us
	<ul style="list-style-type: none"> <li>➤ Reserve appointment</li> <li>➤ Online therapy</li> <li>➤ Packed therapy               <ul style="list-style-type: none"> <li>● What is your problem                   <ul style="list-style-type: none"> <li>➤ Relationship problem</li> <li>➤ Drug addiction</li> <li>➤ Depression</li> <li>➤ Develop self-stem</li> <li>➤ I don't know</li> </ul> </li> <li>● how many times do you want to get therapy                   <ul style="list-style-type: none"> <li>➤ 14 days</li> <li>➤ 24 days</li> </ul> </li> </ul> </li> </ul>		



### 3.4.4 Supplementary Specification

Our Supplementary Specification are expressed based on 3 major sectors. They are: -

- Legal and regulatory requirements, and application standards (*Business Rule*)
- Quality attributes of the system to be built, including usability, reliability, performance, and supportability requirements (*Change case*)
- Other requirements such as those for operating systems and environments, compatibility with other software, and design constraints (*Constraints*)

#### 3.4.4.1 Business Rule

A business rule defines or constrains one aspect of our business that is intended to assert business structure or influence the behavior of our business. Business rules often focus on access control issues. Here is a list of business rules for our system:

<b>Identifier:</b> BR-01 <b>Description:</b> the user can access the information provided by the admin but not allowed to access the database
<b>Identifier:</b> BR-02 <b>Description:</b> in order to get service the patient needs to have an account. Therefore if account exists login using their account if not they should create new account.
<b>Identifier:</b> BR-03 <b>Description:</b> when creating an account they are expected to fill all the input fields before trying to submit.
<b>Identifier:</b> BR-04 <b>Description:</b> the user name and password will be given by the database administrator and password's length must be 8 characters and above containing alphanumeric characters and special characters
<b>Identifier:</b> BR-05 the patient need to have the URL of our website
<b>Identifier:</b> BR-06 <b>Description:</b> in order for patients to get online therapy they should only choose the online psychologist.



<b>Identifier: BR-07</b> <b>Description:</b> every interaction of the psychologist and patient should pass through system admin and must get approval. Unless it is approved it by the system admin no service will not be offered.
<b>Identifier: BR-08</b> <b>Description:</b> the psychologists should be professional
<b>Identifier: BR-09</b> <b>Description:</b> the patient's information and other private information will remain confidential.
<b>Identifier: BR-10</b> <b>Description:</b> the service to be offered will only be based on the choice the patient made.

#### 3.4.4.2 Constraints

Some of our *constraints* are:

- ✓ Limited amount of time
- ✓ Marketing and Promotion
- ✓ Network Constraint
- ✓ Labor Constraints
- ✓ Language Constraints

#### 3.4.4.3 Change Cases

Some of our Supportability requirements (*Change case*) are:

- ✓ Confidentiality
- ✓ Integrity
- ✓ Compassion
- ✓ Simplicity

✓ Presentable

## 3.5 System Model – Analysis

### 3.5.1 System Use case Modeling

#### 3.5.1.2 Use case documentation

##### Use Case Description for Register

Use-case ID	UC-01
Use-case Name	Register
Description	After accessing website's homepage in order for a patient to get service he/she needs to login using their account through by registering. The registration page contains registration form expecting the user to enter valid information about them.
Actors	patient and Psychologist
Pre-condition	User must visit the website and enter valid information.
Post-condition	1. Password and user name will be generated that is used to access the system. 2. Valid account will be given for the user.
Include	
Extends	

##### Basic course of action

1. Patient should view the homepage
2. Patient selects sign up link
3. Sign up page is displayed
4. Patient is requested to enter username, password, age, gender and other expected information.
5. User Information will be recorded to the database.
6. Use-case ends.

##### Alternative course of action

- A1: missing expected input fields and trying to submit.  
A2: invalid input characters entered.

## Use Case Description for login

Use-case Name	Login
Use-case ID	UC-02
Description	The use case allows to login to the system and access the website according to their role. The various user roles are psychologist, system admin, and patient. All users of the system have a maximum of 3 attempts to login after that their account will be locked and they will have to contact the system admin to unlock their account.
Used use-case	Include: Register
Actors	User, Psychologist, admin
Pre-condition	Actor must have an account
Post-condition	1. Actor will have access to the system
Include	
extends	Use case register

### Basic course of action

1. User should view the homepage
2. User will be requested to enter username and password
3. User inputs username and password
4. System validates username and password
5. The system gives access to user based on request
6. Use-case ends.

### Alternative course of action

A1: if invalid user name and password. The system displays error message.

A2: if no account user is requested to create account.

Use-case Name	Get therapy
Use-case ID	Use-case 03
Description	The use case allows patients to get therapy by choosing from the available service. The available services are online therapy and packed therapy.
Used use-case	Register or login
Actors	User and Psychologist
Pre-condition	Actor must first login to the system using his/her account
Post-condition	user will get therapy
extend	Use case login
include	Online therapy and packed therapy

#### Basic course of action

1. Patient should view the homepage
2. Patient selects service link
3. Patient sign up/login
4. Patient is requested to choose service preference.
5. Service will be offered to the user
6. Use-case ends.

#### Alternative course of action

A1: if no user account then the user will be asked to create account before trying to get service.

Use-case Name	Packed therapy
Use case ID	UC-05
Description	The use case allows users to get their preferred service based on their choice for some duration of time like for 7 days, 14 days and 21 days.
Used use-case	Include: Register
Actors	User , psychologist, system admin
Pre-condition	1.Actor must first login to the system
Post-condition	user will get User can get additional features of the system and additional special psychologist
include	
extends	Use case Get therapy(UC-03)

#### Basic course of action

1. Patient should view the homepage
2. Patient selects service link
3. Patient sign up/login
4. Patient chooses packed therapy
5. The choice will be send to the admin
6. System admin schedules the appointment
7. Use-case ends.

### Use Case Description for Reserve appointment

Use-case Name	Reserve appointment
Use case ID	UC-06
Description	The use case allows the admin to schedule user appointment with the psychologist based on the user's choice.
Used use-case	Include: Register
Actors	System admin
Pre-condition	1.Actor must first login to the system 2.actor must choose the packed therapy
Post-condition	1.user will get email notification in appointment day 2.get online therapy
include	
extends	Use case Packed therapy(UC-05)

#### Basic course of action

1. Patient should view the homepage
2. Patient selects service link
3. Patient sign up/login
4. Patient chooses packed therapy
5. The choice will be send to the admin
6. System admin schedules the appointment
7. Use-case ends.

### Use Case Description for Alert Notification

Use-case Name	Alert Notification
Use case ID	UC-07
Brief Description	Patient and psychologist will get email notification about their appointment
Used use-case	Include: Register , extend: reserve appointment
Actors	User and psychologist
Pre-condition	1.Actor must first register to the system 2.User must fulfill appointment form 3. user must allow the system to send email
Post-condition	1.user will get email notification in appointment day 2. user will get motivational speech by users email
include	Use case Reserve appointment(UC-06)
extend	

#### Basic course of action

1. Patient should view the homepage
2. Patient selects service link
3. Patient sign up/login
4. Patient chooses online therapy
5. Patient sees online available psychologists and chooses one.
6. System allows or denies the requested service.
7. Use-case ends.

#### Alternative course of action

A1: if the psychologist is not online,

- ✓ the user will be notified about the situation,
- ✓ the user will be asked to retry

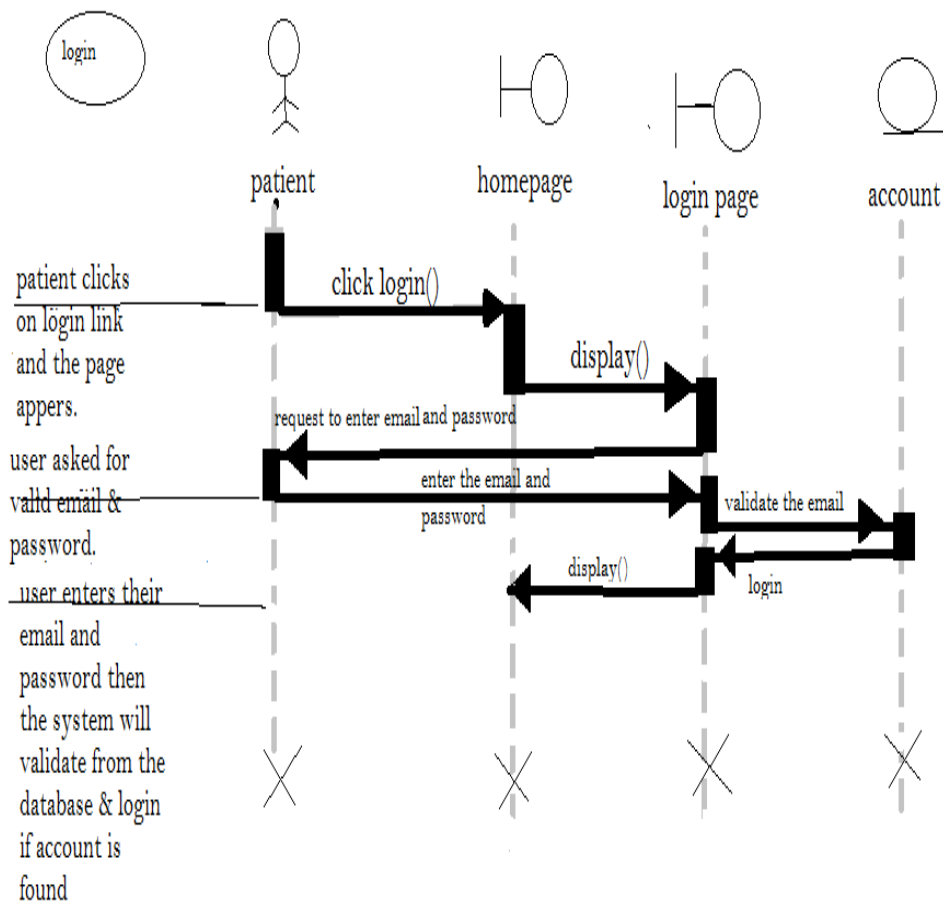
### 3.5.2 Sequence diagram

Sequence diagram is an interaction diagram that emphasizes the time ordering of messages. The focus is less on the message and more on the order in which message occurs. Our sequence diagram is a Unified Modeling Language (UML) diagram that illustrates the sequence of messages between objects in an interaction. A sequence diagram consists of a group of objects that are represented by lifelines, and the messages that they exchange over time during the interaction.

