A Synopsis Report

on

"PHONEFITS"
A Personality based Smartphone Recommendation System

submitted in partial fulfillment of the requirements
for completion of SE project of

TY COMP

in

Computer Engineering

by

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Under the guidance of

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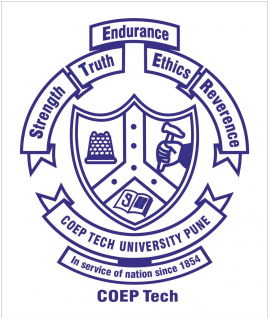

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Shivajinagar, Pune-411005,Maharashtra, INDIA

PROJECT TITLE

PhoneFits : A Personality based Smartphone Recommendation System

PROBLEM STATEMENT

Many individuals are making uninformed smartphone purchase decisions by lack of knowledge and the created hype in the market. It does not align with their specific needs and their personality and later they regret with the purchase they made.
PhoneFits website provides a quiz which analyses your personality based requirements and recommends smartphones which is best suited to your personality with your requirements.

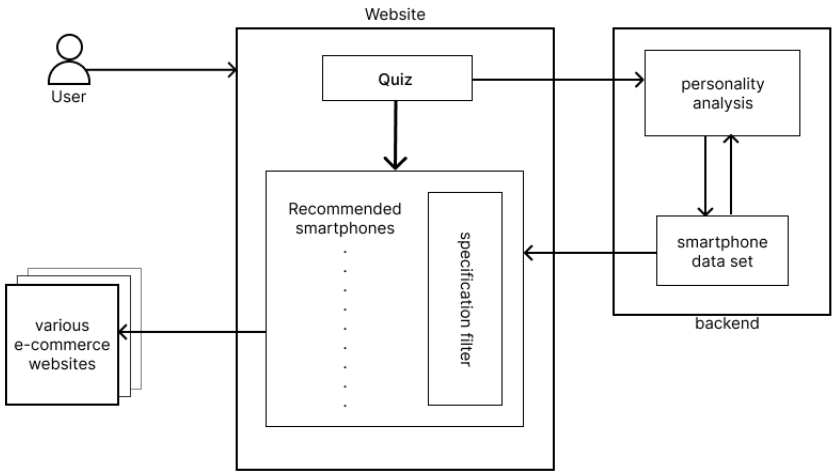
HARDWARE REQUIREMENT

Processor: Core i3 and later
Hard Disk: 10 GB or more
Memory: 2 GB RAM(minimum) , 4 GB RAM(recommended)

SOFTWARE REQUIREMENT

Front End: HTML, CSS, Javascript
Back End: Python, EEL
Operating System: Windows 7 or later

ARCHITECTURAL DIAGRAM:

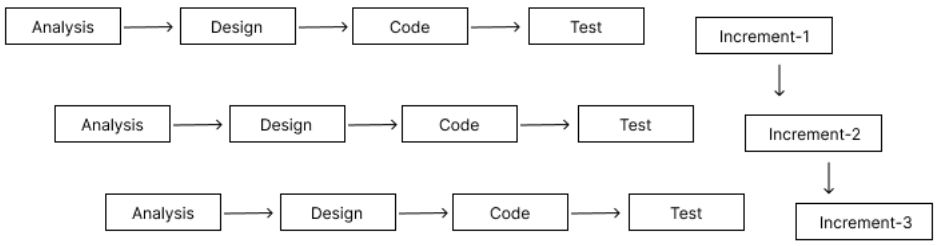


The architecture of the proposed system for PhoneFits

PROCESS MODEL

Incremental Process Model

Incremental Model is a process of software development where requirements are divided into multiple standalone modules of the software development cycle. In this model, each module goes through the requirements analysis, design, implementation and testing phases.



Incremental Model

There are 4 phases involving in the Incremental model and they are enumerated below:

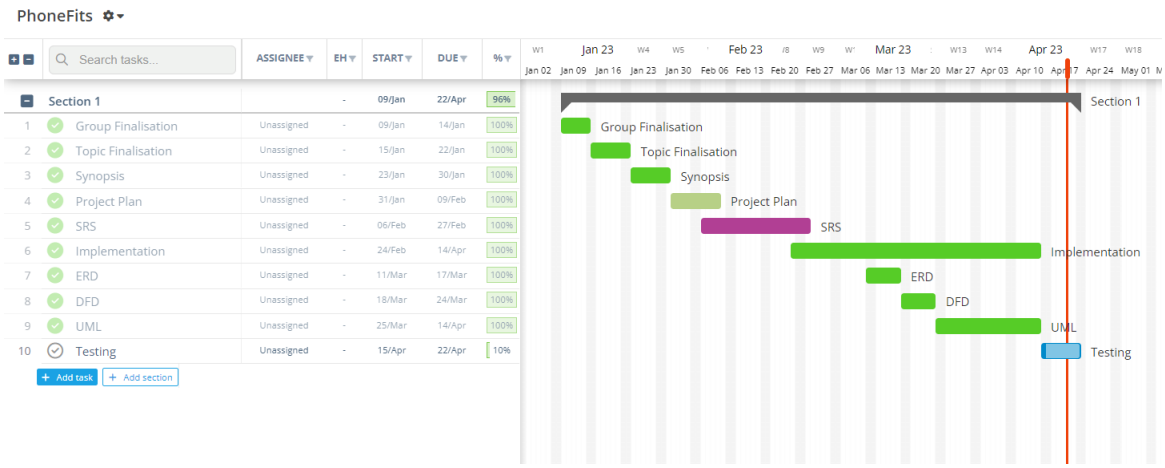
Requirement Analysis : This is the first phase of the incremental model. In this phase, the experts on product analysis identify the product requirements, which include both functional requirements and non-functional requirements; and they also make sure the requirements are compatible. This is a crucial phase when developing software using Incremental models.

Design : This is the second phase of the incremental model. In this phase, the development method and system functionality designs must have been successful. The design is then proposed on how to archive and implement this requirement. When the software develops new practicality, the incremental model then uses the development phase and style.

Coding : This is the third phase. In this phase, coding is done according to the purpose of the requirements. The coding standards must be followed without any unnecessary hard codes and defaults. This phase also enables the implementation of the designs which is done practically. By completing this phase, the quality of the working product can be upgraded and enhanced.

Testing : This is the final phase of the incremental phase. In this phase, the performance of each of the existing functions, as well as other additional functionalities are checked. Also, various methods are used to test the various behaviors of each task.

