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| **1** | **Introduction** |

# 1.1 System Introduction

The purpose of this management system is to help those individuals, teenagers who are suffering from anxiety, depression, and other mental diseases. We want to minimize the efforts of a patient who will continuously go for checkup to the hospital and this management system provides an easy way to communicate with the doctor and the doctor will monitor the patient. The scope of this management system is to provide benefits to the patient and save their time and efforts so they will be cured as early as possible.

# 1.2 Background of the System

We came to know after searching current health issues of Pakistan that psychological problems in Pakistan are widespread. According to one estimate, around 50 million people in Pakistan suffer from mental disorders. A range of psychiatric disorders have been reported, such as depression, anxiety, post-traumatic stress disorder etc. We got this information from the link below and then we thought about making a mental health management system. https://www.thenews.com.pk/tns/detail/614383-dispelling-myths-about-mental-health

# 1.3 Objectives of the System

The objectives of our management system are:

1. To minimize the efforts of patients.
2. To make an easy online interactive environment between doctor and patient.
3. To make people understand their psychology from the comfort of their home.

# 1.4 Significance of the System

The significance of this management system is to provide benefits to the patient and save their time and efforts so they can be cured as early as possible.

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| **2** | **Overall Description** |

# 2.1 Product Perspective

The main perspective of this management system is to provide an easy way to the patients for their checkup. The patient will never go to the hospital regularly for checkup and it will reduce time and effort. Many people become physically disabled and they do not remain in their senses because of some accidents so this management system will be more beneficial for them.

# 2.2 Product Scope

The scope of this product is very high. We can use this management system in every hospital, clinic and in every home.

# 2.3 Product Functionality

* Login
* Questionnaires
* Disease Level
* Medications/Meditations
* Patient Progress
* Patient Review

# 2.4 Users and Characteristics

There are 2 classes of this management system: doctor and patient. The characteristics of the doctor class are login, patient status, patient cured. The characteristics of patient class are login, disease, questionnaire, medication, meditation, and feedback

# 2.5 Operating Environment

Windows 10 (64-bit)

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| **3** | **Specific Requirements** |

# 3.1 Functional Requirements

The services provided by us to the patient are the functional requirements.

# 3.2 Behavior Requirements

We have used NetBeans Interface linking to fulfill the behavioral requirements.

# 3.3 External Interface Requirements

## 3.3.1 User Interfaces

There are 2 different interfaces for the user and for the doctor, 1 for patient and 1 for doctor.

**Interface for Patient:**

When the patient opens our application a login form will appear and the user first registers himself or herself and the user must enter correct information otherwise login will not be granted. After login the patient will select the disease, after selection of disease the questionnaire will appear after which the patient will have to answer properly. The level of disease assessed by the doctor will appear in front of the patient. Now the patient will click the send button and the medicine and exercise related to the disease prescribed by the doctor will appear to the user. There will be a chat box available if the patient wants to consult the doctor. After the patient is cured, he must provide feedback.

**Interface for doctor:**

The doctor will login in our application and register him or herself and must provide correct info for login otherwise errors will appear. A screen will appear in which a questionnaire will appear in front of the doctor. The doctor will examine the questionnaire and recommend the medicine and meditations to the patient. If he wants to give additional remarks to the patient, he/she can do it with the chat box. At last, the doctor will save the info of the patients that how much patients are completely cured

## 3.3.2 Hardware Interfaces

* Laptop Dell i5 Inspiron 3521
* 4Gb RAM
* 128GB SSD
* 500GB HDD

## 3.3.3 Software Interfaces

The software interface used by us is Java IDE NetBeans (12.4). The database used for this application is local storage.

## 3.3.4 Communications Interfaces

The communication interfaces used by us are Email, Facebook, WhatsApp, Instagram, LinkedIn, Tweeter

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| **4** | **Other Non-functional Requirements** |

# 4.1 Performance Requirements

The performance of our software will be maintained by our team so that we can be safe from bugs and errors in the future.

# 4.2 Safety and Security Requirements

We will apply validation to prevent invalid users from entering our application.

# 4.3 Software Quality Attributes

Our software will be valuable to those patients who get disabled after severe injuries due to accidents and they cannot come to the doctor every time for their checkup. So, our application will help them to have a chat from the doctor from the comfort of home without getting disturbed

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| **5** | **Design Description** |

**5.1 Use Cases:**

**A screenshot of a computer

Description automatically generated with low confidence**

**5.2 Composite Viewpoint** Diagram

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**5.3 Logical Viewpoint**

**Class Diagram**

A picture containing timeline

Description automatically generated

**5.4 Interaction Viewpoint**: -

**Sequence Diagram**

A picture containing diagram

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**5.5 State Dynamics Viewpoint**

**State Chart Diagram**

Diagram

Description automatically generated

**5.6 Algorithm Viewpoint**

**Actors:**

1. Patient
2. Doctor

## 5.6.1. Patient Algorithm

1. Patient enters username and password to login in Management System.
2. If username is correct, system checks for the password.
3. If the password is also matched, the client is logged in. Otherwise patient is redirected back to the login page.
4. Successful login > Patient dashboard.
5. Disease is selected > Questionnaire is shown.
6. If questionnaire is marked completed > Patient gets disease level shared by the doctor.
7. Patient can also check his progress and medicines prescribed by the doctor.
8. Else > Patient can logout.

## 5.6.2. Doctor Algorithm

1. Doctor enters username and password to login in Management System.
2. If username is correct, system checks for the password.
3. If the password is also matched, the client is logged in. Otherwise doctor is redirected back to the login page.
4. If the password is also matched, the Doctor is logged in.
5. Successful login > Doctor Dashboard.
6. To Review Panel > To assess questionnaires filled by patients to show them their disease level.
7. Medications and Meditations > To prescribe medicines and meditations to the patient.
8. Else> Doctor can logout.