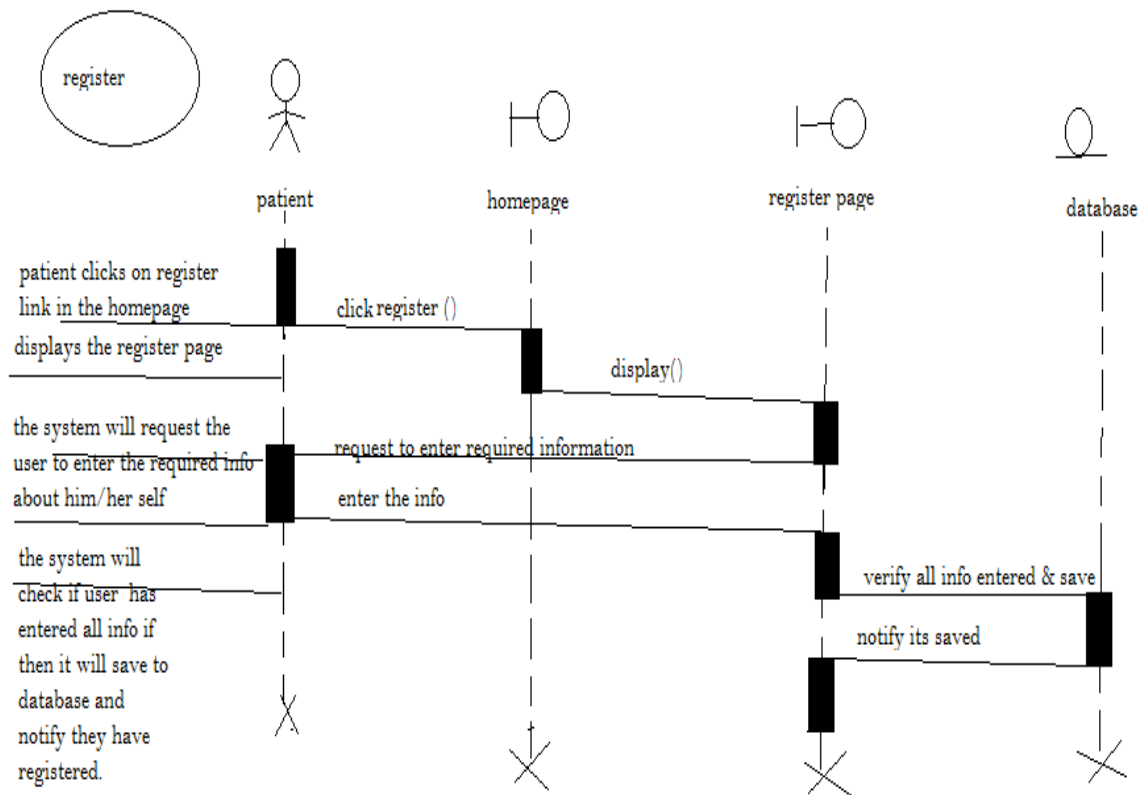
Our sequence diagram shows the sequence of messages passed between objects. Sequence diagrams can also show the control structures between objects. For example, lifelines in a sequence diagram for a banking scenario can represent a customer, bank teller, or bank manager. The communication between the customer, teller, and manager are represented by messages passed between them. The sequence diagram shows the objects and the messages between the objects.

In the interaction frame, our position instances that participate in the interaction in any order from left to right, and then you position the messages between the participants in sequential order from top to bottom. Execution specifications appear on the lifelines and show the start and finish of the flow of control.

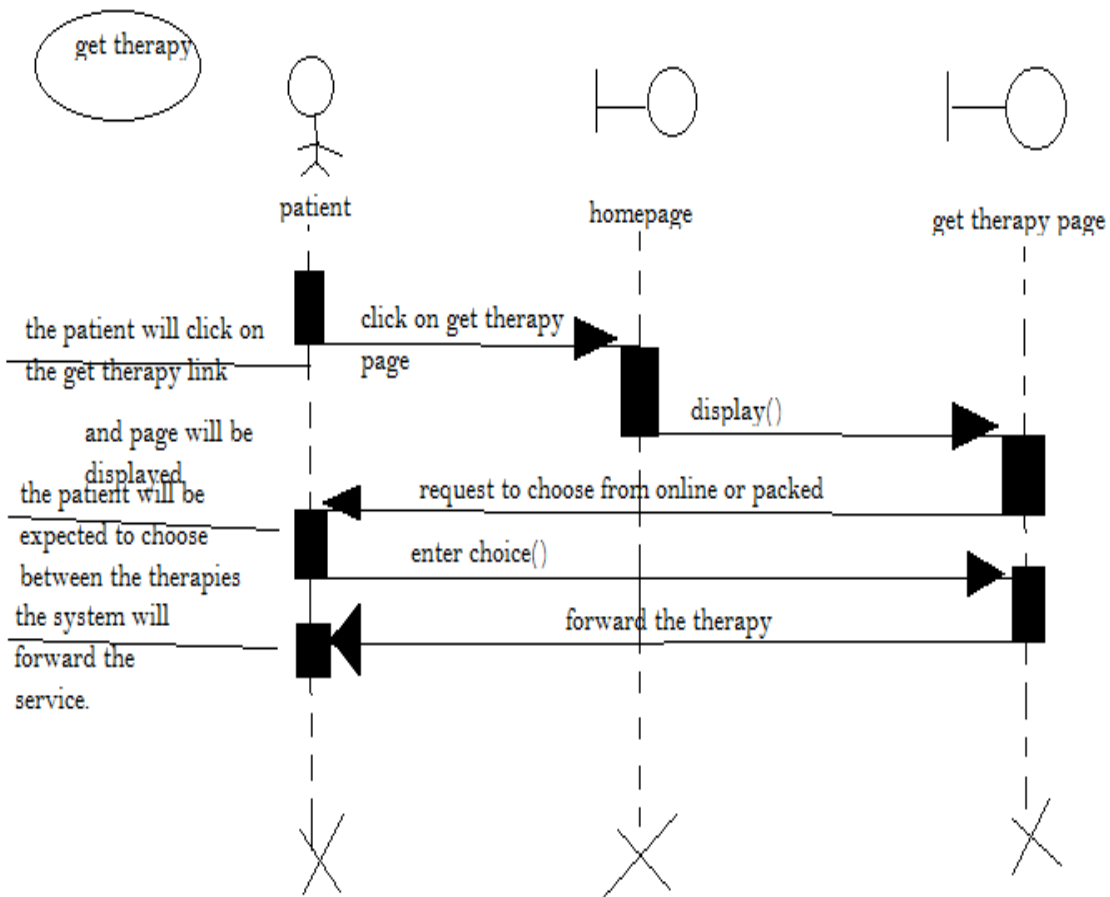




**Fig 3.5.2.1 Sequence diagram for login**



**Fig 3.5.2.2 Sequence diagram for reserve appointment**



**Fig 3.5.2.2 Sequence diagram for getting therapy**

### 3.5.3 Activity diagram

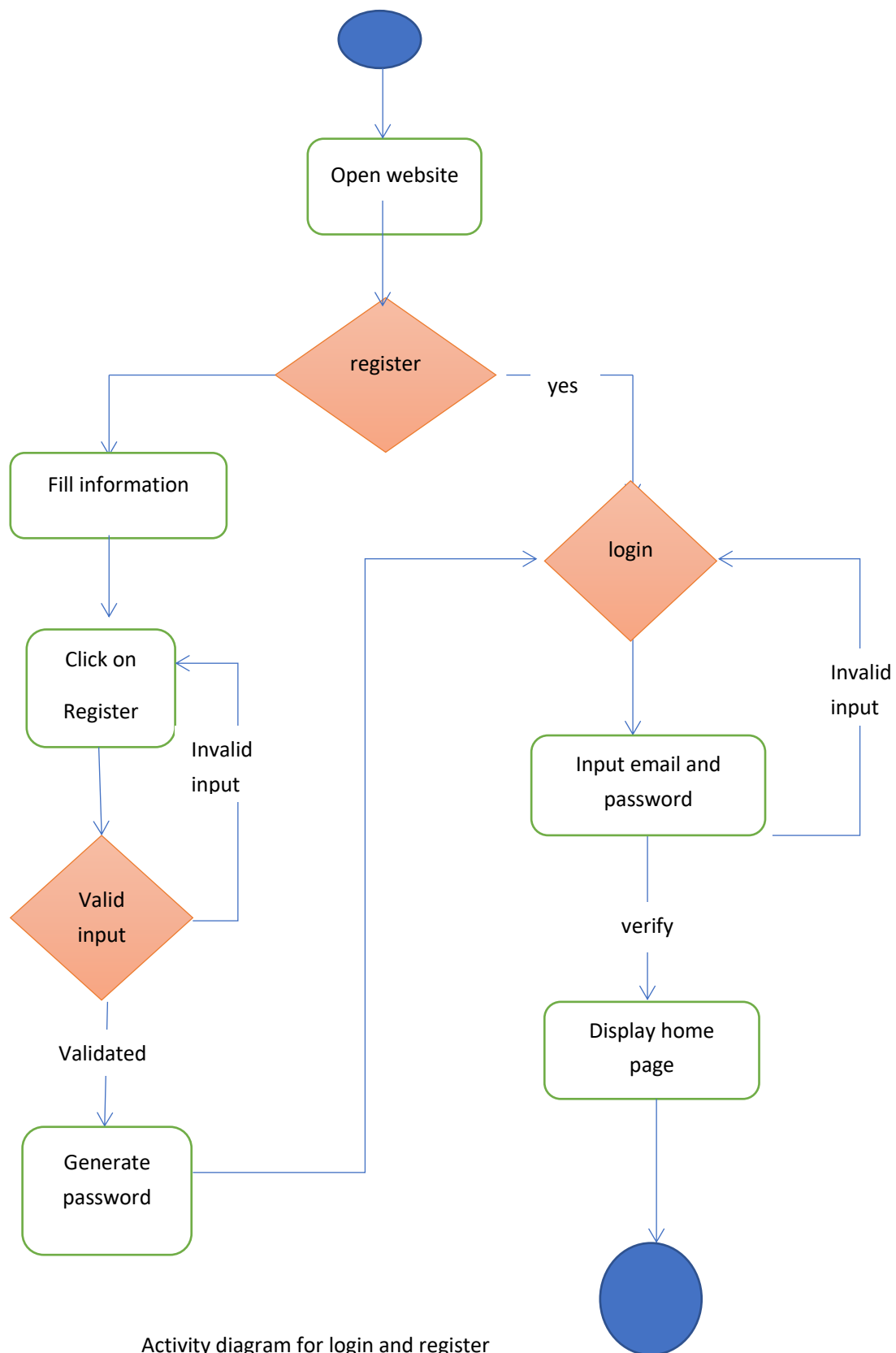
Activity Diagrams describe how activities are coordinated to provide a service which can be at different levels of abstraction. Typically, an event needs to be achieved by some operations, particularly where the operation is intended to achieve a number of different things that require coordination, or how the events in a single use case relate to one another, in particular, use cases where activities may overlap and require coordination. It is also suitable for modeling how a collection of use cases coordinates to represent business workflows