Gantt Chart


PhoneFits
Search tasks...
ASSIGNEE
EH
START
DUE
%
Jan 23
Feb 23
Mar 23
Apr 23
Section 1 09/Jan 22/Apr 96%
1 Group Finalisation Unassigned 09/Jan 14/Jan 100%
2 Topic Finalisation Unassigned 15/Jan 22/Jan 100%
3 Synopsis Unassigned 23/Jan 30/Jan 100%
4 Project Plan Unassigned 31/Jan 09/Feb 100%
5 SRS Unassigned 06/Feb 27/Feb 100%
6 Implementation Unassigned 24/Feb 14/Apr 100%
7 ERD Unassigned 11/Mar 17/Mar 100%
8 DFD Unassigned 18/Mar 24/Mar 100%
9 UML Unassigned 25/Mar 14/Apr 100%
10 Testing Unassigned 15/Apr 22/Apr 10%
Add task
Add section
Section 1
Group Finalisation
Topic Finalisation
Synopsis
Project Plan
SRS
Implementation
ERD
DFD
UML
Testing

SOFTWARE REQUIREMENTS SPECIFICATION

for

PHONEFITS

Version 1.0

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March 3, 2023

Contents

1 Introduction

1.1 Purpose

Many individuals are making uninformed smartphone purchase decisions that do not align with their specific needs and their personality. This happens by getting misinfluenced by smartphone companies fancy advertisements, lack of knowledge and the created hype in the market which does not always hold true. This all results in less satisfaction with their device purchase and potential wasted money which may result in even worse choice in case of people who can afford only one time purchase. After choosing a phone the user also have to spend more time in getting best deals from different e-commerce websites.

1.2 Document Conventions

This document uses the following conventions.

Conventions	Name
DB	Database
ER	Entity Relationship
HTML	Hypertext Markup Language
CSS	Cascading Style Sheets
JS	JavaScript

1.3 Intended Audience and Reading Suggestions

This SRS is for developers, project managers, users and testers. Further the discussion will provide all the internal, external, functional and also non-functional information about the product "PHONEFITS".

1.4 Project Scope

"PHONEFITS" creates a space for youths, elders and the people who have less knowledge about smartphones.

After a user gets into the website he will be redirected to a quiz after hitting start button. The quiz will be based on questions which will analyse users choices to calculate the type of personality the user is. Then according to the analysed personality user will be redirected to smartphone sections where user will get suggestion for smartphones.

2 Overall Description

2.1 Product Perspective

"PhoneFits" serves as a user-friendly platform that offers a personalized experience for each user. PhoneFits is able to identify the user's specific needs and preferences by offering a questionnaire or quiz, and use the information gathered to recommend smartphones that align with the user's characteristics.

From a technical perspective, PhoneFits have a robust database of smartphones scrapped from internet which contains features, prices and people reviews. PhoneFits have reliable and accurate algorithm and data analysis like cosine similarity that uses the user's input to determine the most suitable phone recommendations.

Overall, the "PhoneFits" provide users with a reliable, convenient, and personalized service that helps them find the perfect smartphone for their needs and preferences.

2.2 User Classes and Characteristics

User classes and characteristics for PhoneFits include:

General users: Users who are interested in purchasing smartphone, but may not have specific preference and looking for a phone that fits their budget and basic needs.

Tech-savvy users: Users who are knowledgeable about the latest smartphones and their features, interested in purchasing a phone with specific hardware or software features.

Business users: Users who need a phone for work-related tasks such as email, document editing, and video conferencing, may require a phone with specific security features.

Gaming users: These are users who are interested in playing mobile games and require a phone with high-end graphics, processing power, and storage.

Elderly users: These are users who may have specific needs, such as larger fonts, simplified user interfaces, and hearing aids compatibility.

The characteristics of these user classes may vary, and the mobile recommendation website should take into consideration factors such as age, gender, occupation, location, and personal preferences when recommending smartphones. Additionally, the website should provide clear and simple explanations of technical features, specifications, and pricing, making it easy for users to compare and make informed decisions.

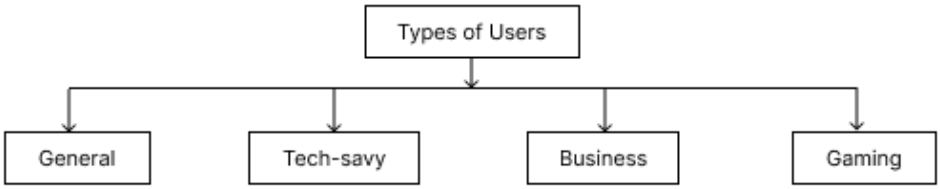


Figure 2.1: type of users

2.3 Product Functions

The functioning of PhoneFits typically involves the following steps:

User input: It provide a questionnaire or quiz that allows users to input information about their needs and preferences. This information may include budget, desired features (such as camera quality, battery life, or screen size), and preferred brand.

Data processing: PhoneFits uses algorithm to process the user input and generate a list of recommended smartphones. The algorithm should take into account mainly users personality and then the user's budget, desired features, and preferred brand, as well as current market trends, reviews, and ratings.

Recommendations: PhoneFits provide the user with a list of recommended smartphones that match their needs and preferences. The list should include details such as phone model, specifications, price, and links to buy the phone from authorized retailers.

Feedback and updates: PhoneFits allow users to provide feedback on the recommended smartphones, such as ratings and reviews. It also tries to update its database regularly with new phone releases, prices, and features.

User account management: PhoneFits allow users to create and manage their accounts, save their preferences and previous recommendations, and receive notifications about new phone releases or updates.

Overall, "PhoneFits" provide a user-friendly platform that offer personalized smartphone recommendations to users. It is easy to navigate, provide clear and concise information about recommended phones, and allow users to make informed decisions about their smartphone.

2.4 Operating Environment

PhoneFits is designed to work on a variety of hardware and software environments, to provide users with a smooth and hassle-free experience while using the website It will be operate in any Operating Environment - Mac, Windows, Linux and Android.

