PREDICTIS

INSTRUCTION MANUAL

ENGLISH

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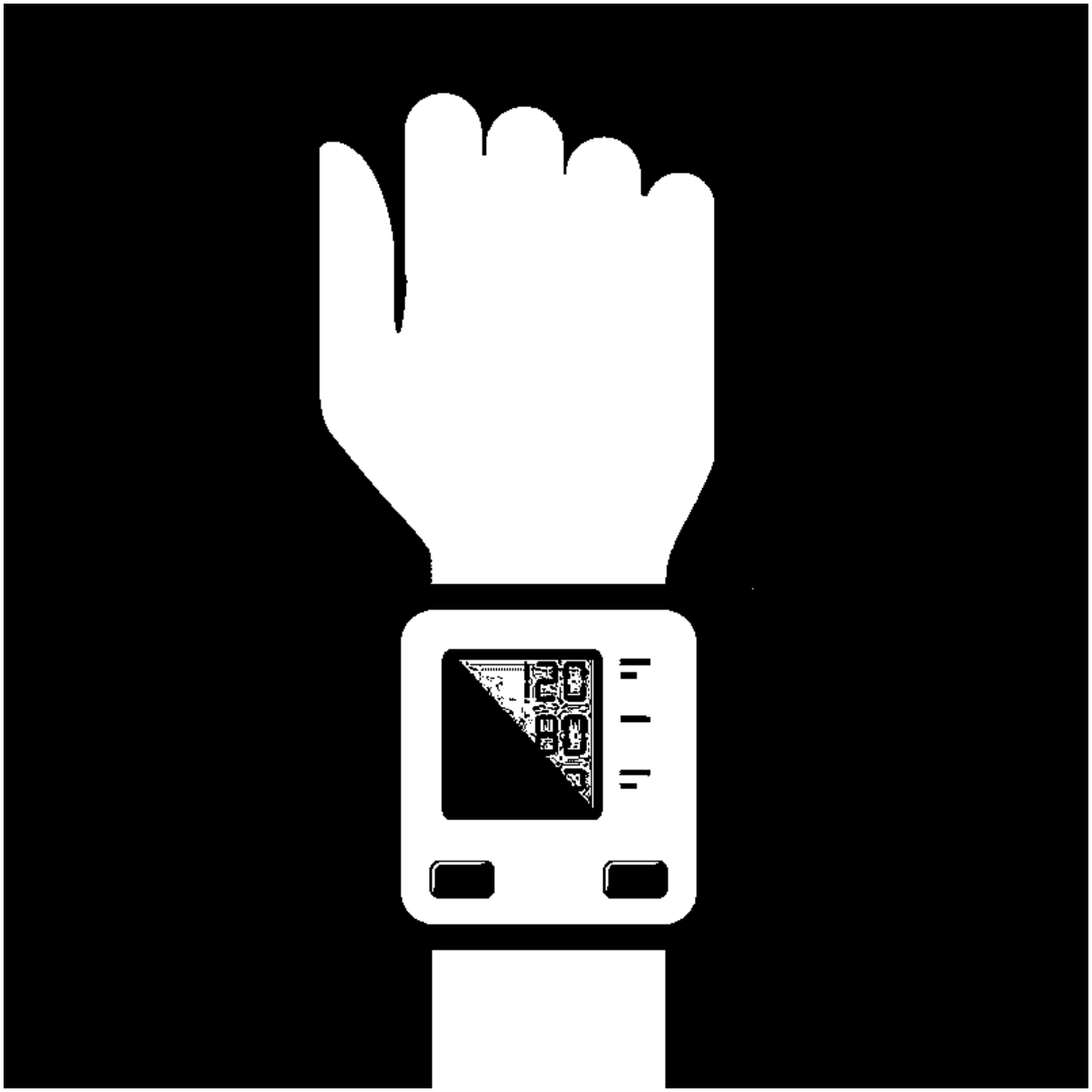
TOOL DESCRIPTION



1.0 GENERAL INFORMATION

The General Information section explains in general terms the system and the purpose for which it is intended.

1.1 System Overview:

- Predictis aims to encourage general people about their heart health, which is the result of a healthy lifestyle.
- The system works in multiple stages.
- First the system will receive profile data which are the values that are constant.
- Then it will take real time data to monitor and classify the risk zone of users' health. All the data will be stored in the database, results will be shown from a pretrained model.
- System will suggest a better lifestyle for improving the health of the heart to decrease the risk of heart attacks.