1. Identify candidate use cases, through the examination of business workflows
2. Identify pre- and post-conditions (the context) for use cases
3. Model workflows between/within use cases
4. Model complex workflows in operations on objects
5. Model in detail complex activities in a high-level activity Diagram

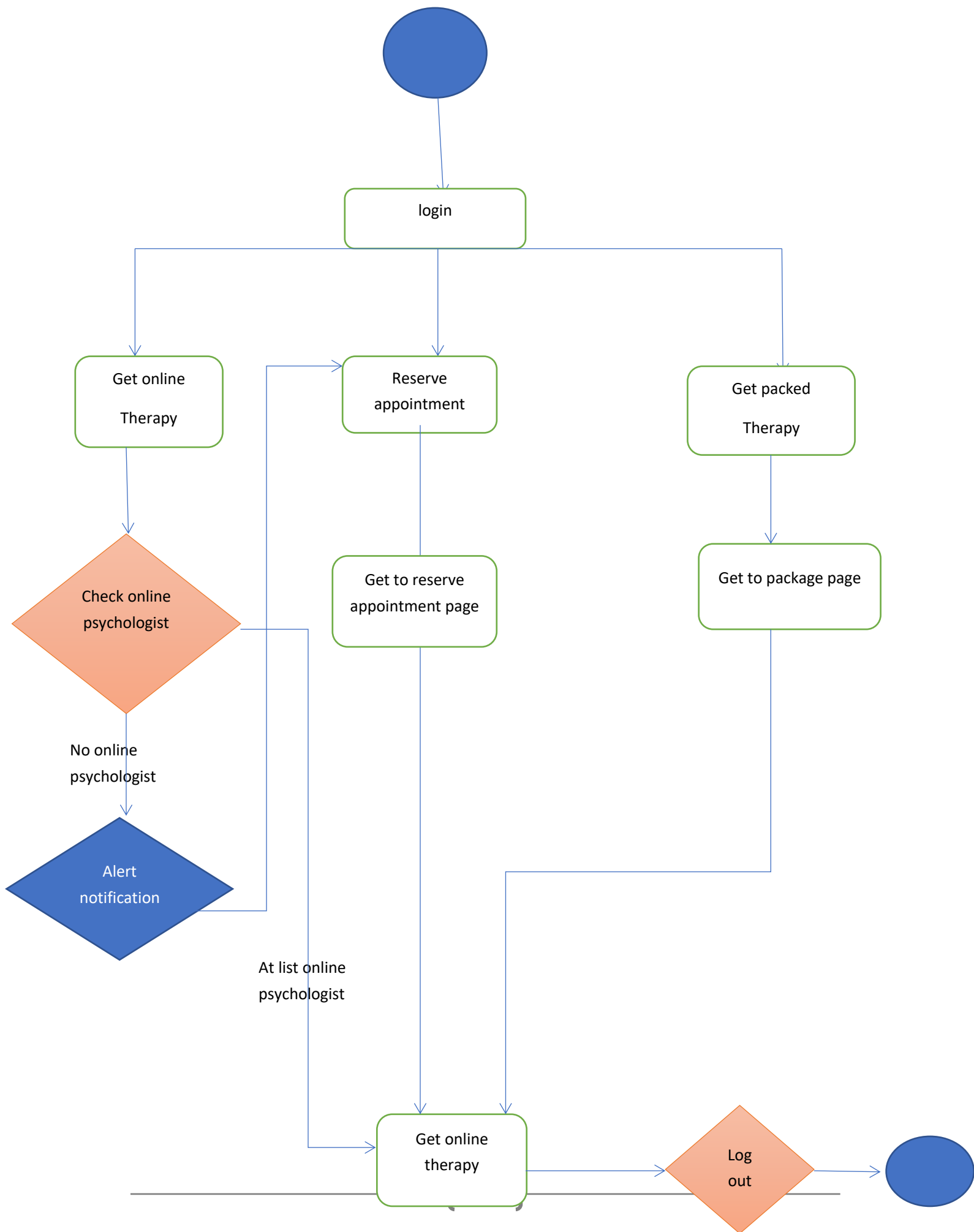
Activity diagrams present a number of benefits to users. Consider creating an activity diagram to:

- Demonstrate the logic of an algorithm.
- Describe the steps performed in a UML use case.
- Illustrate a business process or workflow between users and the system.
- Simplify and improve any process by clarifying complicated use cases.
- Model software architecture elements, such as method, function, and operation.

Use activity diagrams to better visualize process flows and identify areas needing improvement or highlight areas of efficiency.



Activity diagram for login and register



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# CHAPTER FOUR

# SYSTEM DESIGN

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## 4.1 Introduction

In this chapter, the process of defining elements like modules, architecture, components and their interface and data for our system based on the specific requirements will be discussed.

We will elaborate our Design goals, tradeoffs and phase models briefly. Our user interface design and deployment diagram along with the subsystem decomposition will be described in this chapter.

## 4.2 Design Goals

The goal of the system is to satisfy the functional and nonfunctional requirements of online therapy and mentorship system as specified in the requirements specification document.

Design goals and strategies can be used as an easy way to control the implementation tool achieve best result based on your particular design tools. They will contain predetermined sets of processes properties that have been planned to achieve particular design goals.

We generally grouped the design goals into five categories. These are: Performance Criteria, Dependability Criteria, Cost Criteria, Maintenance Criteria, and End User Criteria.

### **Performance:**

The system should respond fast with high throughput, i.e. It should perform searching information, uploading information, registration processing and generating report in a time less than a minute.

### **Dependability:**

The office needs the system to be highly dependable. The system should be robust (forceful) i.e. it should be able to carryon invalid user inputs, fault tolerant, reliable and available. The system shouldn't allow unauthorized users to access, site, materials and other secured data or modify.

**Correctness:**

Correctness refers to satisfying the requirements. When we implement online therapy and mentorship system, we will try to satisfy the requirements we have collected during software requirement specification. Correctness will be expressed in the following three approaches:

*Testing* – falsify correctness claim by finding counter example to check online therapy and mentorship system functionalities. *Formal Verification* – takes mathematical approach.

*Code Inspection* – manually walk-through code to increase correctness.

**Cost:**

The system should be developed, deployed, administered and maintained with minimum cost possible.

**Maintenance:**

The system should be easily extensible to modify the uploading information, add new functionality, portable to different platforms. The code for the system should be easily readable, understandable and should be easily mapped to specific requirements.

**Robustness:**

System will tolerate misuse without catastrophic failure. The misuse will be bad data, bad use or bad programming.

Robustness achieved in the following ways:

- By using data abstraction and encapsulation
- By initializing variables
- Qualifying all inputs
- Qualify all formal parameters to a method and
- Qualify post conditions.

**End User Criteria:**

The system should have simple and understandable graphical user interface such as forms and buttons which have descriptive names. It should give reliable response for each user request at least before the session expires.



**Usability:**

Usability is the extent to which a service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. From the end users' perspective, the system should be designed in such a way that it is easy to learn and use, efficient and having few errors if any.

**Fault Tolerance:**

Online therapy and mentorship system should be fault tolerant to loss of connectivity with the service.

**Flexibility:**

The requirements may change during or after the project implementation. Flexibility will be achieved in the following ways: Encapsulation (hiding the representation), Different types of the same base category by means of abstract classes, Extend functionality by new class methods or with an abstract class and several derived classes.

**Reliability:**

Online therapy and mentorship system should be reliable.

**Security:**

Online therapy and mentorship system should be secured, i.e., not allow other users or unauthorized users to access data that has no the right to access it.

**Modifiability:**

Online therapy and mentorship system should be modifiable for further modification and enhancement of the websites for only authorized users.

**Reusability:**

Systems aim is to cut cost of code production over 1 or more projects. The followings are the ways of reusability: Reuse object code, Reuse source code, Reuse assemblies of related classes, Reuse patterns of designs.

**Efficiency:**

Online therapy and mentorship System aim to make greatest use of the processing, memory size and network speed. Efficiency will be achieved by Writing clever algorithms.

## 4.3 Design Trade Offs

A trade-off can be defined as a decision made to alter the quality of some aspects of the system to gain other benefits.

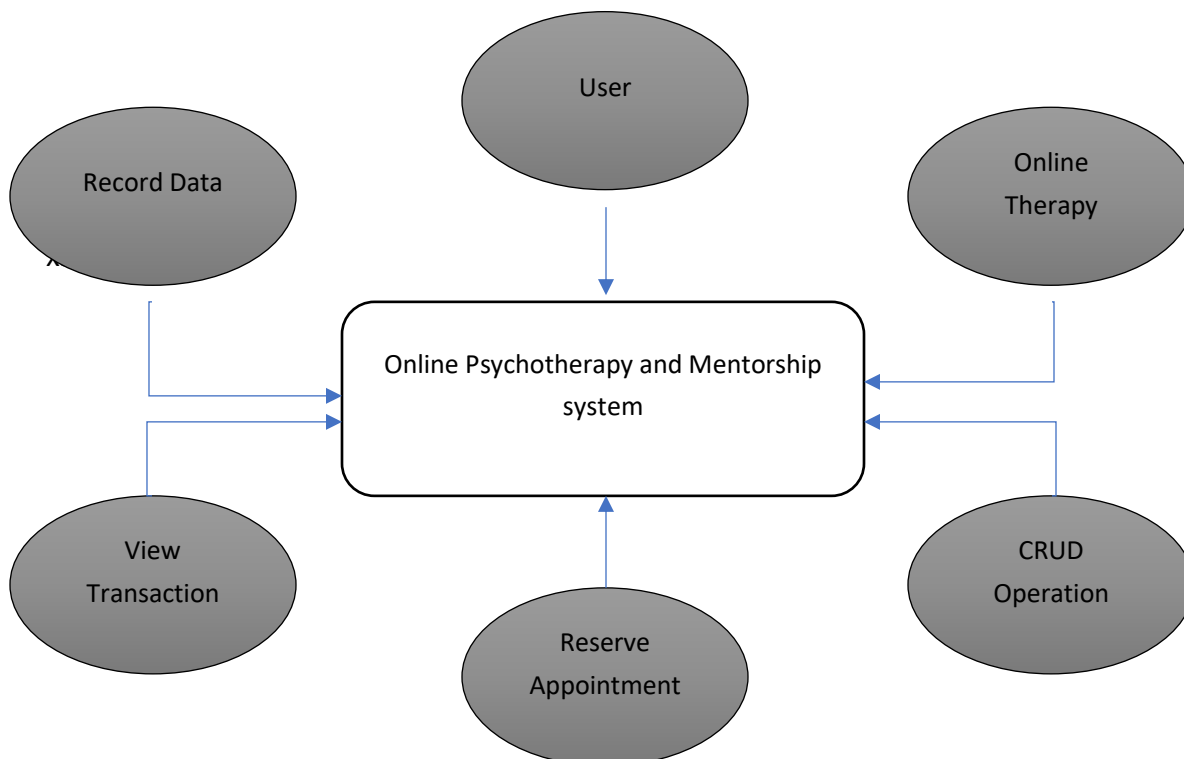
The following are some of the made tradeoffs we took into consideration.

**Reliability Vs. Speed:** - To ensure the reliability of the system, mentee and clients may have to enter lots of personal information before they get any service from the system. That may decrease speed of the system.

**Efficiency Vs Speed:** - To ensure the right service for the clients, we have decided to trade off some magnitude of speed to maximize efficiency. The system will get on rigorous procedures to get the right service for the right customer.

**Security vs. Performance:** The confidentiality of clients is major importance for our system since our system is demanded security and confidentiality at the highest level.

## 4.4 Subsystem Decomposition



Subsystem decomposition is a concept that will help reduce the complexity of the system by simplifying it into multiple smaller systems. The subsystem can be considered as a set of related entities.

### **Authentication**

The main function of the Authentication subsystem is to authenticate user login before allowing access to the system. Authentication is needed in order to use the system. Also, handles user registration and token generation. Requires services by the Data subsystem.

### **Mentee Interface**

The Mentee Interface subsystem will provide each Mentee with a predefined interface depending on their respective preference within the system. From here the users will have access.

### **User Management**

One of the biggest subsystems. It will be responsible for managing user related info. The subsystem will provide services such as editing profile information, adding/removing Candidates, Updates news and information's. Utilized the services of the Data subsystem and alert subsystem.

### **Data**

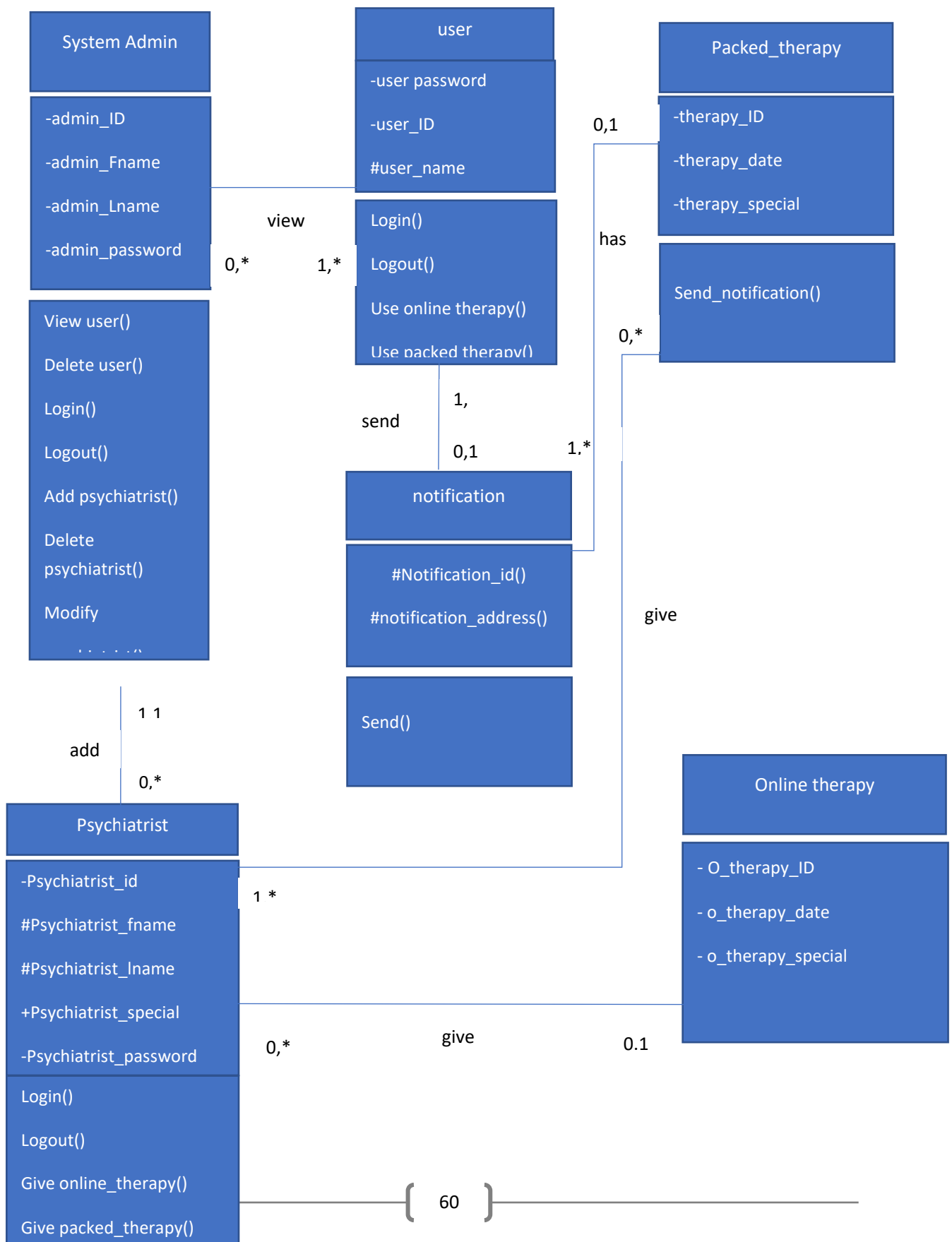
The Data subsystem is responsible for storage and retrieval of all persistent data in the system. Other subsystems are reliant on the Database subsystem service for completing queries.

### **Alert**

The Alert subsystem provides other subsystem the means of displaying alerts to the user when something has gone wrong, missing items, invalid request, or they have done something illegal. Other subsystems utilize its services in order to produce feedback to the user.

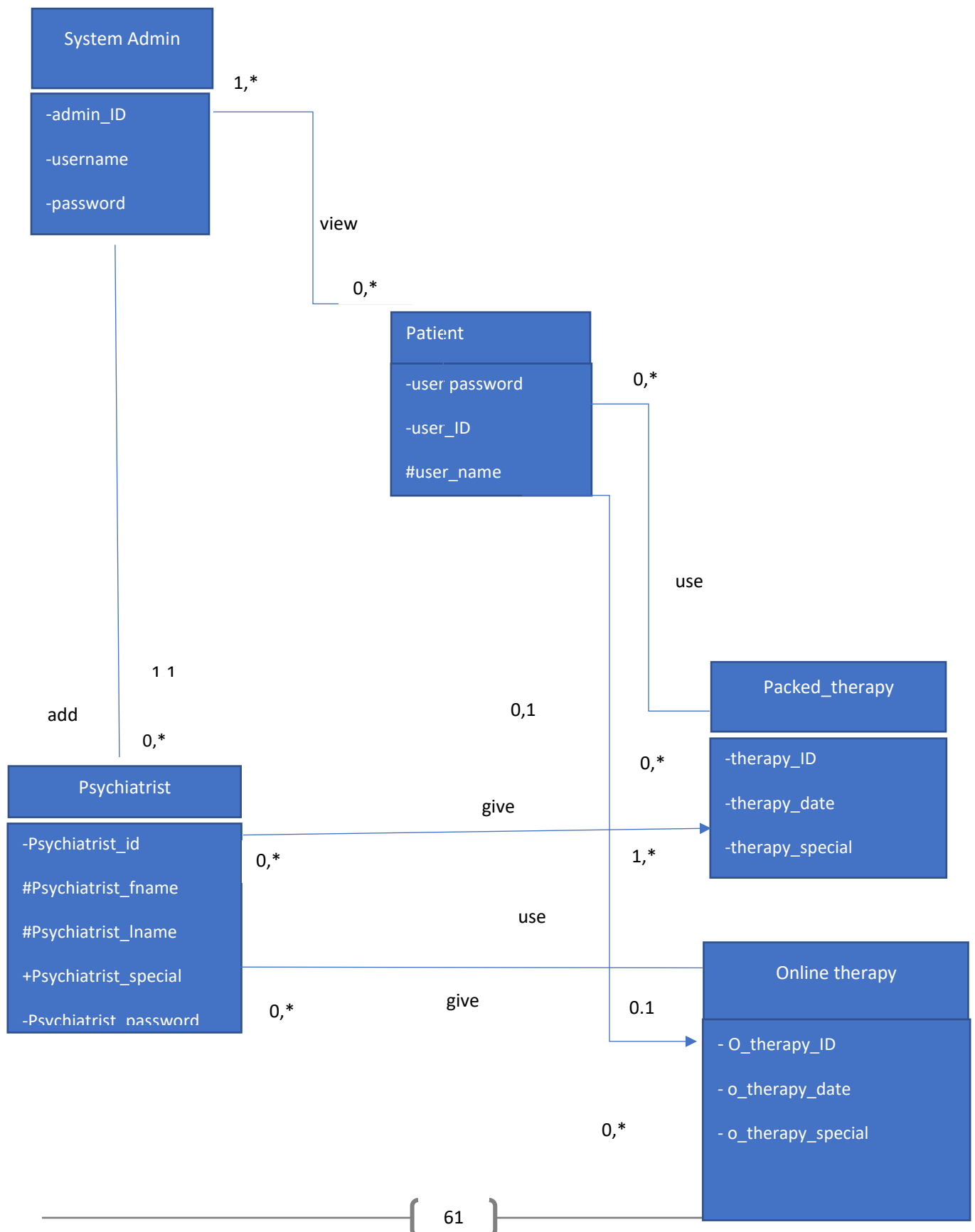
## 4.5 Design Phase Model

### 4.5.1 Class Diagram



## 4.5.2 Persistent Model

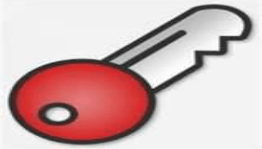
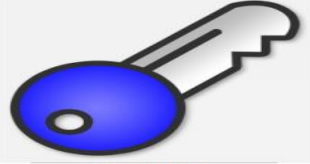
### 4.5.2.1 Mapping Class Diagram to relation