2.5 Design

Design Flow is as follows :
1: user comes to site, hits begin process–¿ starts with a quiz
2: website takes quiz inputs and analyse it to calculate user is which personality centric, like photographer, gamer, education, basic user, etc
3: website will show smartphones according to calculated user personality and user will be able to filter smartphones according to specs, reviews and price order

Other in-between processes–¿
1. website will take suggestion on given recommendation
2. website will have a feedback taking mechanism
3. user will be able to compare prices of recommended smartphones among different e-commerce websites and get best deals

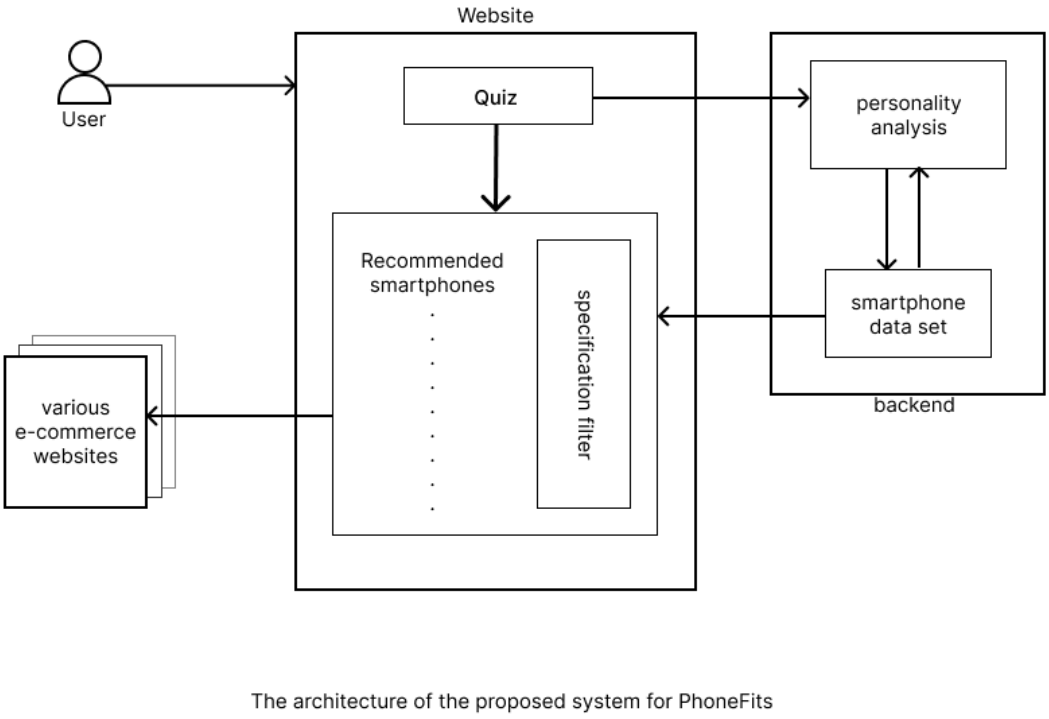


Figure 2.2: Design Flow

3 System Features

3.1 Functional Requirements

Functional Requirements for PhoneFits :

3.1.1 User Input

PhoneFits allows users to input their needs and preferences for a smartphone, such as budget, desired features, and preferred brand.

3.1.2 Data Processing

PhoneFits use an algorithm and data analysis to process the user input and generate a list of recommended smartphones based on the user's personality, needs and preferences

3.1.3 Recommendations

PhoneFits provide the user with a list of recommended smartphones that match their personality, along with specifications and links to buy the phone from authorized retailers.

3.1.4 Feedback and Reviews

PhoneFits allow users to provide feedback and reviews on the recommended smartphones

3.1.5 User Accounts

PhoneFits allow users to create and manage their accounts, save their preferences and previous recommendations, and receive notifications about new phone releases or updates.

3.2 Other Non-Functional Requirements

Non-functional Requirements for PhoneFits :

3.2.1 Performance

PhoneFits respond quickly and reliably to user requests, with minimal downtime or lag.

3.2.2 Security

PhoneFits is secure and protect user data from unauthorized access or attacks.

3.2.3 Compatibility

PhoneFits is compatible with a wide range of devices, web browsers, and operating systems.

3.2.4 Usability

PhoneFits is user-friendly and easy to navigate, with clear and concise information about recommended phones.

3.2.5 Accessibility

PhoneFits is accessible to users with disabilities, including those using assistive technology.

Overall, the functional and non-functional requirements of PhoneFits are critical to ensure that users receive accurate and personalized smartphone recommendations, along with a smooth and hassle-free experience while using the website.

4 External Interface Requirements

4.1 Hardware Requirements

The external hardware interface required for accessing the PhoneFits is the user's personal computer or any device like laptop, tablet and mobile phone.The mobile phone should be touch screen. Minimum requirements for Desktop/Laptop:
• Memory : 3.8GiB
• Processor : Intel® Core TM i3-5015U CPU@2.10GHz x 4
• Graphics : Intel® HD Graphics 5500(BDW GT2)
• GNOME : 3.28.2
• OS type : 32 or 64 bit

4.2 Software Requirements

• Operating System - The application can be used on any operating system eg (Windows, Linux, DOS, etc) with a web browser
• Database -We have used "Mysql" as database to store the details of registered users and to track their previous booking/renting history and payment
history,also to store transactional data like live bidding, item availbility,etc
• Authentication APIs can help you authenticate users and keep your website secure.