1.2 Organization of the Manual:

The user's manual consists of the following sections.

1) General Information
2) System Summary
3) Using of System

- ✓ The General Information section explains the purpose for which the tool is intended. System Summary provides a general overview of the system.
- ✓ It outlines the uses of the system's hardware and software requirements,
- ✓ system's configuration, user access and risk factors.
- ✓ The Getting Started section presents a brief system menu.
- ✓ The System section will have a detailed description of system functions.

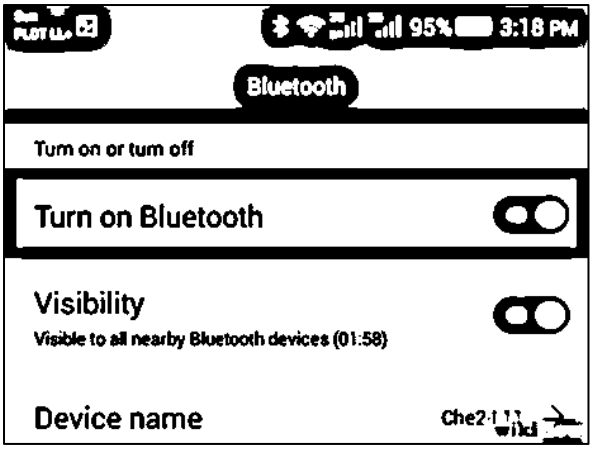
2.0 SYSTEM SUMMARY

System Summary provides a general overview of the system. It outlines the uses of the system's hardware and software requirements, System's configuration, user access and risk factors.

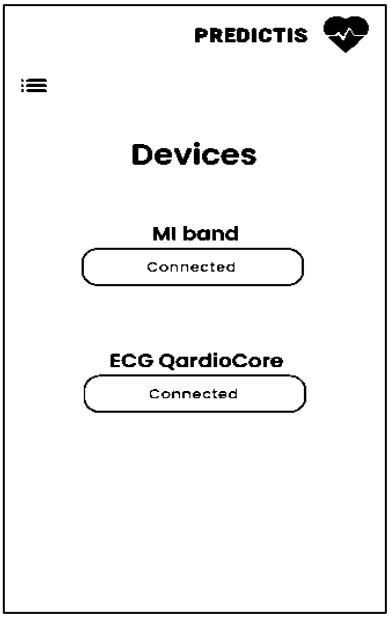
2.1 System Configuration:

1) Predictis operates on mobile devices integrated with hardware tools.
2) It is for the Android operating system.

3) This application requires internet connection in order to save the user data on database.

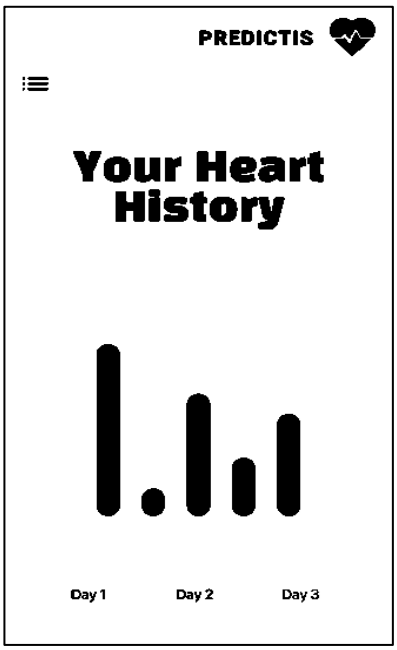


4) Bluetooth should be turned on to connect the device with the application.



5) To integrate with the hardware so that hardware along with the app can run simultaneously the devices should be connected.

6) Predictis can be used after connecting the hardware devices.



7) Data saved in the database can be seen using the internet from the app.

2.2 User Access:

Predictis has mainly two types of users.

1) Patients having risk of cvd.
2) General people who are conscious about their health Picture.