### 4.5.2.2 Normalization

**Normalization** is a database design technique that reduces data redundancy and eliminates undesirable characteristics like Insertion, Update and Deletion Anomalies. Normalization rules divides larger tables into smaller tables and links them using relationships.

Tables	Attributes
patient	Patient_firstname , Patient_lastname, Patient_age, Patient_gender, Patient_email, Patient_phone_no, username,password
pyschotherapist	Psychotherapist_firstname, Psychotherapist_lastname, Psychotherapist_expriance, Psychotherapist_gender, Psychotherapist_phone, Psychotherapist_email,username,password
System Admin	Username ,pass
Service	Service_type, Service_duration

Tables	 Primary Key	 Foreign Key
patient	patient_id	Service_id
System Admin	Admin_id	patient_id,psychotherapist_id, Service_id
pychotherapist	pychotherapist_id	Service_id
Service	service_id	Admin_id

## 1NF (First Normal Form) Rules

- Each table cell should contain a single value.
- Each record needs to be unique.

Tables	Attributes
patient	Patient_name, Patient_age, Patient_gender, Patient_email, Patient_phone_no, username,password
Admin	admin_id, password
Service	Service_type, Service_duration
phycotherapist	Psychotherapist_name, Psychotherapist_gender, Psychotherapist_phone, Psychotherapist_email,username,password

## 2NF (Second Normal Form) Rules

- Rule 1- Be in 1NF
- Rule 2- Single Column Primary Key that does not functionally dependent on any subset of candidate key relation

Tables	Attributes
patient	Patient_name, Patient_age, Patient_gender, Patient_email, username,password
System admin	admin_id, password
Service	Service_type, Service_duration
Psychotherapist	Psychotherapist_name, Psychotherapist_gender, Psychotherapist_email,username,password

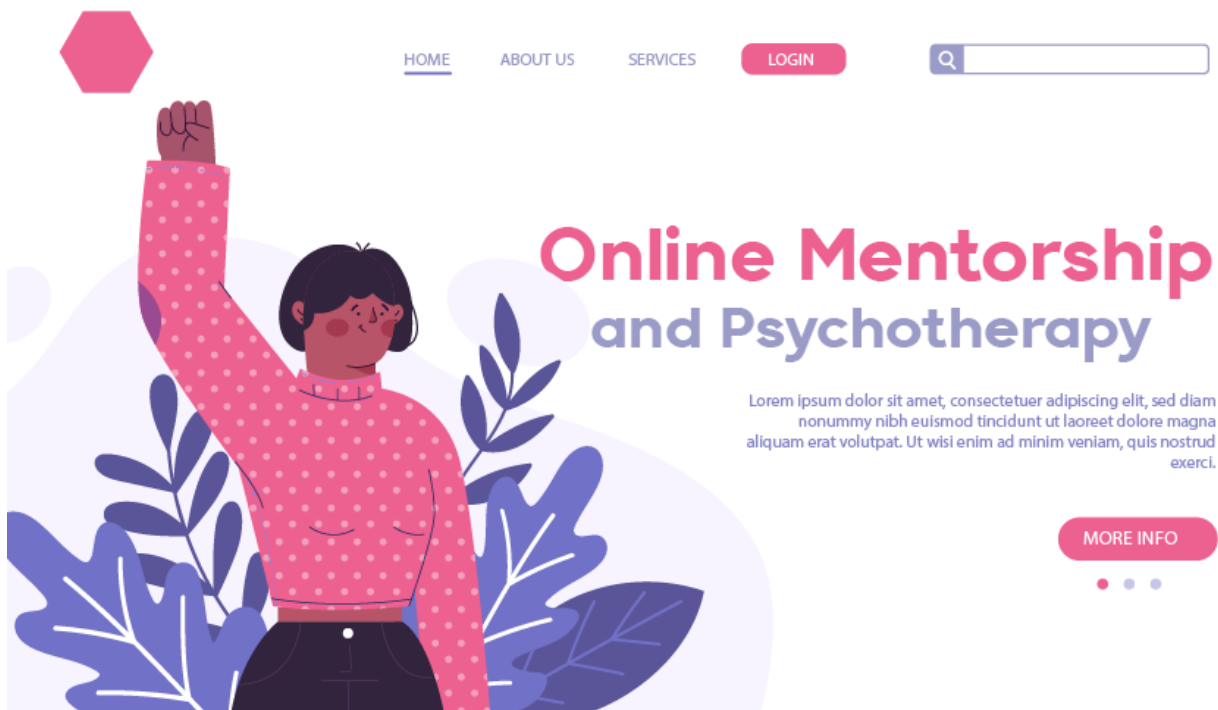
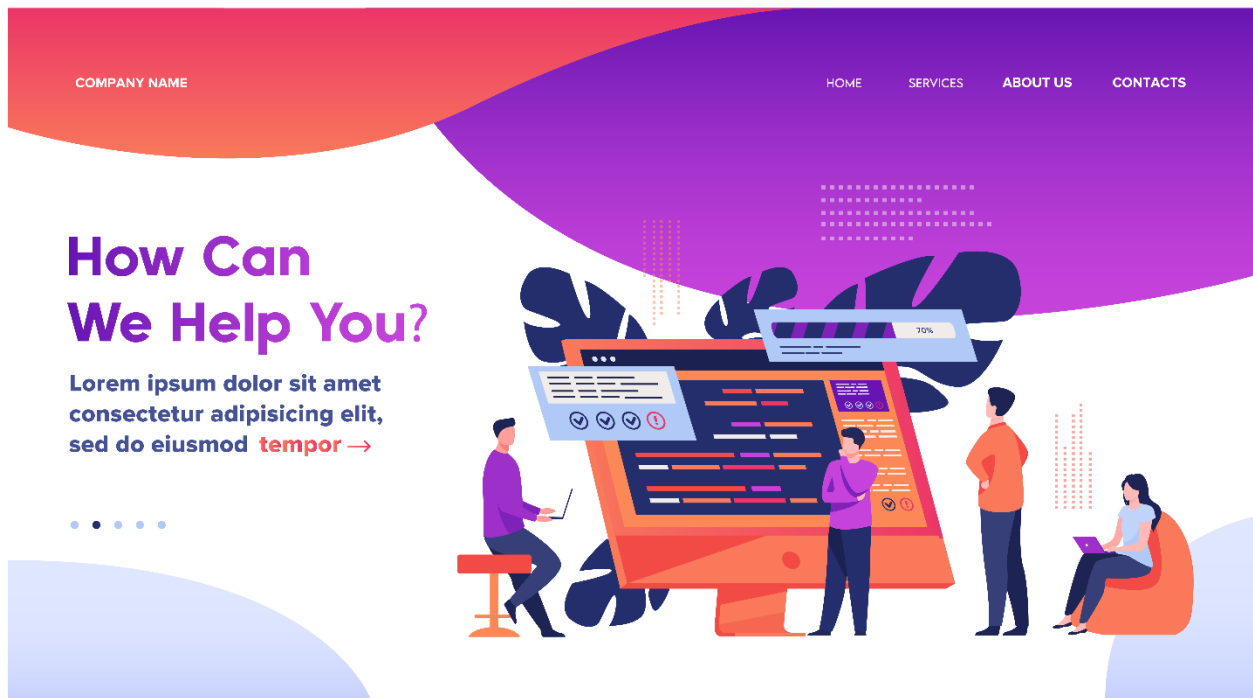
## 3NF (Third Normal Form) Rules

- Rule 1- Be in 2NF
- Rule 2- Has no transitive functional dependencies

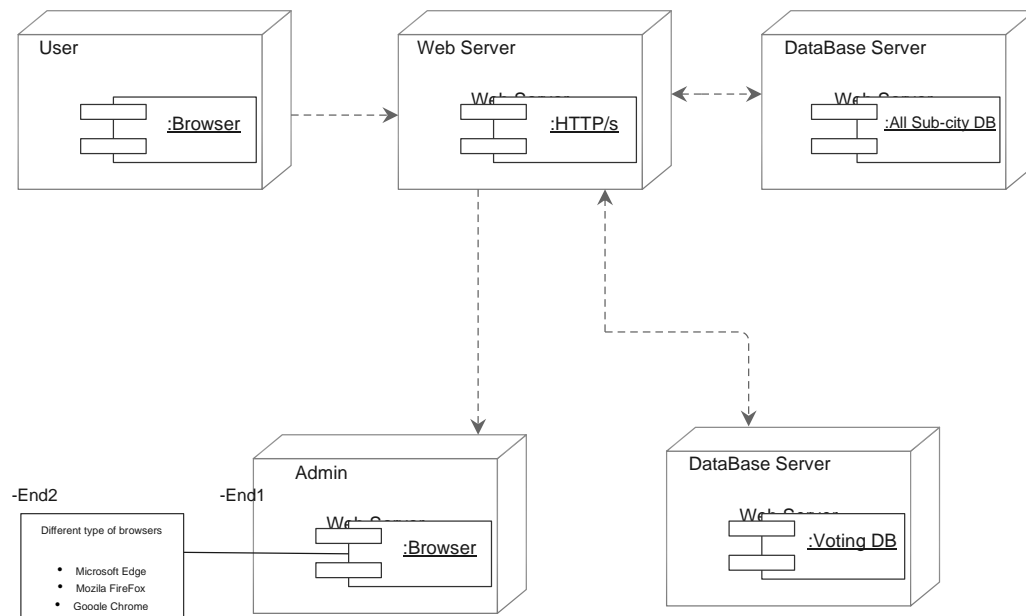
Tables	Attributes
patient	Patient_name, Patient_age, Patient_gender, username,password
System Admin	admin_id, password
Service	Service_type
Phycsiotherapist	<b>psychoterapist_name</b> , Psychotherapist_gender,username,password