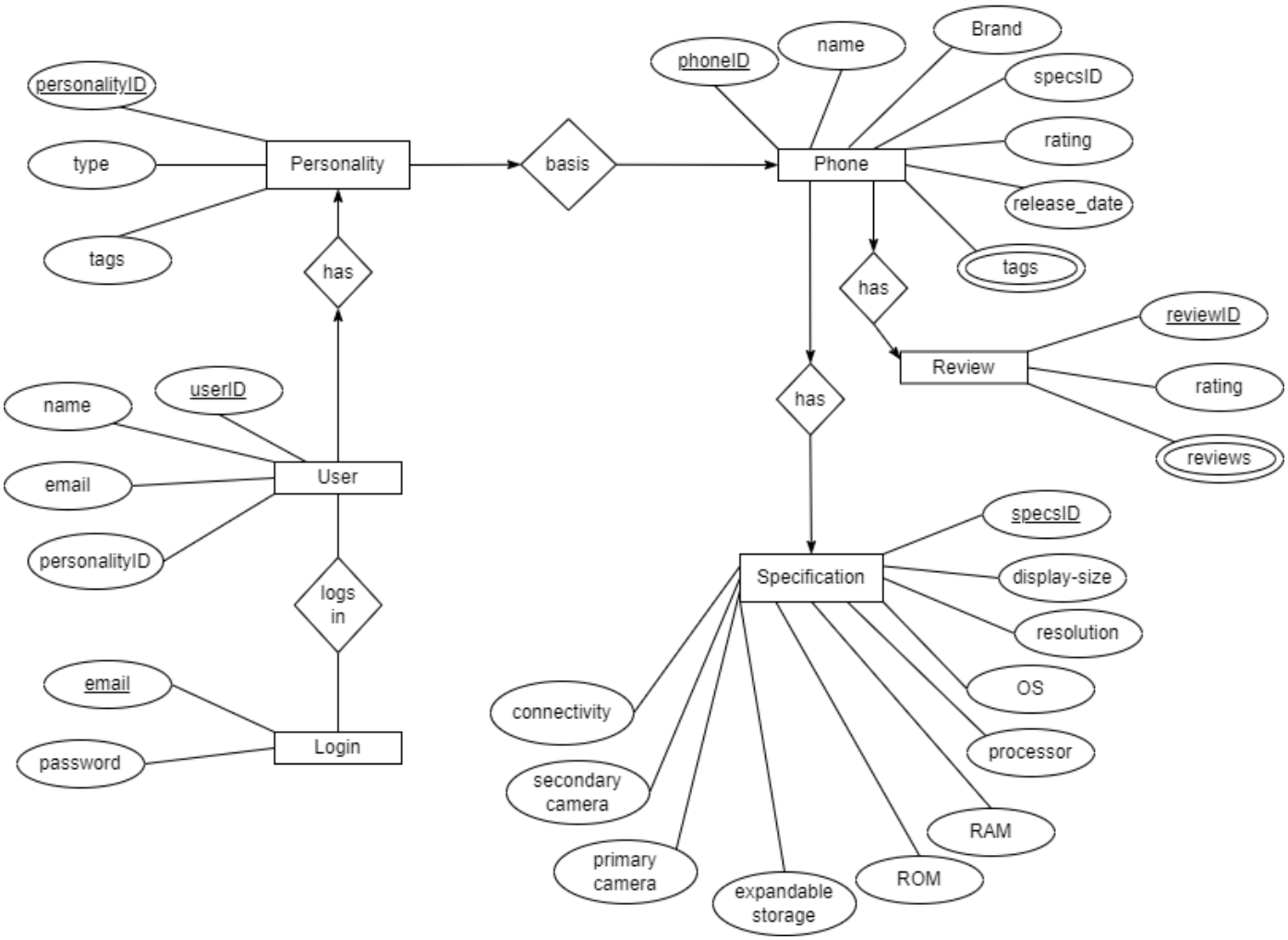
4.3 Constraints

1. Technology Constraints : The system should be developed using modern web technologies and should be compatible with different browsers and operating systems.
2. Legal Constraints : The system should comply with applicable laws and regulations related to online auctions, such as data privacy laws, consumer protection laws, and tax laws.

5 Glossary

• Algorithm: A set of rules and calculations used to process user input and generate recommended smartphones.
• Specifications: The technical details and features of a smartphone, such as screen size, battery life, camera quality, etc.
• Authorized Retailers: Retailers that are authorized by smartphone manufacturers to sell their products.
• Feedback: Comments and opinions provided by users about their experience with the recommended smartphones.
• Reviews: Detailed evaluations of the recommended smartphones, often including pros and cons, by experts or other users.
• User Accounts: Personalized accounts created by users that allow them to manage their preferences, recommendations, and notifications.
• Compatibility: The ability of the website to function properly on a variety of devices, browsers, and operating systems.

ERD


personalityID
type
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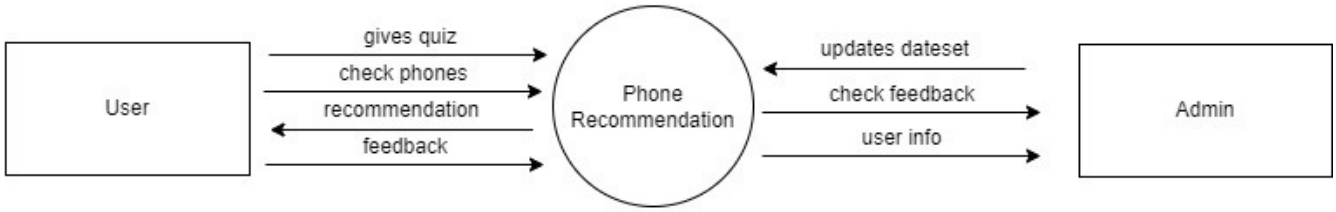
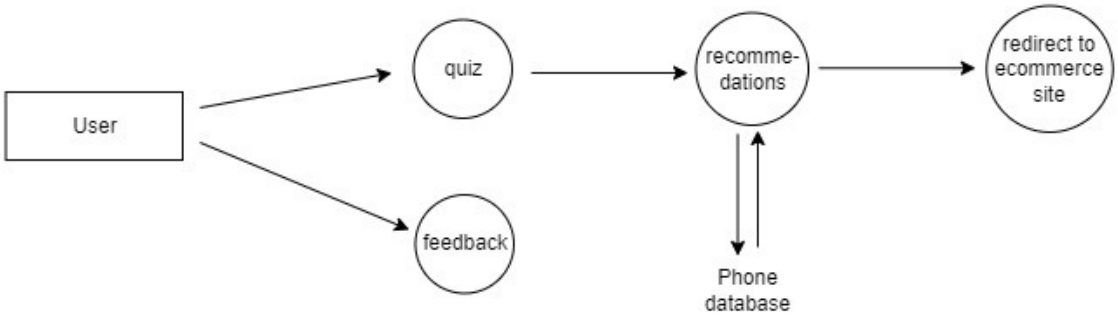
Personality
has
basis
phoneID
name
Brand
specsID
rating
release_date
tags
Phone
has
has
reviewID
rating
reviews
Review
name
userID
email
personalityID
User
logs in
email
password
Login
specsID
display-size
resolution
OS
processor
RAM
ROM
expandable storage
primary camera
secondary camera
connectivity
Specification