3.0 USING OF THE SYSTEM

BEFORE TAKING A MEASUREMENT:

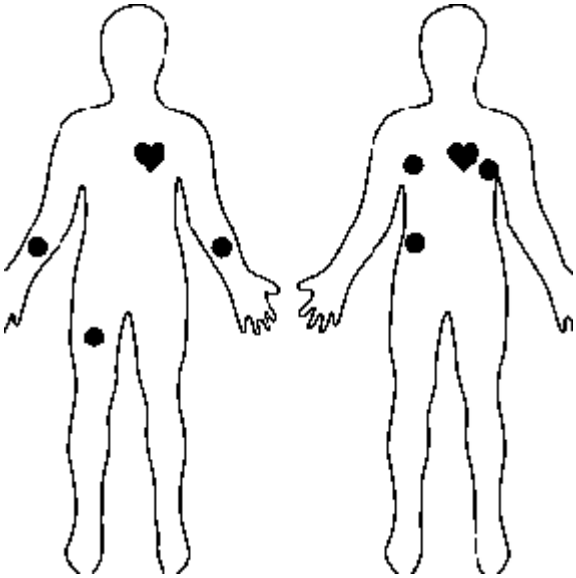
1. To ensure a reliable reading, follow these recommendations:
2. Avoid eating, drinking alcohol, smoking, exercising, and bathing for 30 minutes, before taking a measurement.
3. Rest for at least 5 minutes before taking the measurement.
4. Stress raises blood pressure. Avoid taking measurements during stressful times.
5. The cuff can be applied to your left or right wrist.
6. Measurements should be taken in a quiet place.
7. Position the unit at heart level throughout the measurement.
8. Remain still and do not talk during the measurement.
9. Keep a record of your blood pressure and pulse readings for your physician.
10. A single measurement does not provide an accurate indication of your true blood
11. Pressure or pulse.
12. You need to take and record several readings over a period of time.
13. Try to measure your blood pressure at the same time each day for consistency.

3.1 SIGN UP / LOGIN

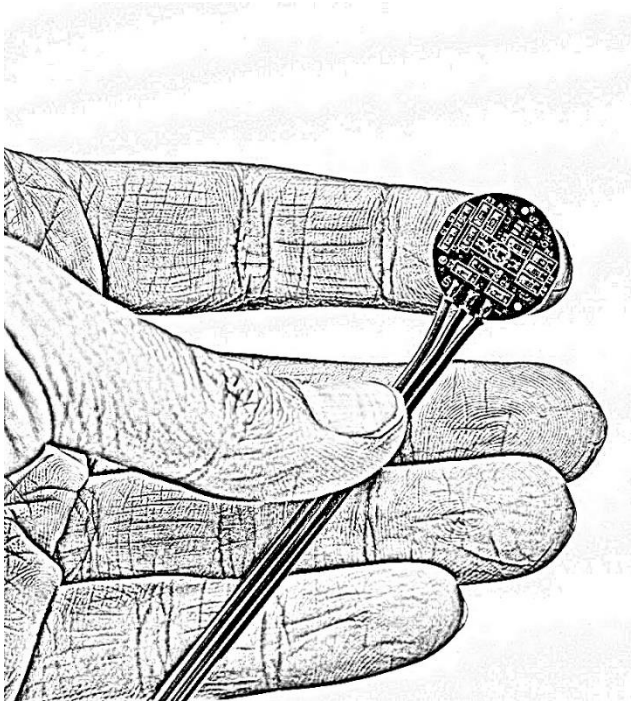
1) User has to sign up by giving profile data and afterwards can log in with the given credentials.

3.2 CONNECTING DEVICE

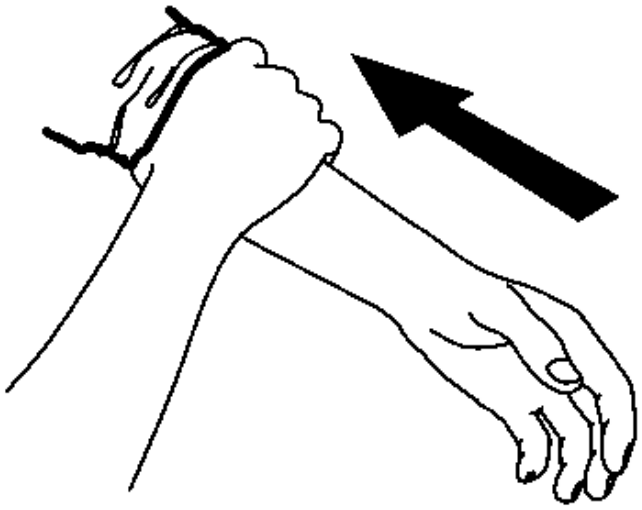
The devices of this system work with the internet, the user has to make sure the devices are turned on and are connected to the particular places of the body.



