

CARNEGIE MELLON UNIVERSITY
Advanced Mobile Application Development
Project name: Mentale
Project vision

Done by:
Jean Sauveur Mizerere Rukundo
Orly Mugwaneza
Sabin Sheja

1. Description

Mentale is mental health project with the aim of empowering every human being to know and get familiar with their mental health status. Currently, the whole world is experiencing the increase in number of people who are suffering from mental health problems and especially here in Rwanda, there is a large number of people suffering from mental disorders and other mental health problems and most of the people don't realize that they have mental problems until they reach a critical condition.

Mentale is a software which will help in diagnosing and consulting mental health disabilities. The system will be an internet-based platform which will collect different question that can be asked or used in consultation of everyone and provide feedback directly on your mental health status and what basic procedure you need to follow. The user will have to register into the system and start by answering predefined simple questions for the system to know patient's initial mental health status. For each login system will allow a user to enter his/her mood of the day to help the system to learn mental health progress of the user and be able to receive the recommendation from the system. Recommendations can be manually entered by doctors or automatically generated by the system according to previous patients data.

Coming up with Mentale, we have seen different Rwandans being isolated and denied because of mental health issues and disease while they can live as other human beings, different youths and adults of the age between 16-35 years are becoming alcohol abused, and according to Partners in Health, one in every four Rwandans suffers from post-traumatic stress disorder and nearly one in every six adults suffers from depression. Therefore, this shows how there is still a gap in the mental health for both private sector and government side that is why we come up with Mentale contribute and reduce or solve mental health problems in an easier way. Mentale allows

everyone to easily get familiar with mental health issues, learn, and get online guidance and basic needs to deal with them.

2. Objective

Mentale Android app has an objective of using online assistance to allow people to connect, chat, and meet with mental health practitioners and get health assistance from either online or in-person. This app will allow users to know and get familiar with mental health easily through the app without going to the hospital. People are busy working which is hard for them to find time for going to the hospital for a medical checkup. Mentale will allow these people to be able to get first aid by logging to this app and provide their mood of the day or by booking online the nurse and nurse will be able to diagnose user online.

3. Purpose

Mentale Android app aims to facilitate in the mental health care sector with the purpose of helping people with mental health disorders including:

- Suicide
- Depression
- Anxiety
- Alcohol and drug addiction
- Trauma

All above mental health problems arise mostly from the level of poverty, overworking, and daily life. Currently, based on research made by United Nation in September 2019, one person dies by suicide every 40 seconds¹ and every year over 264 million people worldwide suffer from depression². Therefore, as depression, suicide, alcohol, drugs and trauma cause many other

¹ (2019, September 9). Suicide: one person dies every 40 seconds. Retrieved January 22, 2020, from <https://www.who.int/news-room/detail/09-09-2019-suicide-one-person-dies-every-40-seconds>

² (2019, December 4). Depression - World Health Organization. Retrieved January 22, 2020, from <https://www.who.int/news-room/fact-sheets/detail/depression>

body health problems which sometimes led to deaths we want to introduce mentale to fight against depression and other mental disorder problems before it takes many lives of people.

4. Scope/boundaries

Given the time constraints, suggestions to results of diagnosis will be programmed and few mental illness will be addressed. Following is our scope in terms of functionalities to be implemented:

4.1. Patient side:

- User registration and login
- Providing daily mood by answering a set of questions
- Receiving results and suggestions from the diagnosis
- Booking a nurse/doctor
- Chatting with a nurse through video call

4.2. Practitioner side

- User registration and login
- Receive pending appointment requests
- Confirming appointment request
- Set availability
- Chatting with a patient through video call

4.3. Future work:

- The system will be able to provide suggestions from the diagnosis using machine learning algorithm.
- Include online payment for the service

5. Target user

This app is targeting people who are:

- Youths and are suffering from alcohol abuse
- In low and middle income class to fight against anxiety and depression
- Employed people who are always busy focusing on their daily work and sometimes find themselves overworking.
- All other people who wish to be diagnosed and check their mental health status.

6. Key benefits

6.1. User benefits:

- Get mental health assistance from home or at workplace
- Track his/her mental health status every day
- Get mental health diagnosis for cheap price

6.2. Company's benefit:

- Get income for diagnosis fees
- Get insight from the users for future app improvement
- Participate in reducing the mental health global challenges

6.3. General benefits:

- Reducing number of depressed people
- First aid in case of emergency
- Employment to practitioners

7. Competition

In Rwanda, the mental health sector mostly relies on the government, or non-profit organizations that help people to get access to health facilities in their living area and pay for medicine. Partners in Health is an organization that aims to help the poorest regions to get health care, from this health care initiative they also help people who have mental health issues to get medicine³. Other competitors are the rehabilitation centers that help people who are addicted to drugs to become normal⁴. All those centers and Partners in Health help people who already reached the level where they need a special treatment of the doctors and need to go and see doctors face to face.

8. Differentiation

	Mentale	Partners in Health	Rehabilitation centers
Service	Advising people to be aware of mental health, diagnose people and check if they need to go and see a special doctor	Help poor to get health care in all domains including mental health	Help drug addicted people to stop taking drugs
Technology	Online services(Android app), video chat counselling, in-person assistance	Partner with hospitals	Have their own facilities and people come for services
Strengths	Easily accessible, cheap, faster, can be accessed by everyone	Financially strong, supported by government and international organizations	Government centers
Weakness	New to the market	No technology involved, it's just empowering mentor health mentors, operates in 3 districts	Help drug addicted people only

³ "Rwanda | Partners In Health." <https://www.pih.org/country/rwanda>. Accessed 24 Jan. 2020.

⁴ "About Us - NATIONAL REHABILITATION SERVICE." <http://igihe.org.rw/nrs/spip.php?rubrique1>. Accessed 24 Jan. 2020.

9. Individual/team members

Name	AndrewID
Jean Sauveur Mizerere Rukundo	mizerere
Orly Mugwaneza	omugwane
Sabin Sheja	ssheja