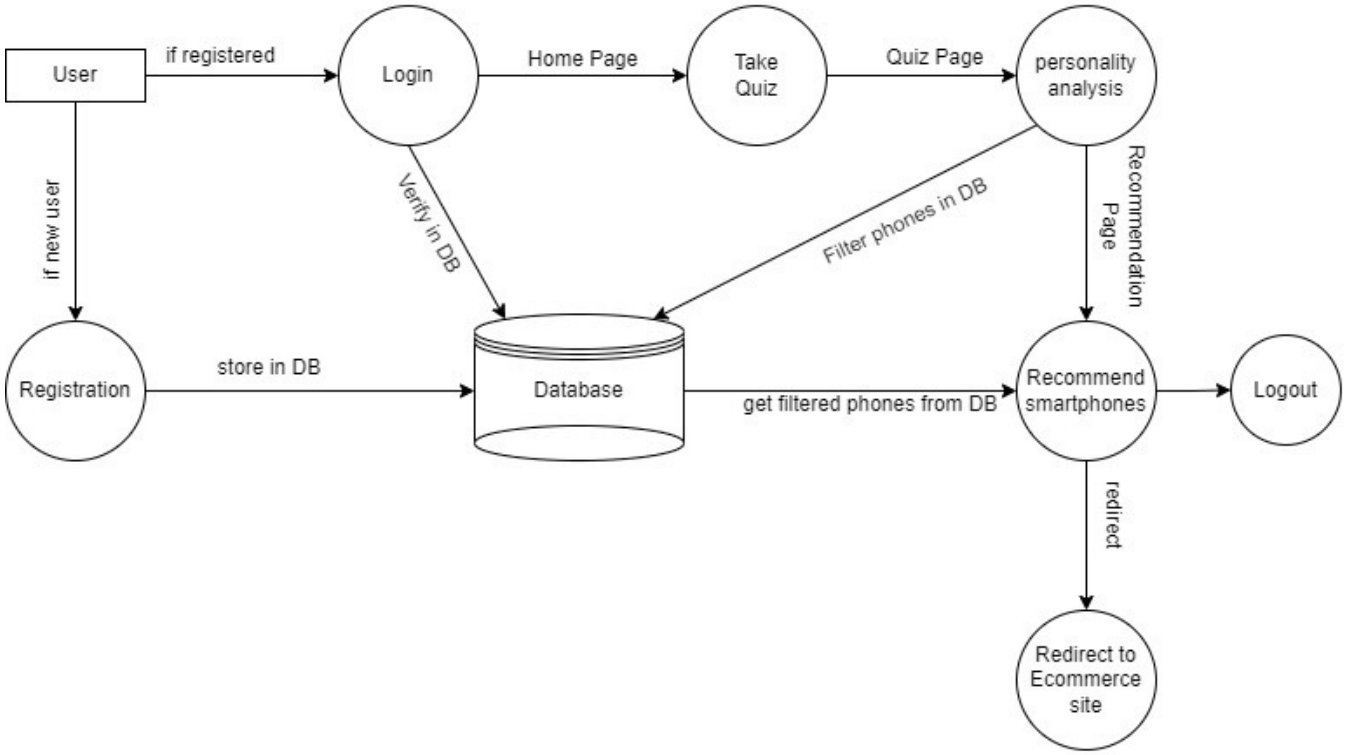
DFDs



PhoneFits : 0-Level DFD

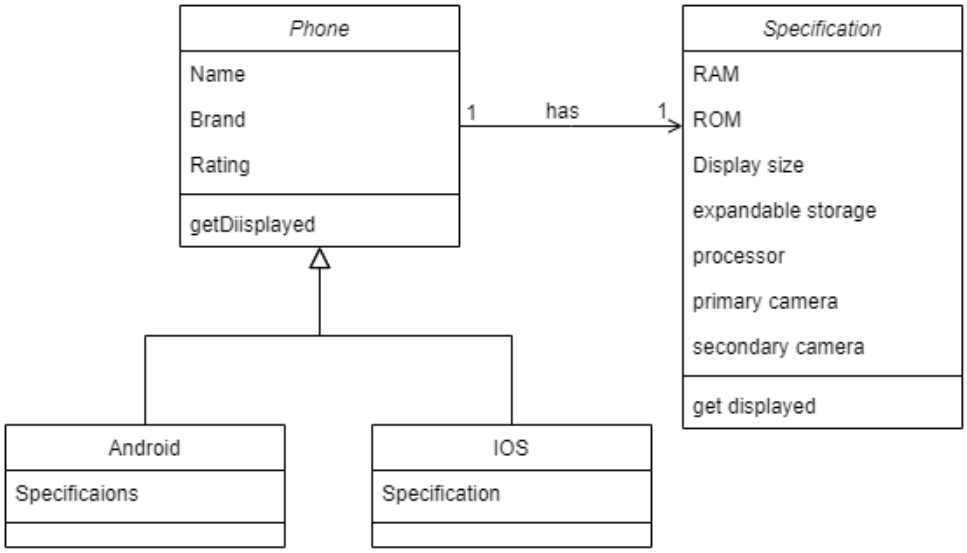


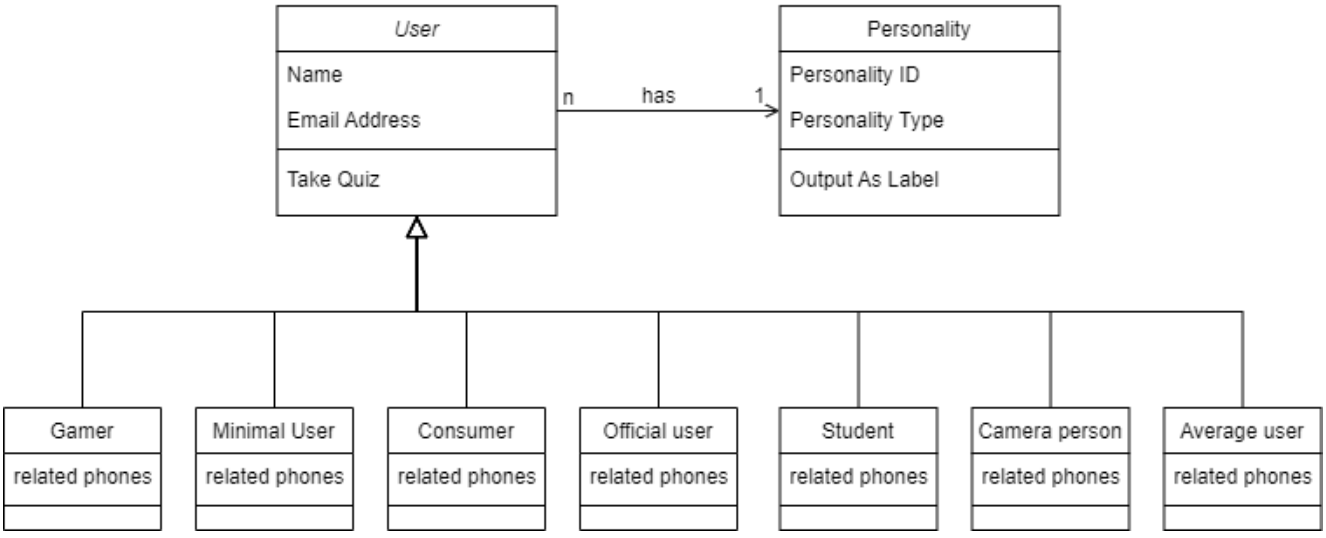
PhoneFits : 1-Level DFD



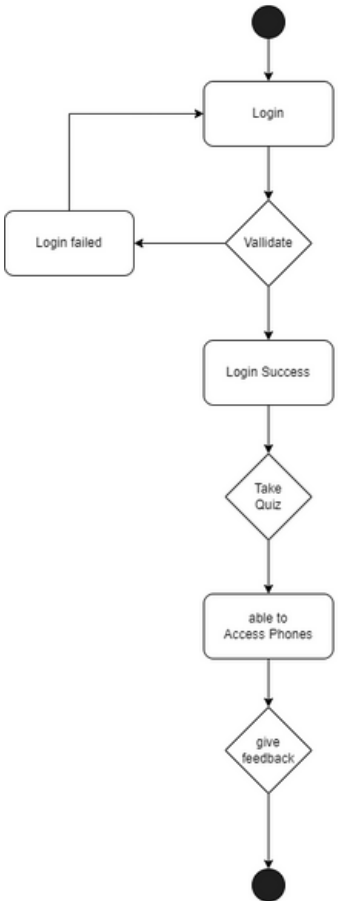
PhoneFits : 2-Level DFD

UMLs

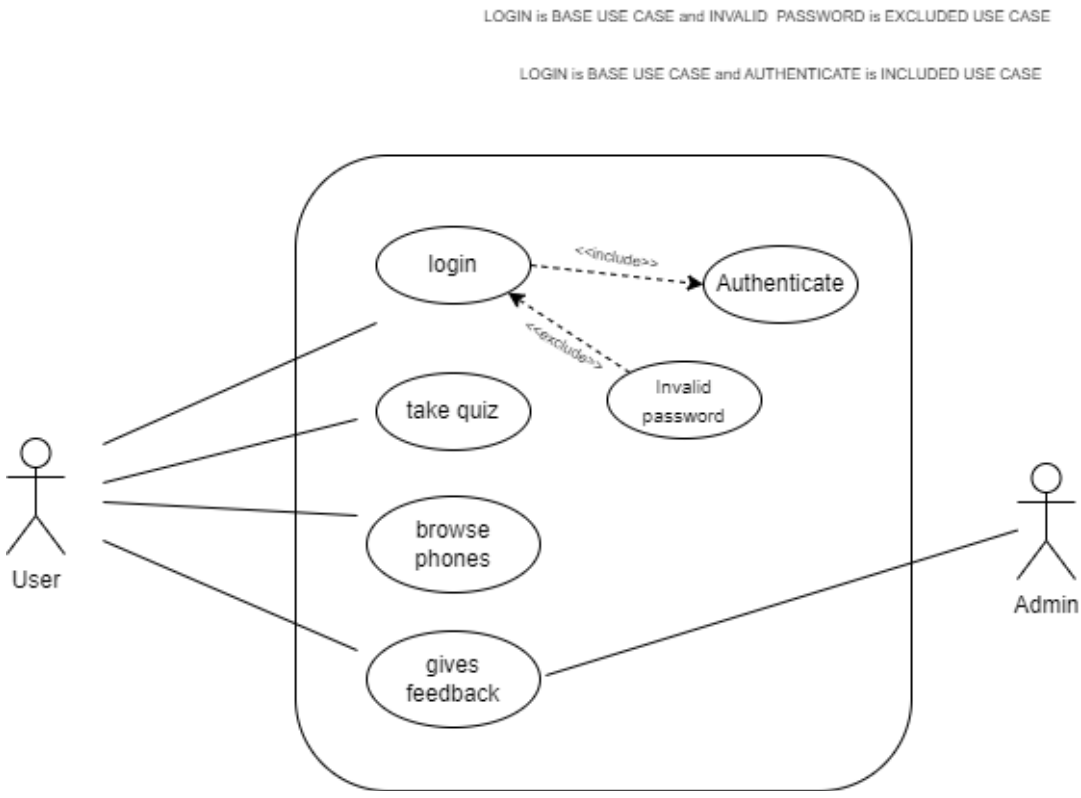




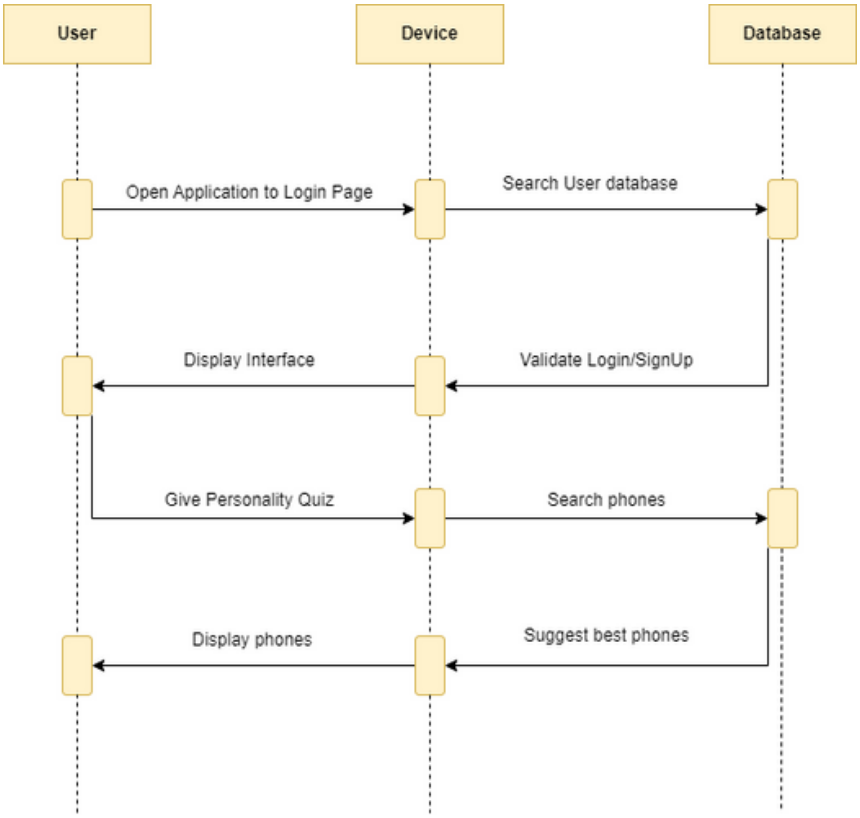
1. Class Diagram



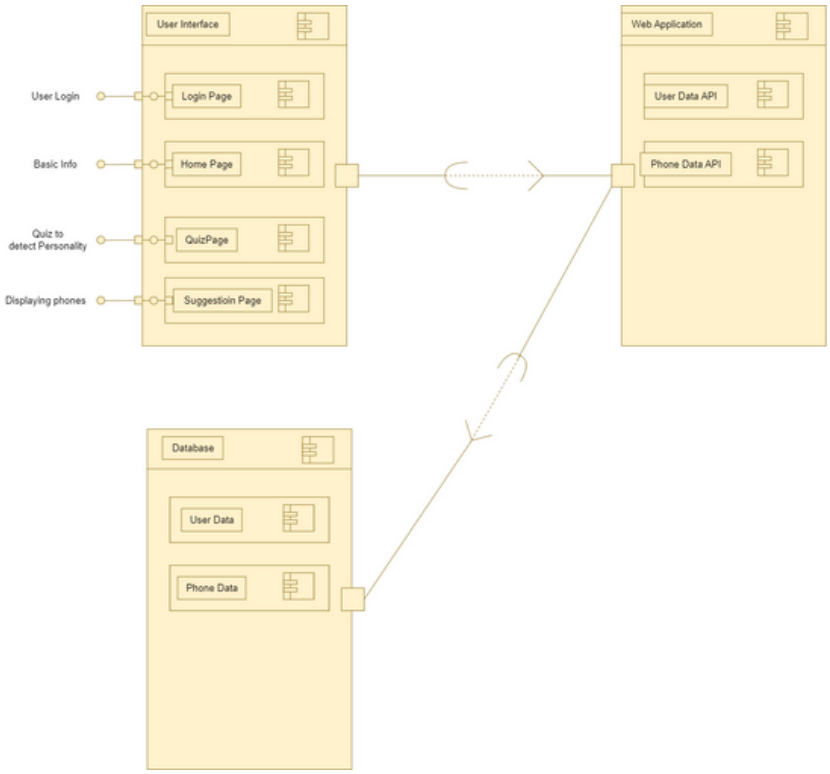
2. State Diagram



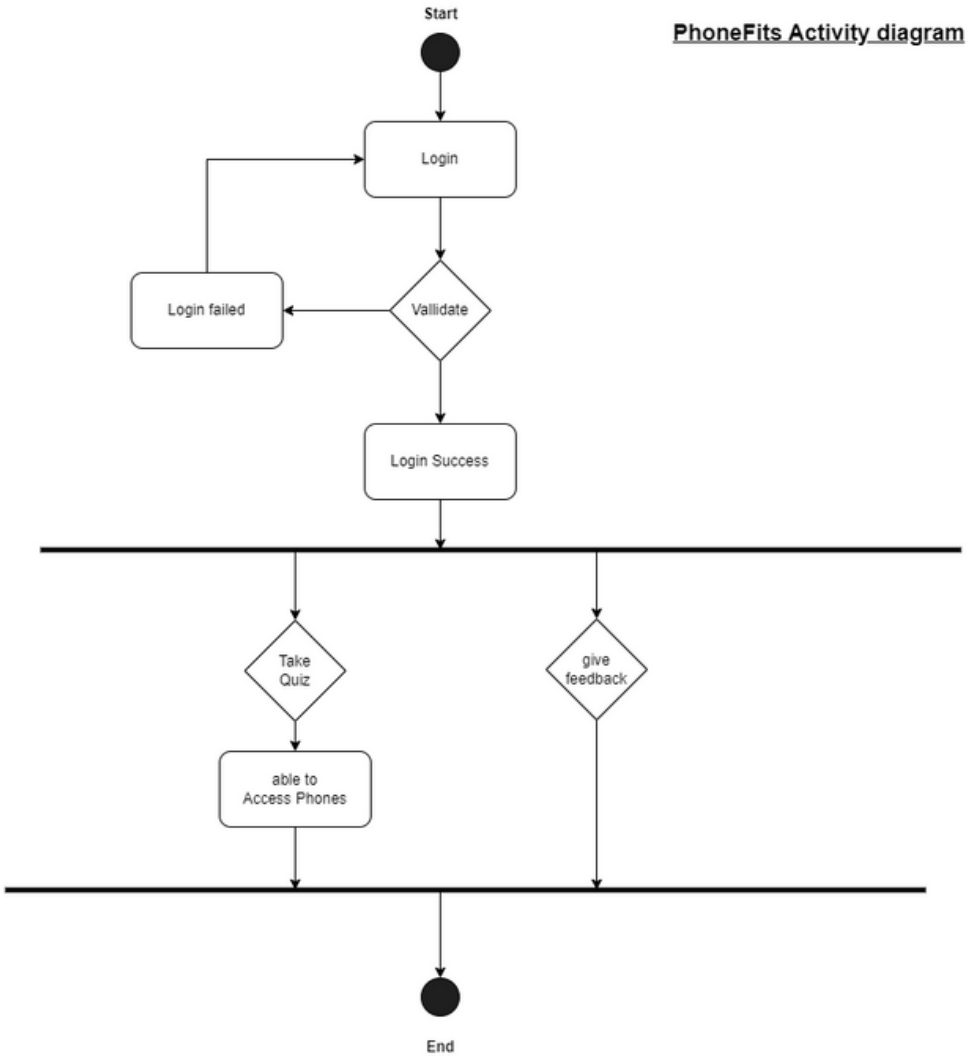