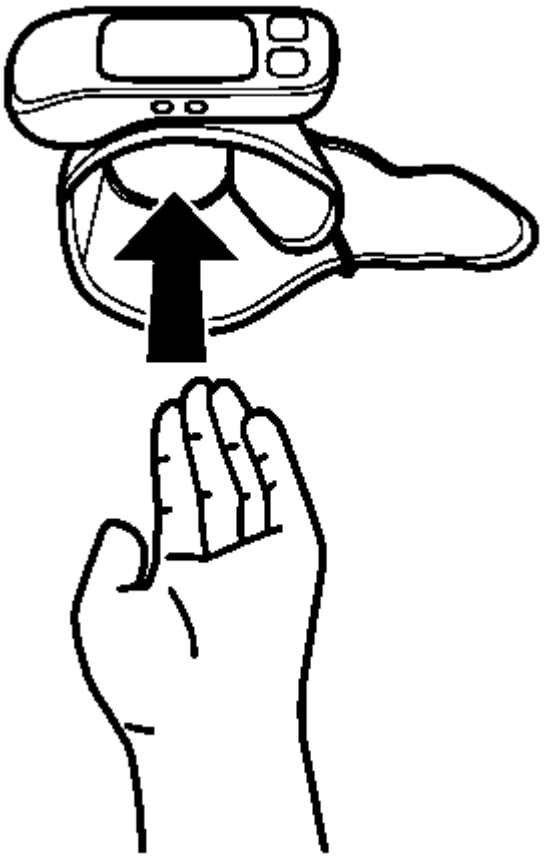
2) The Red colored wire, Yellow colored wire & Green colored wire should be connected to the Right Chest, Left Chest & on the Right side of lower belly.
3) The Red colored wire, Yellow colored wire & Green colored wire should be connected to the Right hand (2-3inch lower from wrist), Left hand (2-3inch lower from wrist) & on the Right side of upper thigh.



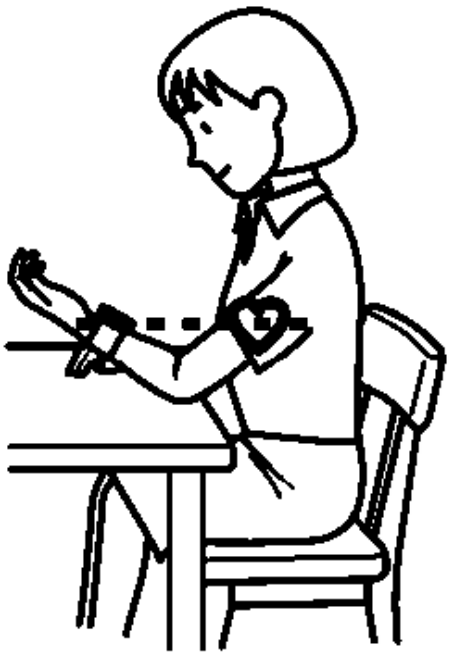
4) The pulse sensor should be placed upon the index finger. It should be connected with the ti of the finger.



5) Roll up sleeve. Make sure your sleeve is not rolled up too tightly on your arm. This may constrict the flow of blood in your arm.

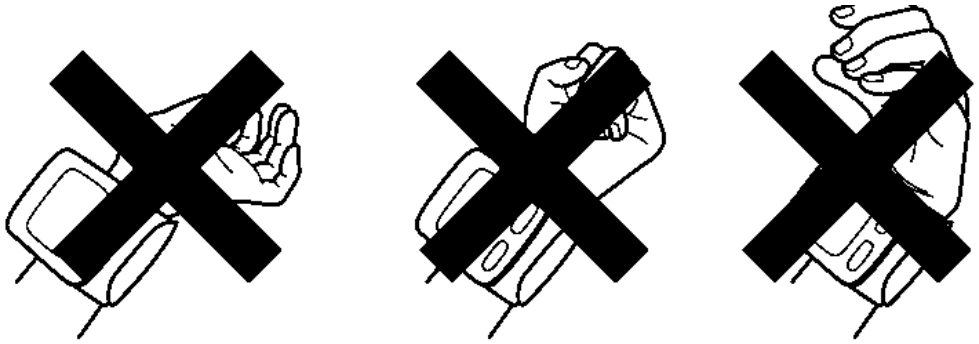


6) Put your arm through the cuff loop. Your palm should face upward.