### 4.5.3 User Interface Design



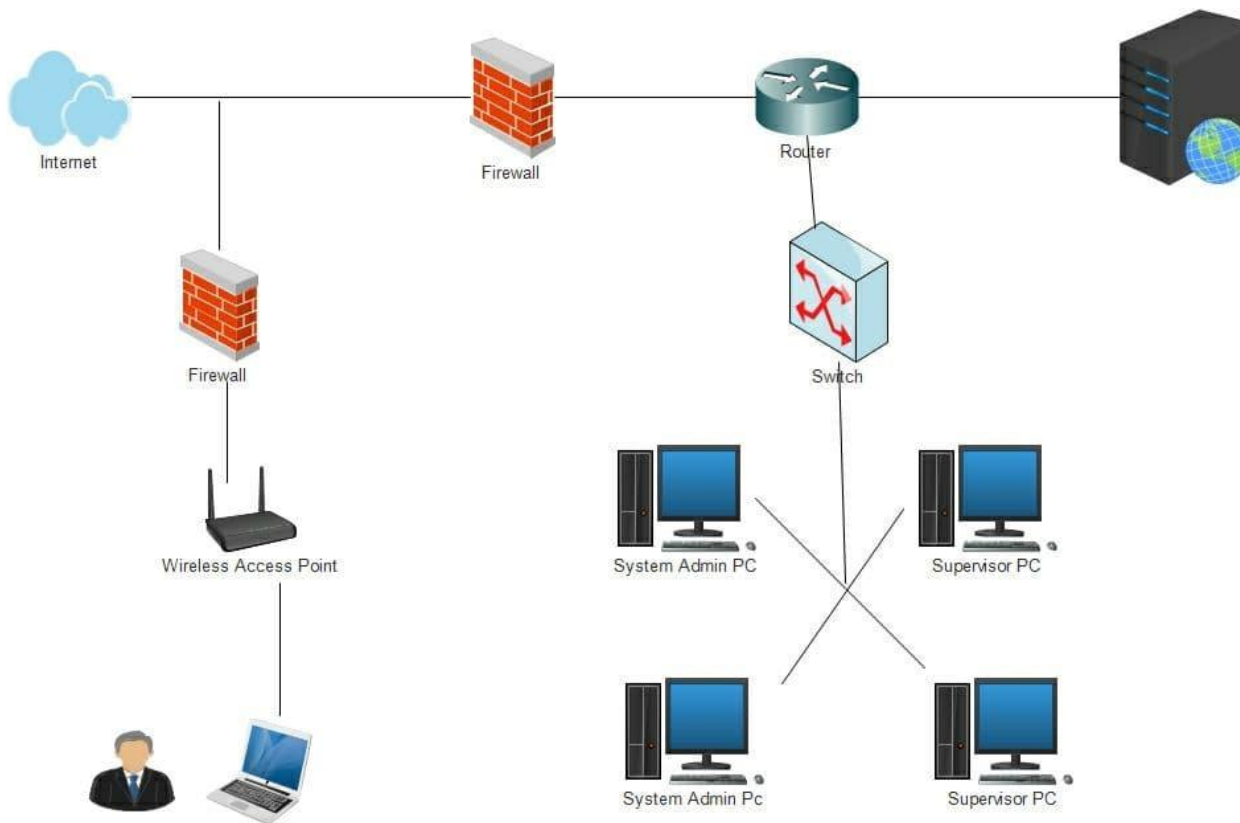
#### 4.5.4 Deployment Diagram



## 4.5.5 Network Design

A network diagram is a visual representation of network architecture. It maps out the structure of a network with a variety of different symbols and line connections. It is the ideal way to share the layout of a network because the visual presentation makes it easier for users to understand how items are connected.

Hereinbelow, we have put the network design to be implemented for the system to work flawlessly.



---

# CHAPTER 5

# IMPLEMENTATION AND TESTING

---

## 5.1 Introduction

In the Implementation phase, **coding is done** and the software developed is the input for the next phase i.e., testing. In the testing phase, the developed code is tested thoroughly to detect the defects in the software. ... Any issues in the production environment are resolved by the developers which come under maintenance.

## 5.2 Sample Code

```
-- Database: `online_therapy`

BACK END IMPLEMENTAION

-- Table structure for table `admin`

CREATE TABLE `admin` (
  `Admin_id` int(11) NOT NULL,
  `Admin_firstname` varchar(50) NOT NULL,
  `Admin_lastname` varchar(50) NOT NULL,
  `Admin_email` varchar(50) NOT NULL,
  `username` varchar(50) NOT NULL,
  `password` varchar(50) NOT NULL,
  `patient_id` int(11) NOT NULL,
  `psychtherapist_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

-- Table structure for table `logs`

CREATE TABLE `logs` (
  `log_id` int(11) NOT NULL,
  `Patient_id` int(11) NOT NULL,
```

```

`action` varchar(50) NOT NULL,

`date` date NOT NULL

)ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

CREATE TABLE `patient` (

`patient_id` int(11) NOT NULL,AUTO_INCREMENT

`Patient_firstname` varchar(50) NOT NULL,

`Patient_lastname` varchar(50) NOT NULL,

`Patient_age` int(11) NOT NULL,

`Patient_gender` varchar(5) NOT NULL,

`Patient_adress` varchar(50) NOT NULL,

`username` varchar(50) NOT NULL,

`password` varchar(50) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

CREATE TABLE `psychtherapist` (

`psychtherapist_id` int(11) NOT NULL,AUTO_INCREMENT

`psychtherapist_firstname` varchar(50) NOT NULL,

`psychtherapist_lastname` varchar(50) NOT NULL,

`psychtherapist_gender` varchar(5) NOT NULL,

`psychtherapist_experience` varchar(50) NOT NULL,

`psychtherapist_age` int(11) NOT NULL,

`psychtherapist_specialized` varchar(50) NOT NULL,

`psychtherapist_adress` varchar(50) NOT NULL,

`username` varchar(50) NOT NULL,

`password` varchar(50) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

CREATE TABLE `service` (

`Service_id` int(11) NOT NULL,AUTO_INCREMENT

`Service_duration` date NOT NULL,

`Service_type` varchar(50) NOT NULL,

`Patient_id` int(11) NOT NULL,

```

```

`psychtherapist_id` int(11) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

DATABASE CONNECTIVITY

<?php

$dbconn = mysqli_connect("localhost","root","","online_therapy");

date_default_timezone_set('Africa/Addis_Ababa');

// Check connection

if (mysqli_connect_errno())

{

    echo "Failed to connect to MySQL: " . mysqli_connect_error();

}

?>

LOGIN TO ADMIN

<?php

    session_start();

    include('../config/dbconn.php');

    if($_SERVER["REQUEST_METHOD"] == "POST"){

        $user_unsafe=$_POST['username'];

        $pass_unsafe=$_POST['password'];

        $user = mysqli_real_escape_string($dbconn,$user_unsafe);

        $pass1 = mysqli_real_escape_string($dbconn,$pass_unsafe);

        $pass=md5($pass1);

        $salt="a1Bz20y dqelm8m1wql";

        $pass=$salt.$pass;

        date_default_timezone_set('Africa/Addis_Ababa');

        $date = date("Y-m-d H:i:s");

        $query=mysqli_query($dbconn,"SELECT * FROM `admin` WHERE username='$user' AND password='$pass'");

        $res=mysqli_fetch_array($query);

        $id=$res['user_id'];

        if (mysqli_num_rows($query)<1){

```

```

$_SESSION['msg']="Login Failed, Admin not found!";

header('Location:admin_login_page.php');

}

else{

$res=mysqli_fetch_array($query);

$_SESSION['id']=$res['user_id'];

header('Location: admin_index.php');

$_SESSION['id']=$id;

$remarks="(Administrator) has logged in the system at ";

mysqli_query($dbconn,"INSERT INTO logs(patient_id,action,date) VALUES('$id','$remarks','$date')")or
die(mysqli_error($dbconn));

}

}

```

?>

LOGIN USER

<?php

```

session_start();

include('../config/dbconn.php');

if($_SERVER["REQUEST_METHOD"] == "POST"){

$user_unsafe=$_POST['username'];

$pass_unsafe=$_POST['password'];

$user = mysqli_real_escape_string($dbconn,$user_unsafe);

$pass1 = mysqli_real_escape_string($dbconn,$pass_unsafe);

$pass=md5($pass1);

$salt="a1Bz20y dqelm8m1wql";

$pass=$salt.$pass;

date_default_timezone_set('Africa/Addis_Ababa');

$date = date("Y-m-d H:i:s");

$query=mysqli_query($dbconn,"SELECT * FROM `patient` WHERE username='$user' AND password='$pass'");

$res=mysqli_fetch_array($query);

```

```

$id=$res['patient_id'];

if (mysqli_num_rows($query)<1){

    $_SESSION['msg']="Login Failed, User not found!";

    header('Location:user_login_page.php');

}

else{

    header('Location: user_index.php');

    $_SESSION['id']=$id;

    $remarks="has logged in the system at ";

    mysqli_query($dbconn,"INSERT INTO logs(patient_id,action,date) VALUES('$id','$remarks','$date')")or
die(mysqli_error($dbconn));

    }

}

?>

FRONT END

HOME PAGE

<?php

include('config/dbconn.php');

?>

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="utf-8" />

    <link rel="apple-touch-icon" sizes="76x76" href="./assets/img/apple-icon.png">

    <link rel="icon" type="image/png" href="./assets/img/favicon.png">

    <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1" />

    <title>Online mentorship</title>

    <meta content='width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=0, shrink-to-fit=no'
name='viewport' />

<!--  Fonts and icons  -->

```



```

<link href="https://fonts.googleapis.com/css?family=Montserrat:400,700,200" rel="stylesheet" />

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-awesome/latest/css/font-awesome.min.css" />

<!-- CSS Files -->

<link href="assets/css/bootstrap.min.css" rel="stylesheet" />

<link href="assets/css/now-ui-kit.css" rel="stylesheet" />

<!-- CSS Just for demo purpose, don't include it in your project -->

<link href="assets/css/demo.css" rel="stylesheet" />

<!-- inserted -->

<link rel="stylesheet" href="plugins/datatables/dataTables.bootstrap.css">

<link href="assets/js/google-code-prettify/prettify.css" rel="stylesheet"/>

<link href="assets/css/bootstrap-responsive.css" rel="stylesheet"/>


<link href="assets/style.css" rel="stylesheet"/>

<!-- inserted -->

</head>

<body class="index-page sidebar-collapse">

<!-- Navbar -->

<nav class="navbar navbar-expand-lg bg-primary fixed-top navbar-transparent " color-on-scroll="400">

  <div class="container">

    <div class="navbar-translate">

      <a href="../website/Electicks Website/page/home.php" class="navbar-brand" rel="tooltip" title="Designed and Coded by Unity University Students, Inc." data-placement="bottom" target="">

        online therapy

      </a>

      <button class="navbar-toggler navbar-toggler" type="button" data-toggle="collapse" data-target="#navigation" aria-controls="navigation-index" aria-expanded="false" aria-label="Toggle navigation">

        <span class="navbar-toggler-bar bar1"></span>

        <span class="navbar-toggler-bar bar2"></span>

        <span class="navbar-toggler-bar bar3"></span>

        <span class="navbar-toggler-bar bar4"></span>

      </button>

```

```

</div>

<div class="collapse navbar-collapse justify-content-end" id="navigation" data-nav-image="./assets/img/blurred-image-1.jpg">

  <ul class="navbar-nav">

    <li class="nav-item">

      <a href="pages/user_login_page.php" class="nav-link" href="javascript:void(0)" onclick="scrollToDownload()">

        <i class="now-ui-icons users_single-02"></i>

        <p>Login</p>

      </a>

    </li>

    <li class="nav-item">

      <a href="pages/user_signup.php" class="nav-link" onclick="scrollToDownload()">

        <i class="now-ui-icons education_paper"></i>

        <p>Sign up</p>

      </a>

    </li>

    <li class="nav-item">

      <a class="nav-link" href="pages/products.php">

        <i class="now-ui-icons files_paper"></i>

        <p>service</p>

      </a>

    </li>

    <li class="nav-item">

      <a class="nav-link" href="" onclick="scrollToDownload()">

        <i class="now-ui-icons shopping_cart-simple"></i>

        <p>about us</p>

      </a>

    </li>

    <li class="nav-item">

      <a class="nav-link" rel="tooltip" title="Follow us on Twitter" data-placement="bottom" href="https://twitter.com"
target="_blank">

```

```

        <i class="fa fa-twitter"></i>

        <p class="d-lg-none d-xl-none">Twitter</p>

    </a>

</li>

<li class="nav-item">

    <a class="nav-link" rel="tooltip" title="Like us on Facebook" data-placement="bottom"
href="https://www.facebook.com" target="_blank">

        <i class="fa fa-facebook-square"></i>

        <p class="d-lg-none d-xl-none">Facebook</p>

    </a>

</li>

<li class="nav-item">

    <a class="nav-link" rel="tooltip" title="Follow us on Instagram" data-placement="bottom"
href="https://www.instagram.com" target="_blank">

        <i class="fa fa-instagram"></i>

        <p class="d-lg-none d-xl-none">Instagram</p>

    </a>

</li>

</ul>

</div>

</div>

</nav>

<!-- End Navbar -->

<div class="wrapper">

    <div class="page-header clear-filter" filter-color="orange">

        <div class="page-header-image" data-parallax="true" style="background-image: url('./assets/img/p1.jpg');

        <div class="container">

            <div class="content-center brand">

                <br><br>

                <h3>mental helth is good </h3>

```

```

        </div>

    </div>

</div>

<br>

<div class="main">

    <div class="section section-basic">

        <div class="container">

            <br>

            <div class="col-md-12">

                <h2 class="title">Mental helth</h2>

                <div class="typography-line">

                    <p>

                        "The reason it seems that price is all your customers care about is that you haven't given them anything else to
                        care about."-Seth Godin, American author, entrepreneur, marketer, and public speaker.

                    </p>

                </div>

            </div>

            <br>

            <center>

                <label><b>Search service: &nbsp;</b></label>

                <form method="POST" action="index_search.php" >

                    <input type="image" title="Search" src="assets/img/search.png" alt="Search" />

                    <input type="text" name="search" class="search-query" placeholder="Enter service name">

                </form>

            </center>

        </div>

        <br><hr color="blue">

    <div class="tab-pane active" id="">

        <ul class="thumbnails">

            <?php

                $query = "SELECT * FROM service ORDER BY Service_type ASC";

```

```

$result = mysqli_query($dbconn,$query);

while($res = mysqli_fetch_array($result)) {

    $Service_id=$res['id'];

?>

    </div>

    <hr color="blue">

    </div>

<?php }?>

    </ul>

</div>

</div>

</div>

<footer class="footer" data-background-color="black">

    <div class="container">

        <nav>

            <ul>

                <li>

                    <a href="" target="_blank">

                        final Project

                    </a>

                </li>

                <li>

                    CCS1R1N4/10

                </li>

            </ul>

        </nav>

        <div class="copyright">

            &copy;

            <script>

                document.write(new Date().getFullYear())

```

```

        </script>, Designed and Coded by Unity University Students, Inc.

    </div>

</div>

</footer>

</div>

</body>

<!-- Core JS Files -->

<script src="/assets/js/core/jquery.3.2.1.min.js" type="text/javascript"></script>

<script src="/assets/js/core/popper.min.js" type="text/javascript"></script>

<script src="/assets/js/core/bootstrap.min.js" type="text/javascript"></script>

<!-- Plugin for Switches, full documentation here: http://www.jque.re/plugins/version3/bootstrap.switch/ -->

<script src="/assets/js/plugins/bootstrap-switch.js"></script>

<!-- Plugin for the Sliders, full documentation here: http://refreshless.com/nouislider/ -->

<script src="/assets/js/plugins/nouislider.min.js" type="text/javascript"></script>

<!-- Plugin for the DatePicker, full documentation here: https://github.com/uxsolutions/bootstrap-datepicker -->

<script src="/assets/js/plugins/bootstrap-datepicker.js" type="text/javascript"></script>

<!-- Control Center for Now Ui Kit: parallax effects, scripts for the example pages etc -->

<script src="/assets/js/now-ui-kit.js" type="text/javascript"></script>

<script type="text/javascript">

    $(document).ready(function() {

        // the body of this function is in assets/js/now-ui-kit.js

        nowuiKit.initSliders();

    });

    function scrollToDownload() {

        if ($('.section-download').length != 0) {

            $("html, body").animate({

                scrollTop: $('.section-download').offset().top

            }, 1000);

        }

    }

}

```

```

</script>

<!-- inserted -->

<script src="/plugins/datatables/jquery.dataTables.min.js"></script>

<script src="/plugins/datatables/dataTables.bootstrap.min.js"></script>

<!-- Le javascript
===== -->

<!-- Placed at the end of the document so the pages load faster -->

<script type="text/javascript" src="http://platform.twitter.com/widgets.js"></script>

<script src="assets/js/jquery.js"></script>

<script src="assets/js/google-code-prettify/prettify.js"></script>

<script src="assets/js/application.js"></script>

<script src="assets/js/bootstrap-transition.js"></script>

<script src="assets/js/bootstrap-modal.js"></script>

<script src="assets/js/bootstrap-scrollspy.js"></script>

<script src="assets/js/bootstrap-alert.js"></script>

<script src="assets/js/bootstrap-dropdown.js"></script>

<script src="assets/js/bootstrap-tab.js"></script>

<script src="assets/js/bootstrap-tooltip.js"></script>

<script src="assets/js/bootstrap-popover.js"></script>

<script src="assets/js/bootstrap-button.js"></script>

<script src="assets/js/bootstrap-collapse.js"></script>

<script src="assets/js/bootstrap-carousel.js"></script>

<script src="assets/js/bootstrap-typeahead.js"></script>

<script src="assets/js/bootstrap-affix.js"></script>

<script src="assets/js/jquery.lightbox-0.5.js"></script>

<script src="assets/js/bootshoptgl.js"></script>

<script type="text/javascript">

$(function() {

    $('#gallery a').lightBox();

});

```

```

</script>

<!-- SlimScroll -->

<script src="/plugins/slimScroll/jquery.slimscroll.min.js"></script>

<!-- FastClick -->

<script src="/plugins/fastclick/fastclick.min.js"></script>

<!-- AdminLTE App -->

<script src="/plugins/app.min.js"></script>

<!-- AdminLTE for demo purposes -->

<script src="/plugins/demo.js"></script>

<script src="/plugins/datatables/jquery.dataTables.min.js"></script>

<script src="/plugins/datatables/dataTables.bootstrap.min.js"></script>

<script>

    $(function () {

        $('#example1').DataTable({

        });

    });

</script>

<!-- inserted -->

</html>

USER SIGN UP

<?php

    session_start();

    include('../config/dbconn.php');

?>

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="utf-8" />

    <link rel="apple-touch-icon" sizes="76x76" href="../assets/img/apple-icon.png">