3. Usecase Diagram



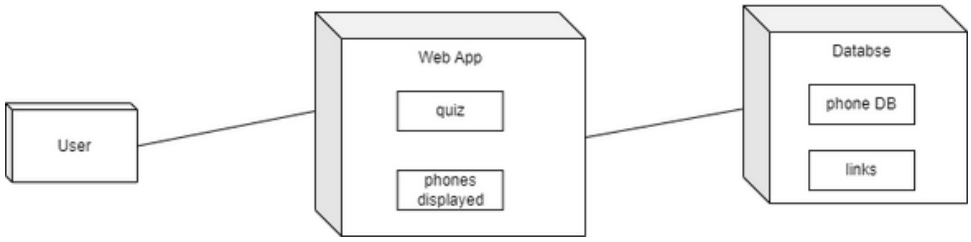
4. Sequence Diagram



5. Component Diagram



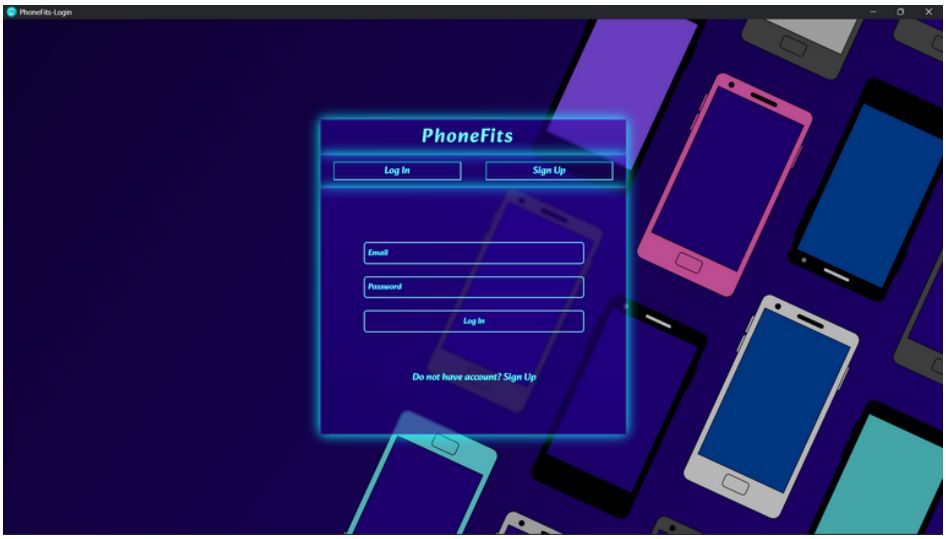
6. Activity Diagram



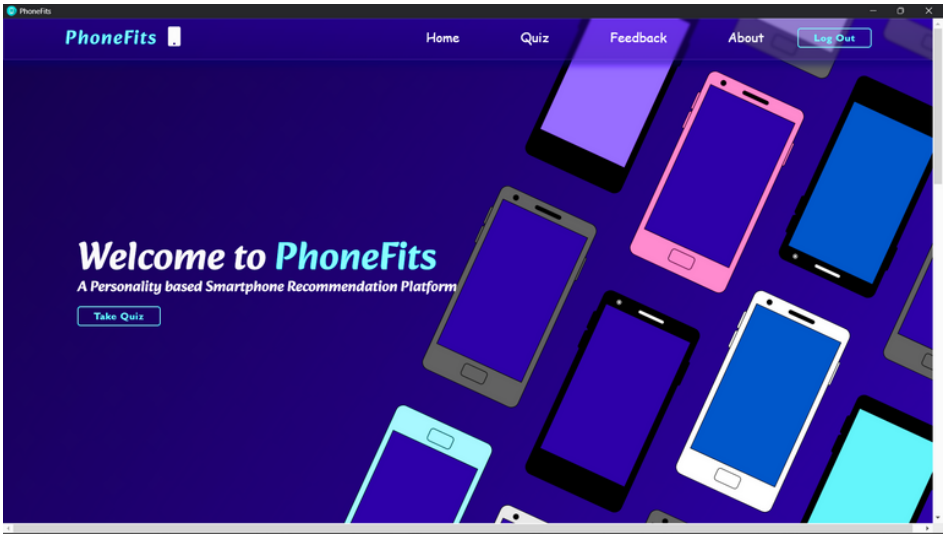
7. Deployment Diagram

Project Implementation

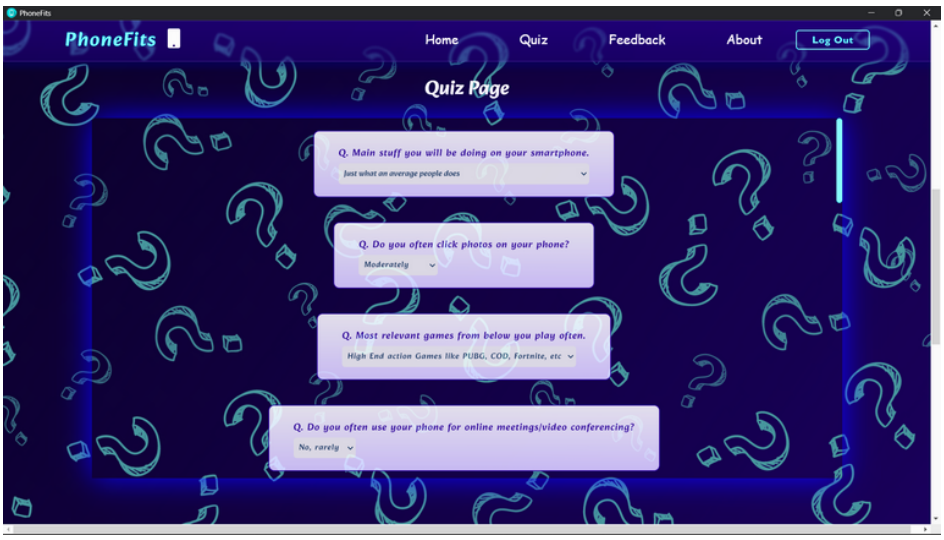
1. Login Page



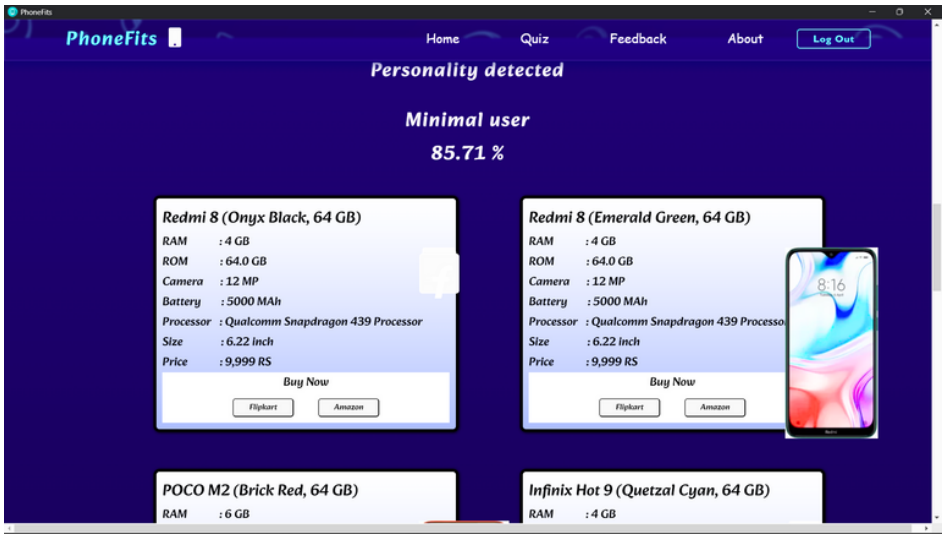
2. Home Page



3. Quiz Page



4. Phone Suggestion Page



5. Feedback Form