7) Position the cuff leaving a clearance of approximately 1/2 to 1 inch (1-2 cm) between the cuff and the bottom of your palm.

8) Sit comfortably on a chair with your feet flat on the floor and place your elbow on a table in order to relax before starting blood pressure measurement.

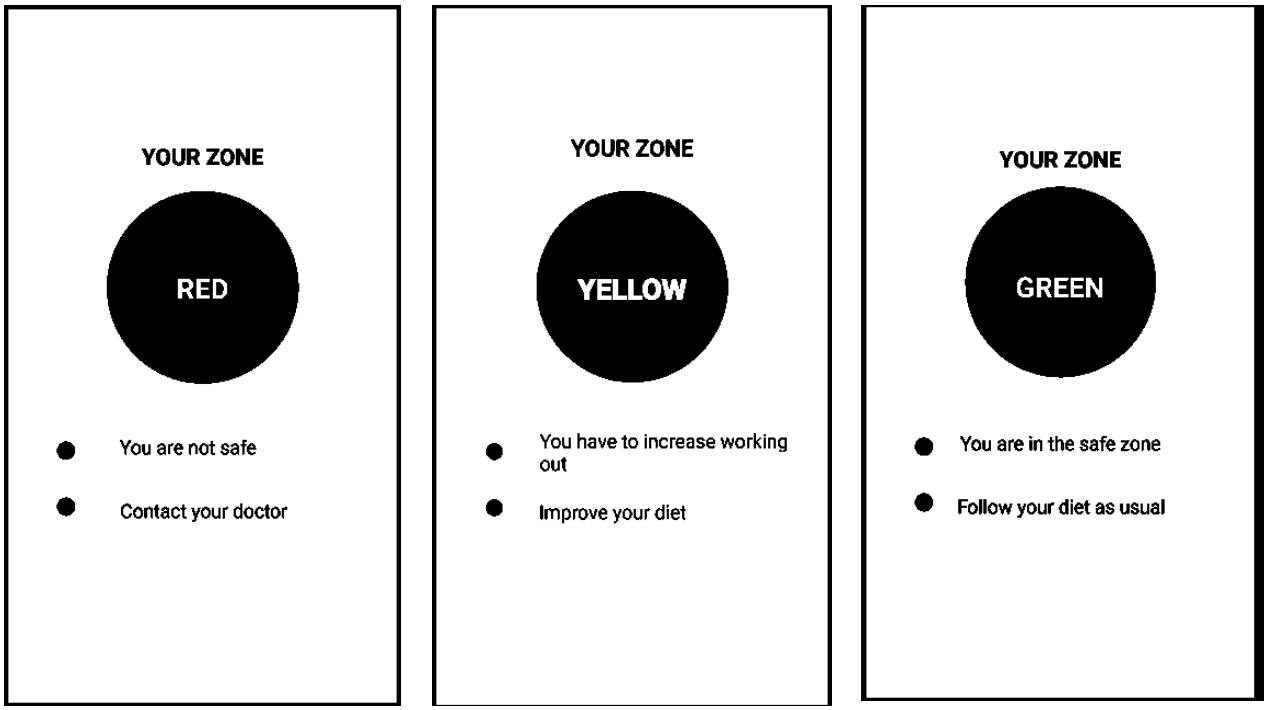


NOTES: 1) Relax your wrist and hand. Do not bend your wrist back, clench your fist, or bend your wrist forward.

2) The cuff must be approximately the same height as your heart. If the cuff is too high above your heart, your blood pressure will read artificially low.

3) If the cuff is too low below your heart, your blood pressure and ecg will be artificially high.