```



```

<link rel="icon" type="image/png" href="../../assets/img/favicon.png">

<meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1" />

<title>online mentorship</title>

<meta content='width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=0, shrink-to-fit=no'
name='viewport' />

<!-- Fonts and icons -->

<link href="https://fonts.googleapis.com/css?family=Montserrat:400,700,200" rel="stylesheet" />

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-awesome/latest/css/font-awesome.min.css" />

<!-- CSS Files -->

<link href="../../assets/css/bootstrap.min.css" rel="stylesheet" />

<link href="../../assets/css/now-ui-kit.css" rel="stylesheet" />

<!-- CSS Just for demo purpose, don't include it in your project -->

<link href="../../assets/css/demo.css" rel="stylesheet" />
</head>

<body class="login-page sidebar-collapse">

<!-- Navbar -->

<nav class="navbar navbar-expand-lg bg-primary fixed-top navbar-transparent " color-on-scroll="400">

  <div class="container">

    <div class="navbar-translate">

      <a href="../../index.php" class="navbar-brand" rel="tooltip" title="Designed and Coded by Unity University Students,
      Inc." data-placement="bottom">

        online therapy

      </a>

      <button class="navbar-toggler navbar-toggler" type="button" data-toggle="collapse" data-target="#navigation" aria-
      controls="navigation-index" aria-expanded="false" aria-label="Toggle navigation">

        <span class="navbar-toggler-bar bar1"></span>

        <span class="navbar-toggler-bar bar2"></span>

        <span class="navbar-toggler-bar bar3"></span>

      </button>

    </div>

    <div class="collapse navbar-collapse justify-content-end" id="navigation" data-nav-image="../../assets/img/blurred-image-
    1.jpg">

```

```

<ul class="navbar-nav">

    <li class="nav-item">

        <a class="nav-link" rel="tooltip" title="Follow us on Twitter" data-placement="bottom"
href="https://twitter.com/CreativeTim" target="_blank">

            <i class="fa fa-twitter"></i>

            <p class="d-lg-none d-xl-none">Twitter</p>

        </a>

    </li>

    <li class="nav-item">

        <a class="nav-link" rel="tooltip" title="Like us on Facebook" data-placement="bottom"
href="https://www.facebook.com/CreativeTim" target="_blank">

            <i class="fa fa-facebook-square"></i>

            <p class="d-lg-none d-xl-none">Facebook</p>

        </a>

    </li>

    <li class="nav-item">

        <a class="nav-link" rel="tooltip" title="Follow us on Instagram" data-placement="bottom"
href="https://www.instagram.com/CreativeTimOfficial" target="_blank">

            <i class="fa fa-instagram"></i>

            <p class="d-lg-none d-xl-none">Instagram</p>

        </a>

    </li>

</ul>

</div>

</div>

</nav>

<!-- End Navbar -->

<?php
// including the database connection file

include("../config/dbconn.php");

if(isset($_POST['submit']))

```

```

{
    $Patient_firstname=$_POST['Patient_firstname'];
    $Patient_lastname=$_POST['Patient_lastname'];
    $Patient_age=$_POST['Patient_age'];
    $Patient_gender=$_POST['Patient_gender'];
    $Patient_adress=$_POST['Patient_adress'];
    $username=$_POST['username'];
    $password=$_POST['password'];
    $pass1=md5($password);
    $salt="a1Bz20y dqelm8m1wql";
    $pass1=$salt.$pass1;
    // checking empty fields
    if(empty($Patient_firstname) || empty($Patient_lastname) || empty($Patient_age) || empty($Patient_gender) ||
empty($Patient_adress) || empty($username) || empty($password)) {
        if(empty($Patient_firstname)) {
            echo "<font color='red'>Firstname field is empty!</font><br/>";
        }
        if(empty($Patient_lastname)) {
            echo "<font color='red'>lastname field is empty!</font><br/>";
        }
        if(empty($Patient_age)) {
            echo "<font color='red'> age field is empty!</font><br/>";
        }
        if(empty($Patient_gender)) {
            echo "<font color='red'>gender field is empty!</font><br/>";
        }
        if(empty($Patient_adress)) {
            echo "<font color='red'>adress field is empty!</font><br/>";
        }

        if(empty($username)) {

```

```

        echo "<font color='red'>Username field is empty!</font><br/>";
    }

    if(empty($password)) {
        echo "<font color='red'>Password field is empty!</font><br/>";
    }
} else {
    //updating the table

    $query = "INSERT INTO Patient (Patient_firstname, Patient_lastname, Patient_age, Patient_gender, Patient_adress,
username, password)

    VALUES
('$Patient_firstname','$Patient_lastname','$Patient_age','$Patient_gender','$Patient_adress','$username','$pass1')";

    $result = mysqli_query($dbconn,$query);

    if($result){
        //redirecting to the display page. In our case, it is index.php
        header("Location: ../index.php");
    }
}
}
?>

<div class="page-header" filter-color="orange">

<div class="page-header-image" style="background-image:url(../assets/img/p1.jpg)"></div>

<div class="container">

<div class="col-md-4 content-center">

<div class="card card-login card-plain">

<form class="form" method="post" action="">

<div class="header header-primary text-center">

<div class="logo-container">

    **LOGO**

    <!--insert logo here-->

</div>

</div>

</div>

```

```

<div class="content">

  <div class="input-group form-group-no-border input-lg">

    <span class="input-group-addon">

      <i class="now-ui-icons users_circle-08"></i>

    </span>

    <input type="text" name="Patient_firstname" class="form-control" placeholder="First name" required>

  </div>

  <div class="input-group form-group-no-border input-lg">

    <span class="input-group-addon">

      <i class="now-ui-icons users_circle-08"></i>

    </span>

    <input type="text" name="Patient_lastname" class="form-control" placeholder="Last name" required>

  </div>

  <div class="input-group form-group-no-border input-lg">

    <span class="input-group-addon">

      <i class="now-ui-icons users_circle-08"></i>

    </span>

    <input type="text" name="Patient_age" class="form-control" placeholder="age" required>

  </div>

  <div class="input-group form-group-no-border input-lg">

    <span class="input-group-addon">

      <i class="now-ui-icons users_circle-08"></i>

    </span>

    <input type="text" name="Patient_gender" class="form-control" placeholder="gender" required>

  </div>

  <div class="input-group form-group-no-border input-lg">

    <span class="input-group-addon">

      <i class="now-ui-icons business_bank"></i>

    </span>

    <input type="text" name="Patient_adress" class="form-control" placeholder="Complete address" required>

```

```

    </div>

    <div class="input-group form-group-no-border input-lg">

        <span class="input-group-addon">

            <i class="now-ui-icons business_bank"></i>

        </span>

        <input type="text" id="username" name="username" class="form-control" placeholder="Username"
required>

    </div>

    <div class="input-group form-group-no-border input-lg">

        <span class="input-group-addon">

            <i class="now-ui-icons ui_1_lock-circle-open"></i>

        </span>

        <input type="password" id="password" name="password" placeholder="Password" class="form-control"
required>

    </div>

</div>

<div class="footer text-center">

    <button type="submit" class="bbtn btn-primary btn-round btn-lg btn-block" id="submit" name="submit">

        Create account

    <span class="glyphicon glyphicon-floppy-save"></span>

    </button>

</div>

</form>

</div>

</div>

</div>

<div class="footer">

    <div class="container">

        <div class="copyright">

            &copy;

            <script>

```

```

        document.write(new Date().getFullYear())

    </script>, Designed and Coded by Unity University Students, Inc.

</div>

</div>

</footer>

</div>

</body>

<!-- Core JS Files -->

<script src="../../assets/js/core/jquery.3.2.1.min.js" type="text/javascript"></script>

<script src="../../assets/js/core/popper.min.js" type="text/javascript"></script>

<script src="../../assets/js/core/bootstrap.min.js" type="text/javascript"></script>

<!-- Plugin for Switches, full documentation here: http://www.jque.re/plugins/version3/bootstrap.switch/ -->

<script src="../../assets/js/plugins/bootstrap-switch.js"></script>

<!-- Plugin for the Sliders, full documentation here: http://refreshless.com/nouislider/ -->

<script src="../../assets/js/plugins/nouislider.min.js" type="text/javascript"></script>

<!-- Plugin for the DatePicker, full documentation here: https://github.com/uxsolutions/bootstrap-datepicker -->

<script src="../../assets/js/plugins/bootstrap-datepicker.js" type="text/javascript"></script>

<!-- Control Center for Now Ui Kit: parallax effects, scripts for the example pages etc -->

<script src="../../assets/js/now-ui-kit.js" type="text/javascript"></script>

</html>

```

---

# CHAPTER 6

# RECOMMENDATION AND

# CONCLUSION

---

## 6.1 Conclusion

There is a problem in mental health caring system in our country and in order to provide good and helpful information and services we have done this platform. The problem on the current way of getting treatment from mental health organization, that we can list out are confusion of finding right treatment for the right price as if we have planned to reduce this problem so this website does work on telling what the right treatment is for the right price.

Regarding to our research there are so many other problems that peoples are facing on getting medical treatment such as not finding the exact location of the mental health organization, information about the problem, then are not easily found, there is a lack of information about the diagnosis which are given on the targeted organization or health center, getting card and schedule of visiting hours before arriving the hospital or any health center is also impossible.

Our website came up with different solution to overcome the above problem by delivering fast, safe and efficient web based that provides treatment online.

The solutions that our website provides is that designing friendly user interface, getting details on the medical centers, notifying latest and reliable information, providing a comprehensive information related to the hospital operating hours, service, psychotherapist specialization, doctors and therapist schedule.



## 6.2 Recommendation

If a problem occurred in finding mental health institutions our website is highly recommended for use, because it can provide a safe, fast and easy treatment way. In finding a good mental health organization it could be very time consuming, therefore, our website is a very good problem solving which is designed to minimize the time waste of our customer or the people who are using this website.

This website is also recommended to use or to solve the following problems or to fulfill the following needs and wants of the people who are using our website: -

- Problems that occurred in finding the right mental health institution
- Problems in not accessing such kind of treatment easily.
- Problems in not accessible 24/7.
- Problems in not addressing most of societies

Most of all we recommended our website for all age user because it is too friendly, every person can communicate with this application so that it is the best and helpful platform .

# Reference

[www.w3school.com](http://www.w3school.com)

[www.mcmet.org](http://www.mcmet.org)

[www.kadcogroup.com/kgb](http://www.kadcogroup.com/kgb)

Object oriented analysis and design book by Brahma Dathan, Samath Ramanth department of computer science, st.cloud, state university, st.cloud, USA

[www.google.com/map/viewer](http://www.google.com/map/viewer)

Modern system analysis and design fifth edition by Jeffrey A. Hoffer

Learning PHP, MySQL, JavaScript, CSS & HTML5 O'REILLY by Robin Nixon 3<sup>rd</sup> edition