



# **INTEGRATED DESIGN PROJECT (IDP-II)**

## **CSE~460**

### **SYSTEM DEVELOPMENT REPORT**

**(GROUP ~HOTEL, SEC~A)**

**PREDICTIS**

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## 1. Required Platform

Name	Deacription
<b>Android studio</b> 	<p>Android studio is the integrated development environment for Google's android platform.</p> <p>We used android studio to build our frontend user interface.</p>
<b>Firebase</b> 	<p>It is a free online database to store the dataset used in our project. We used it to build our backend for the android app.</p>
<b>Github</b> 	<p>Git and Github are used for collabortaing the whole project sonthe team can work remotely then merge it centrally.</p>
<b>Arduino</b> 	<p>Arduino is an IDE for microcontrollers. We used nodeMCU as microcontroller and the code is burned in the nodeMCU by this IDE.</p>
<b>Tensorflow</b> 	<p>Tensorflow is an end-to-end open source platform for machine learning. It is used for model building in Google-colab using keras module.</p>
<b>Anaconda</b> 	<p>Anaconda is a distribution of the ppython and R programming languages for scientific computing, that aims to simplify package management and deployment. We are using it for data processing with pandas.Pandas is a common Python tool for data manipulation and analysis.</p>
<b>Jira</b> 	<p>Jira software is built for every member in a software team to plan track and release software.</p>

**Platform used for front~end :**

**Android Studio**



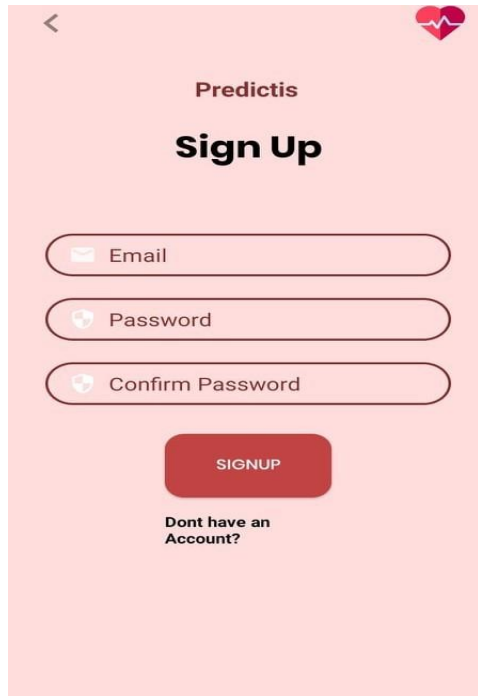
**Platform used for back~end :**

**Firebase**

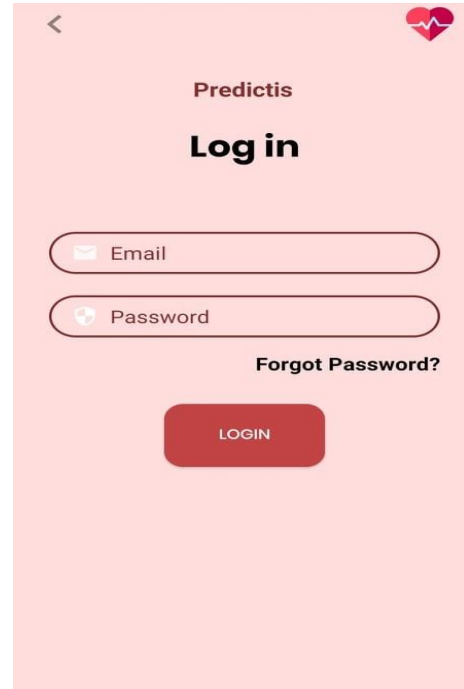


## 2. Snapshot of UI

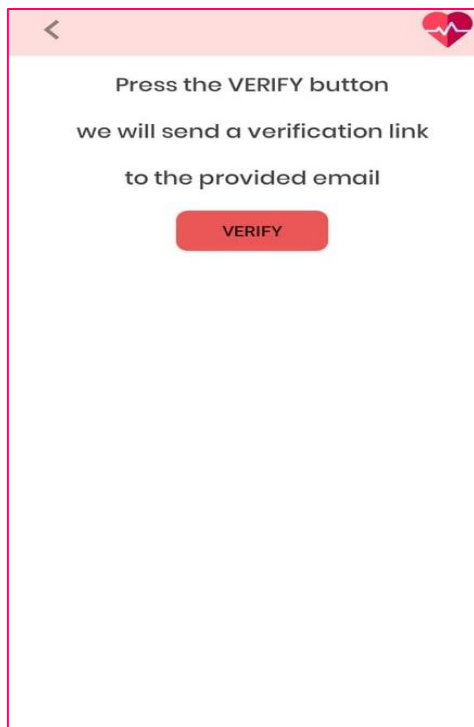
Sign up, log in, authentication and menu:



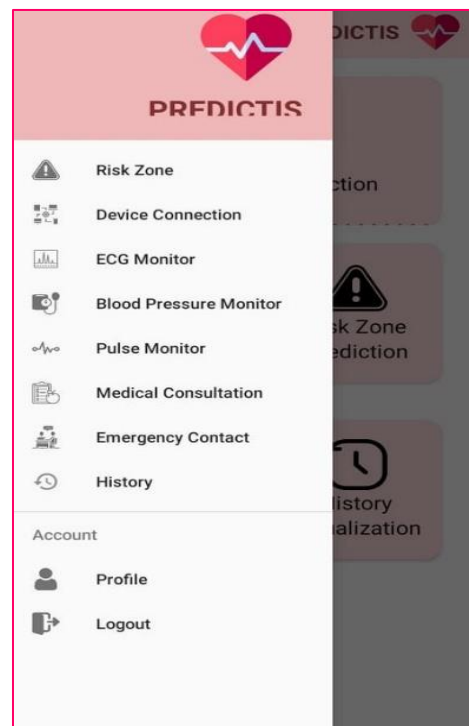
The Sign Up screen features a light pink background. At the top, there is a back arrow on the left and a heart icon with a pulse line on the right. The title "Predictis" is centered above the "Sign Up" heading. Below the heading are three rounded rectangular input fields for "Email", "Password", and "Confirm Password". A red "SIGNUP" button is positioned below the fields. At the bottom, the text "Dont have an Account?" is displayed.



The Log in screen has a light pink background. It includes a back arrow on the left and a heart icon with a pulse line on the right. The title "Predictis" is centered above the "Log in" heading. Below the heading are two rounded rectangular input fields for "Email" and "Password". A "Forgot Password?" link is located below the password field. A red "LOGIN" button is centered at the bottom.



The Verification screen has a light pink background. It features a back arrow on the left and a heart icon with a pulse line on the right. The text "Press the VERIFY button we will send a verification link to the provided email" is centered. Below the text is a red "VERIFY" button.



The Menu screen has a light pink background. It features a back arrow on the left and a heart icon with a pulse line on the right. The title "PREDICTIS" is centered above a list of menu items. The menu items are: Risk Zone, Device Connection, ECG Monitor, Blood Pressure Monitor, Pulse Monitor, Medical Consultation, Emergency Contact, History, Account, Profile, and Logout. Each item is preceded by a small icon.

## Profile data and zone classification :

PREDICTIS

### Profile Data

USERNAME

Enter your name

GENDER

☐ Male ☐ Female ☐ Other

AGE

Enter your age

HEIGHT

Enter your hieght (cm)

WEIGHT

Enter your weight (kg)

OCCUPATION


Enter your occupation

CHOLESTEROL

Enter blood cholesterol(150 mg/c

BLOOD SUGER LEVEL

Enter blood suger level (mmol/L

PREDICTIS

FAMILY HISTORY OF CVD

☐ Yes ☐ No

CHEST PAIN DURING EXERCISE

☐ Yes ☐ No

TYPE OF CHEST PAIN


☐ Pain in ARMS, NECK, JAW, SHOULDER or BACK.  
Possibly described as pressure or squeezing  
☐ Moderate chest pain, gets worse while breathing in and gets better with leaning forward.  
☐ Pain begins low in the front or back of the chest and goes to the back of the neck  
☐ Not aware of any kind of pain specificaly