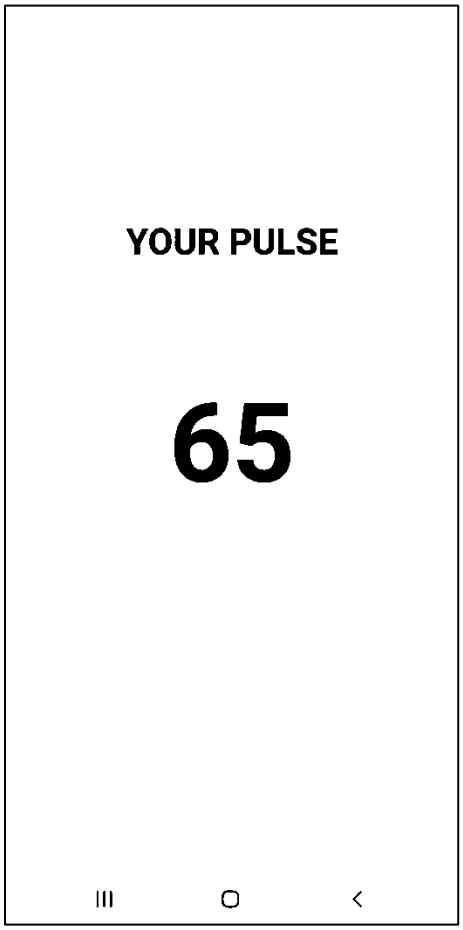
3.3 ZONE CLASSIFICATION



9) The system has a pretrained model which will compare the profile data and real time data and will give the zone classification with proper accuracy.

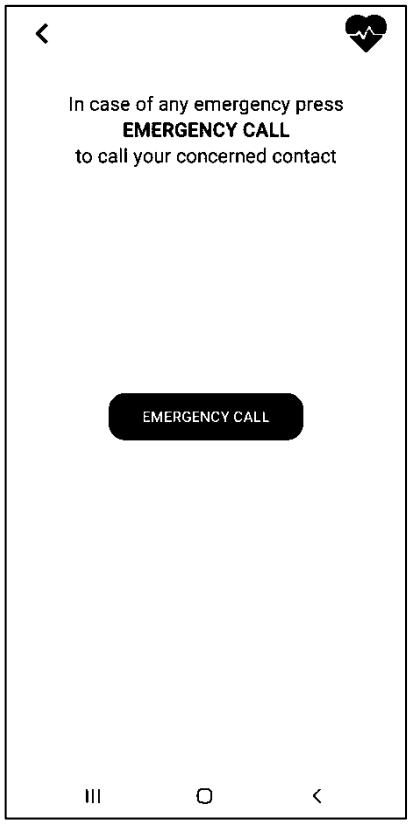
10) Three different zones are Red, Green and Yellow where:
    -Red zone denotes maximum risk of having a heart disease.
    -Yellow zone denotes moderate risk of having a heart disease.
    -Green zone denotes least risk of having a heart disease.

3.4 PULSE MONITORING



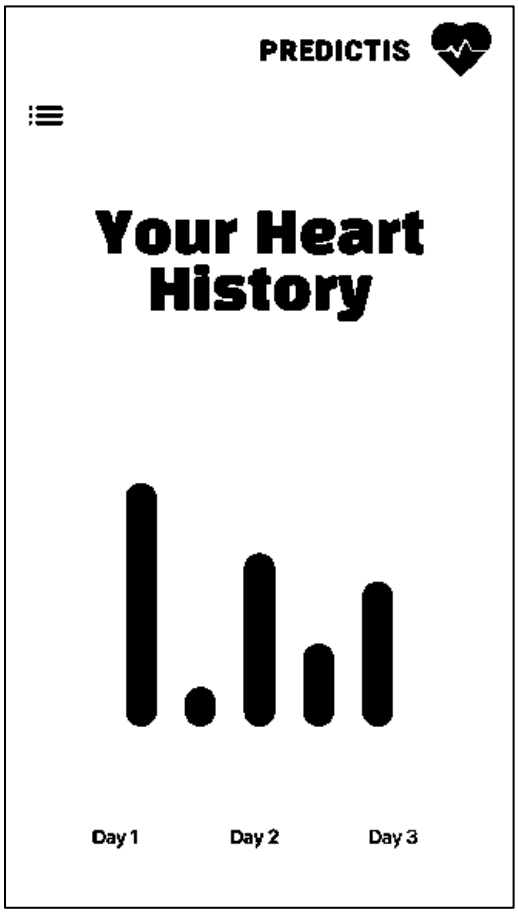
11) Your Realtime Pulse value will be shown here.

3.5 EMERGENCY CONSULTATION



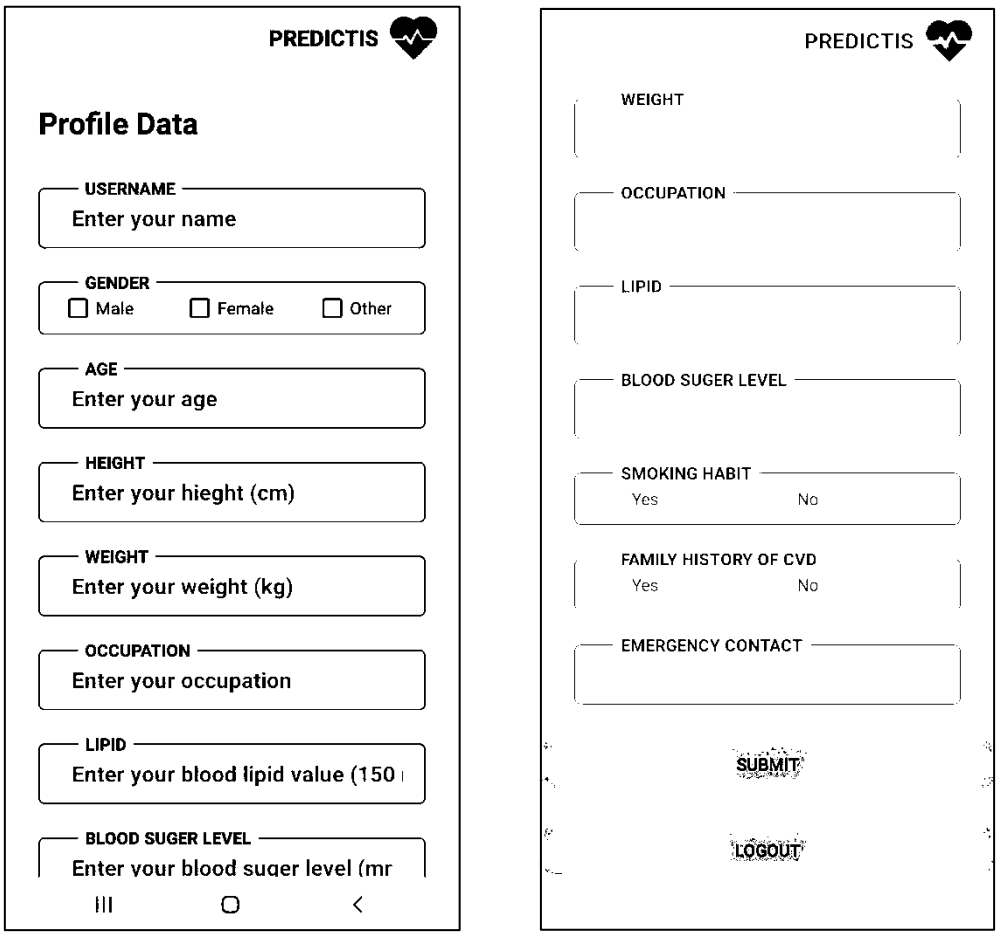
12) You can call an ambulance/their preferred relatives if any emergency arrives.
13) The emergency contact can be edited any time from the profile data.

3.6 HISTORY PAGE



14) use r will be shown their health history which are stored in the cloud storage. Graphical representation is shown.

3.7 PROFILE PAGE



15) You will be provided with the profile page where you can change your profile data if any change occurs.

4.0 RISK MANAGEMENT

Risk description	Mitigation plan(what to do to avoid the risk occurring)	Contingency plan (what to do if the risk occurs)	Impact (what the impact will be to the project if the risk occurs)
Inaccuracy of prediction	Increase data points in training dataset	Check for more datasets	Give wrong prediction
Connection loss	Proper fixations of wearable devices	The devices should be fixed correctly	Connection loss will make the real time data collection shutdown
Inaccurate data from ECG sensor	Place the electrodes in the proper place of the body	Check if electrodes are placed in exact place	Receive inaccurate ECG data leading to wrong prediction
Inaccurate data from pulse sensor	Place the sensor in the proper place of the body	Check sensor is placed in exact place	Receive inaccurate pulse rate data leading to wrong prediction