

Platform to Help Addicts Recover

CHAPTER 1 - PROJECT PROPOSAL

1.1 Introduction

Addiction is defined as both a psychological and physical inability to prevent consuming chemical, drug, activity, or substance, albeit it's causing psychological and physical harm. The term addiction doesn't only refer to dependence on substances like heroin or cocaine. A person who cannot stop taking a specific drug or chemical has a substance dependence. Some addictions also involve an inability to prevent partaking in activities, like gambling, eating, or working. In these circumstances, an individual has a behavioral addiction.

According to the data from <https://ourworldindata.org/>, illicit drugs (drugs that have been prohibited under international drug control treaties) use alone was globally responsible for over 750,000 deaths per year in 2017. This is nearly double the amount of deaths from homicide – 400,000.

Drug addiction (also known as substance abuse disease) is treatable. But it isn't easy. Addiction is a chronic disorder that cannot be healed by just stopping consuming drugs for a few days. To permanently stop using and reclaim their life, the majority of individuals require long-term or recurring treatment. It necessitates a complete assessment, which may involve a consultation with a psychiatrist, psychologist, or professional alcohol and drug counselor. Substance use disorder (SUD) recovery is a never-ending process with no apparent beginning or end. To avoid recurrence, a lot of aftercare and follow-up are required. It necessitates making extra lifestyle modifications and confronting the issues that contribute to SUS.

Even though there are a lot of people dealing with substance use disorder in our country, there is not enough awareness among our community that addiction is a chronic disease that can be treated. Instead of helping those suffering from drug addiction, there is very high stigma and negative attitudes against them. Even though some treatment centers for SUD have opened in recent years, there is a huge lack of program and treatment resources. Even in treatment centers that are giving services, there is a huge gap of providing adequate aftercare.

1.2. Statement of the Problem and Justification

Let alone knowing about SUD rehabilitation centers in the country, there is no enough awareness among our community that addiction is a chronic disease that can be treated. Most resources that help in treatment of SUD are given to patients manually currently. Event announcements are also made via phone call. Even though follow up is an essential part of recovery, once they leave the center, little to no follow up is being given to patients. This is mainly due to the lack of convenient and easily accessible ways of communicating with clinicians. By now rehabilitation centers have no way of keeping sober users in the system to ensure they stay sober and also make use of experiences they get during their treatment to help others. Despite support groups being essential part of SUD treatment, currently there is no way of practicing support group activities without patients being physically present at the rehabilitation center.

1.3. Project Objective

1.3.1. General Objective of the System

The objective of our system is to design and develop a system that will help to create awareness about SUD, motivate those suffering with SUD to go to rehabilitation centers and get help, and improve the effectiveness of SUD treatments.

1.3.2. Specific Objective of the System

To accomplish the general objective, this project has the following specific objectives:

- Gather requirements using interviews and written documents.
- Organize the requirements in the form of functional and non-functional requirements.
- Design a software solution that will achieve functional and non-functional requirements we gather.
- Develop a mobile application for patients.
- Develop a mobile application for physicians.
- Design and develop a web-based system for rehabilitation center managers.

1.4.1 Scope

This project focuses on designing and developing a system that will assist the treatment of SUD. A web-based system and mobile application system will be designed and developed for rehabilitation centers and SUD patients respectively.

1.4.2 Limitation

- Our system only focuses on assisting treatment of substance use disorder not behavioral addiction disorders.
- Our system is not a stand alone treatment method for treating SUD, but a complementary system that will work with other methodologies of treatment.
- The system will only support amharic from local languages.
- The system will not provide video and voice chat. It is only text and image based.
- The system will not show online users
- There will be no web based system for physicians.
- The patient can not be assigned to more than one physician at a time.

1.5. System Development Methodology

During this project, we will primarily use waterfall software development methodology. Even though it is considered as the traditional software development method, it clarifies the process of developing a software into a linear flow with a specified sequence to let us understand that further level is made progressive on completion of the previous one. It is easy to understand and functional. The main reason we choose the waterfall model is because it fits well with our class schedule.

1.5.1. Investigation (Fact-Finding) Methods

In order to gather requirements for the system we are going to develop, we will utilize the following strategies of requirement gathering.

- Interview: - We will interview stakeholders in rehabilitation centers about the current system they are using in treating SUD.
- Document Analysis: - We will analyse SUD treatment manuals to understand the processes and methodologies involved in treating SUD.

1.5.2. System Development Tools

Our system will try to solve the problem stated in our problem statement using both web technologies and mobile technologies. The system will be implemented using the following technologies.

Tools we intend to use for writing documentation

- Google docs

Tools for the implementation phase

For front-end

- HTML5
- CSS3
- Javascript
- Material UI
- React
- React Native

For back-end

- Nodejs
- MySQL

1.6. Significance of Project

This project is very significant to our country because of all the economic, social and political problems SUD is causing in our country. To be able to improve treatment of SUD benefits not only the patients and treatment centers, but the whole community. It will improve the health status of the community including life expectancy. It will also minimize economical, social and political side effects of SUD. Even if our system won't solve all problems of SUD, it is a step in the right direction both in introducing the technology to facilitate SUD treatment and creating awareness about SUD. The very low availability of SUD treatment centers and resources relative to a very large number of SUD patients in our country require an effective way of mobilizing and organizing those resources to be able to reach out to more patients and make sure the treatment is going as planned.

1.7. Beneficiaries

The main beneficiaries of our system are:

- Patients struggling with SUD as the system will provide them the resources and communication platform that will help them recover and not relapse.
- Rehabilitation centers as the system will automate tasks such as resource sharing, event announcement ...
- Patient's family or other caretakers as they will be able to communicate with the clinician that is in charge of the treatment of the patient.

1.8. Time Schedule

Task Name	Start	Finish	April 15,2021			May 1,2021					June 1,2021
			April 15,2021	April 17,2021	April 24,2021	May 1,2021	May 8,2021	May 15,2021	May 22,2021	May 29,2021	June 5,2021
[-] Project Proposal	April 15,2021	April 23,2021									
Problem identification	April 15,2021	April 16,2021									
Project proposal document draft	April 17,2021	April 20,2021									
Project proposal document final	April 21,2021	April 23,2021									
[-] Requirement Analysis	April 24,2021	May 12,2021									
Requirement gathering	April 24,2021	April 26,2021									
Requirement organizing	April 27,2021	April 29,2021									
System model	April 30,2021	May 3,2021									
Requirement analysis draft	May 4,2021	May 8,2021									
Requirement analysis final	May 9,2021	May 12,2021									
[-] System Design	May 13,2021	June 13,2021									
System decomposition	May 13,2021	May 16,2021									
Hardware/Software mapping	May 17,2021	May 19,2021									
Persistent data management	May 20,2021	May 23,2021									
Access control and security	May 24,2021	May 26,2021									
Subsystem services	May 27,2021	May 29,2021									
Detailed class diagram	May 30,2021	June 3,2021									
Packages	June 4,2021	June 5,2021									
System design document draft	June 6,2021	June 9,2021									
System design document final	June 10,2021	June 13,2021									