EMERGENCY CONTACT

Enter your emergency contact

SUBMIT

LOGOUT

<

## YOUR PULSE

# 90

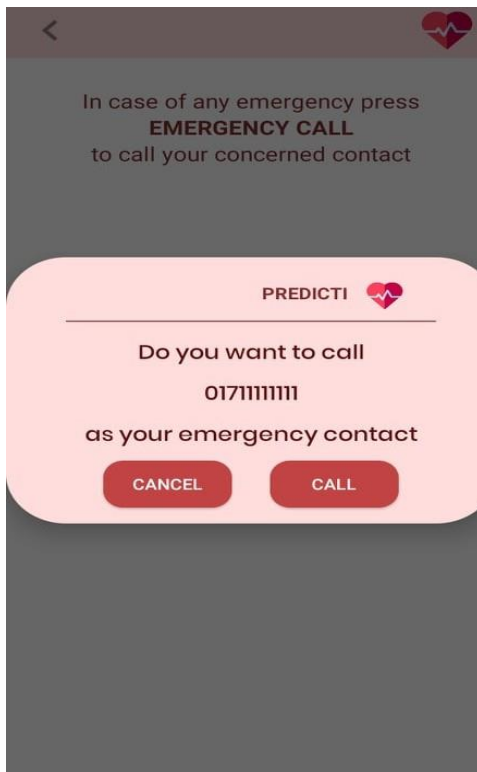
## YOUR ZONE

GREEN

You are in the safe zone

Follow your diet as usual

## Pop up notification and consultation:

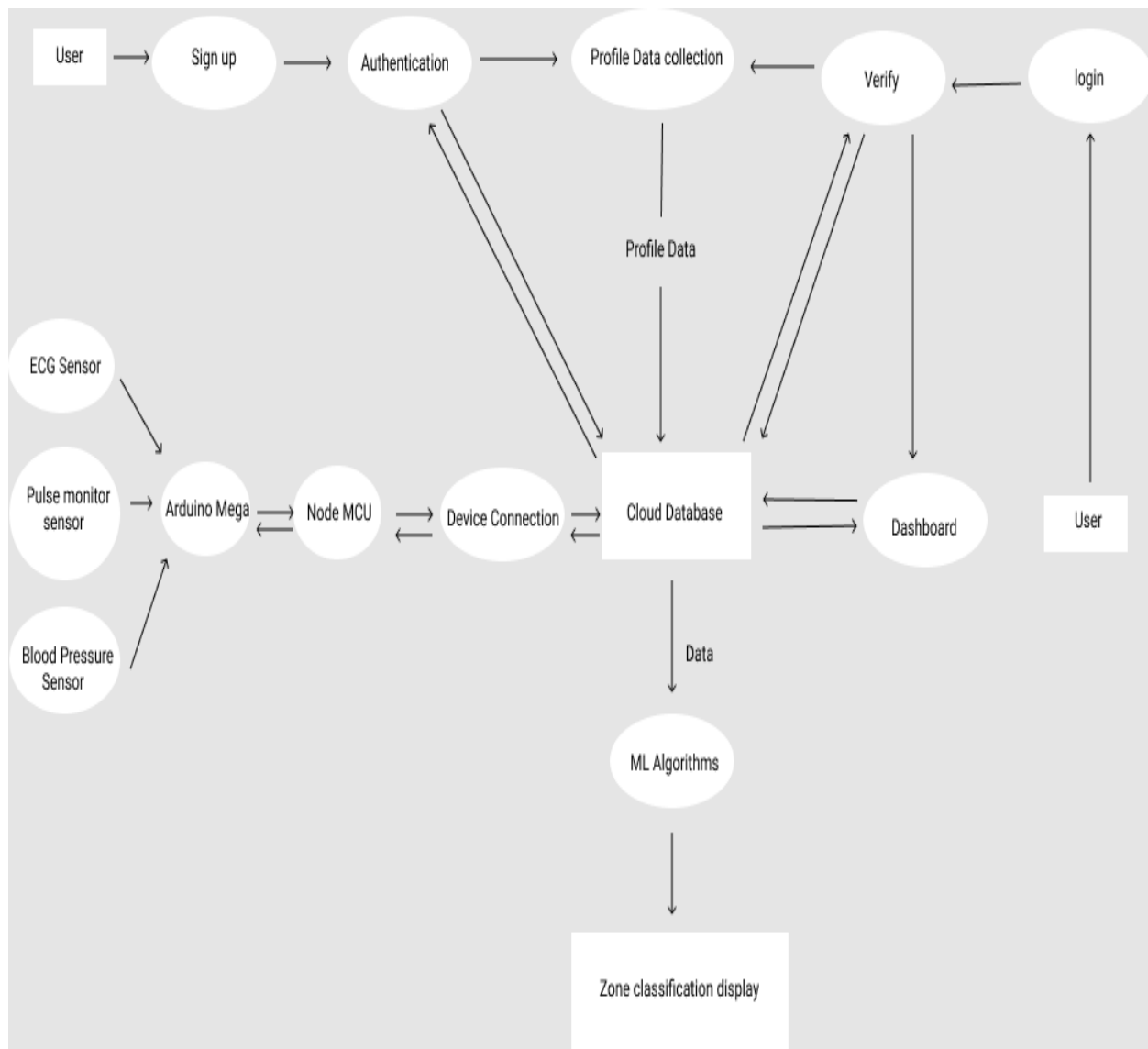


### 3. Senario and DFD

#### Senario 1:

Mr Mannan is a middle aged person. His childhood friend recently had a heart attack and this made him very cautious about his own heart condition. He decided to check if he has any heart risk and also wanted to get it checked. He used the predictis app to do so.

#### DFD 1:



## Senario 2:

Mr X is an existing user of predictis. Recently he has been classified in yellow zone(yellow zone means the user has mild risk of having heart disease). Predictis app guided him with some health consultations following which he could improve his health condition. He was given some doctors' consultation and diet consultation. Also he could do an emergency contact using this app if he needed to.

## DFD 2:

