LA GRANDEE INTERNATIONAL COLLEGE

Simalchaur, Pokhara, Nepal

A Mid -Term Proposal

on

NepHench

Submitted to

La Grandee International College

Bachelor of Computer Application (BCA) Program

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Pokhara University

Submitted by

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1. Introduction:

NepHench Android App is a mobile application designed to help users find and book reliable and professional plumbing and electrical services in their area. The appallows users to browse through a list of verified service providers, view their profiles, and select the one that best suits their needs. NepHench is a fully-featured and user- friendly scheduling app that will help you manage your plumbing and other service business with ease. NepHench app features profiles of verified plumbing and electrical service providers, complete with their contact information, ratings and customer reviews.

NepHench also allow users to schedule appointment, ratings and customer reviews or use GPS tracking system that helps users locate nearby service providers and allows users to communicate directly with service provider through a built-in messaging system. So, this app makes it easy for users to find and book reliable plumbing and electrical services from the comfort of their homes(android-app-for-household-services, 2021). In this project, we designed an app and web page platform to be used as a NepHench system by homeowners, renters, offices, hotels who need plumbing and electrical services but do not have the time or expertise to find reliable service providers.

NepHench is an android and web-based application that allows service provider to expand their customer base and increase their visibility through the app. This app allows service provider to reach a wider audience without the need for expensive advertising campaigns which streamlines the booking process, reducing the time and effort required for both providers and users. User and Service Provider alike have come to rely on e-recruitment to achieve their respective goals. It also provides a secure platform for users to make online payments without the risk of fraud orunauthorized access. This can help to build trust between service providers and users.

Other app called Skill Sewa, Sajilo-Marmat Sewa, Khoj-Sewa, and Sajilo-Mistri and so on lacks the features like GPS tracking, payment gateway integration and a user-friendly interface where NepHench android app become a potentially more beneficial choice for user and service provider due to integration of these features.

2. Problem Statement:

There is a growing demand for home services like plumbing, electrician, carpentry, cleaning etc., but finding reliable and trustworthy service providers can be a challenge. Traditional methods of finding service providers through word of mouth or online directories can be time-consuming and often result in unsatisfactory experiences. Moreover, coordinating with service providers and managing appointments can be cumbersome. (Gupta, Tewari, & Basra, 2021)

- Existing service apps lack the feature of location tracking of the service provider, which can result in delays in booking appointments or difficulty finding the right service provider for the job.
- Users face difficulties in getting in touch with customer support or resolving issues related to appointments, payments, or service quality.
- Some apps do not provide transparent pricing or information about the service providers, which result in confusion and dissatisfaction among users.

Overall, existing service android apps in Nepal may face challenges in providing reliable and convenient services to users due to issues related to limited-service providers, unreliable service providers, poor customer support, lack of transparency, and poor user experience. (Bandekar & D'Silva, Domestic Android Application for Home Services, 2016)

3. Objectives

The major goals of this project are as follows:

- To provide users with a reliable and convenient platform for booking plumbing and electrical services in Nepal.
- To connect users with verified and trustworthy service providers in their local area, who can offer quality services at affordable prices.
- To provide transparent pricing and information about the service providers, so that users can make informed decisions when booking appointments.
- To offer a user-friendly interface that allows users to easily select the type of service they need, view service provider profiles and ratings, and book appointments.

4. Methodology:

In this project, we are using agile development methodology, which involved multiple iterative and continuous feedback from stakeholders. It is an iterative approach to software development that emphasizes collaboration, flexibility, and rapid prototyping. This methodology involves breaking down large projects into smaller, more manageable tasks, and continuously testing and iterating on those tasks, and continuously testing and iterating on those tasks until the final product is complete. The diagram of agile model is shown below: -

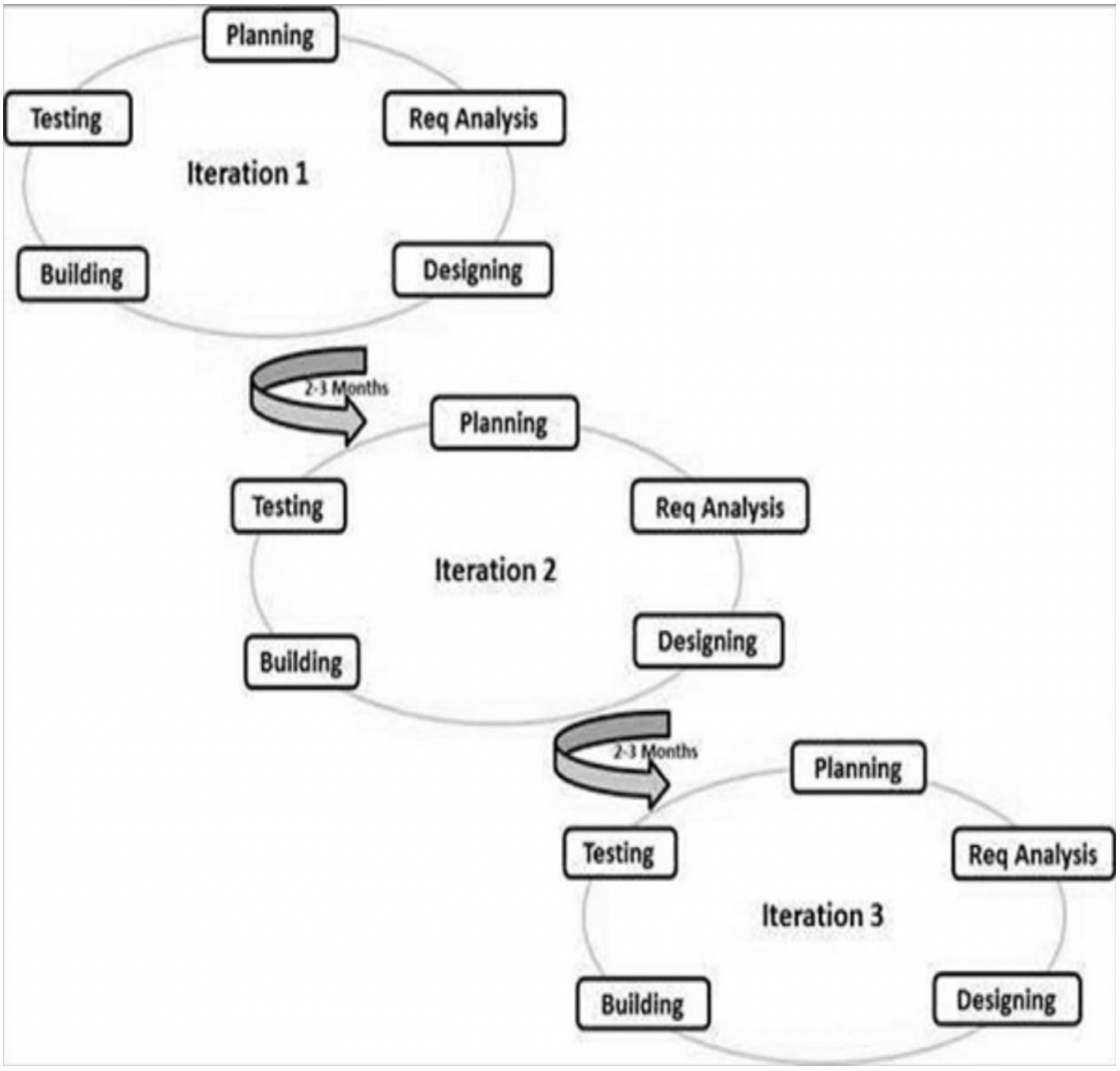

Figure 4. 1: Agile Methodology

5. Requirement Analysis:

Requirement Specification:

- Operating System: Android
- Database: PostgreSQL
- Frontend: React native
- Backend: Java Spring Boot

6. System Analysis and Design:

6.1. Class Diagram:

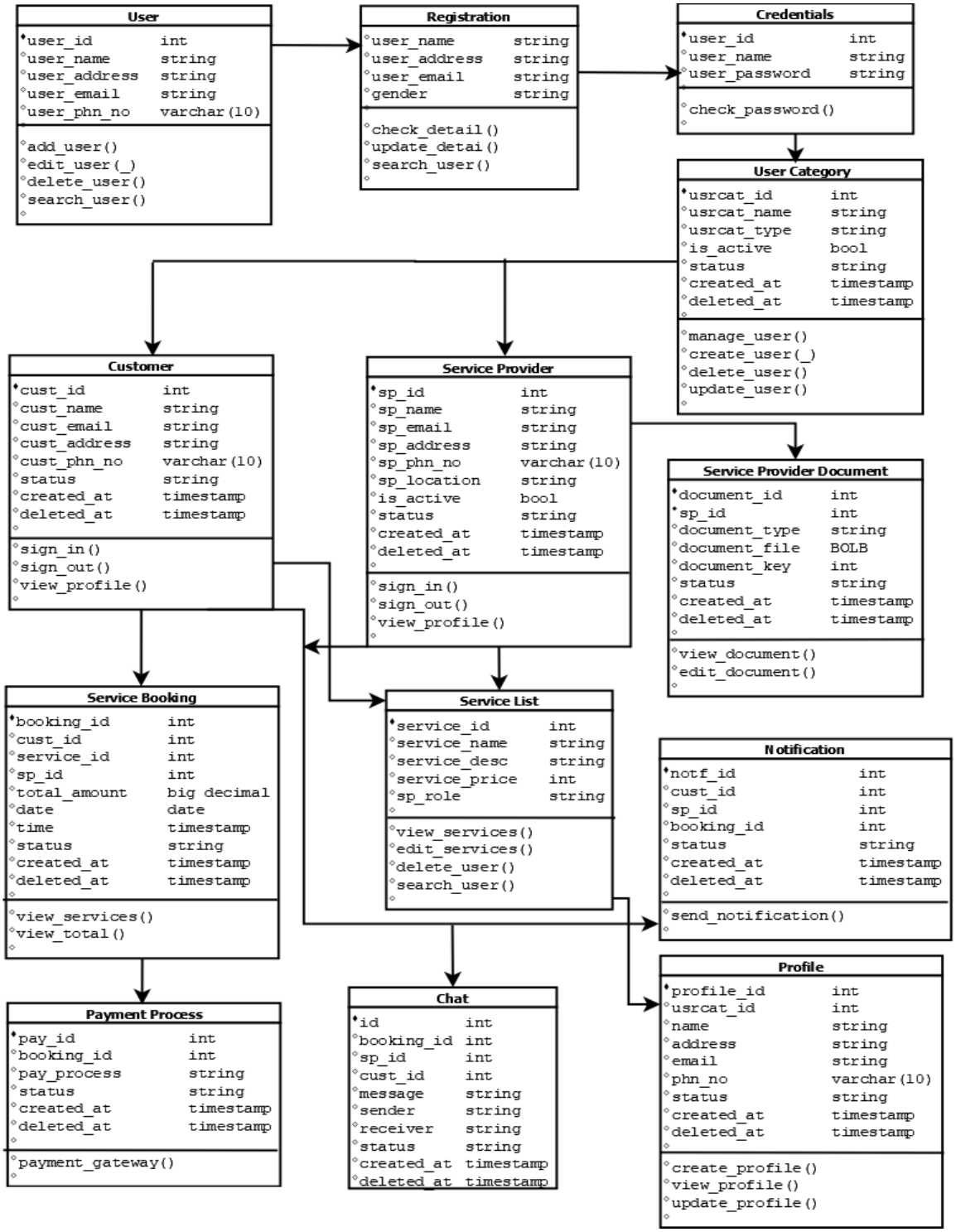

Figure 6.1. 1: Class Diagram

6.2. ER Diagram:

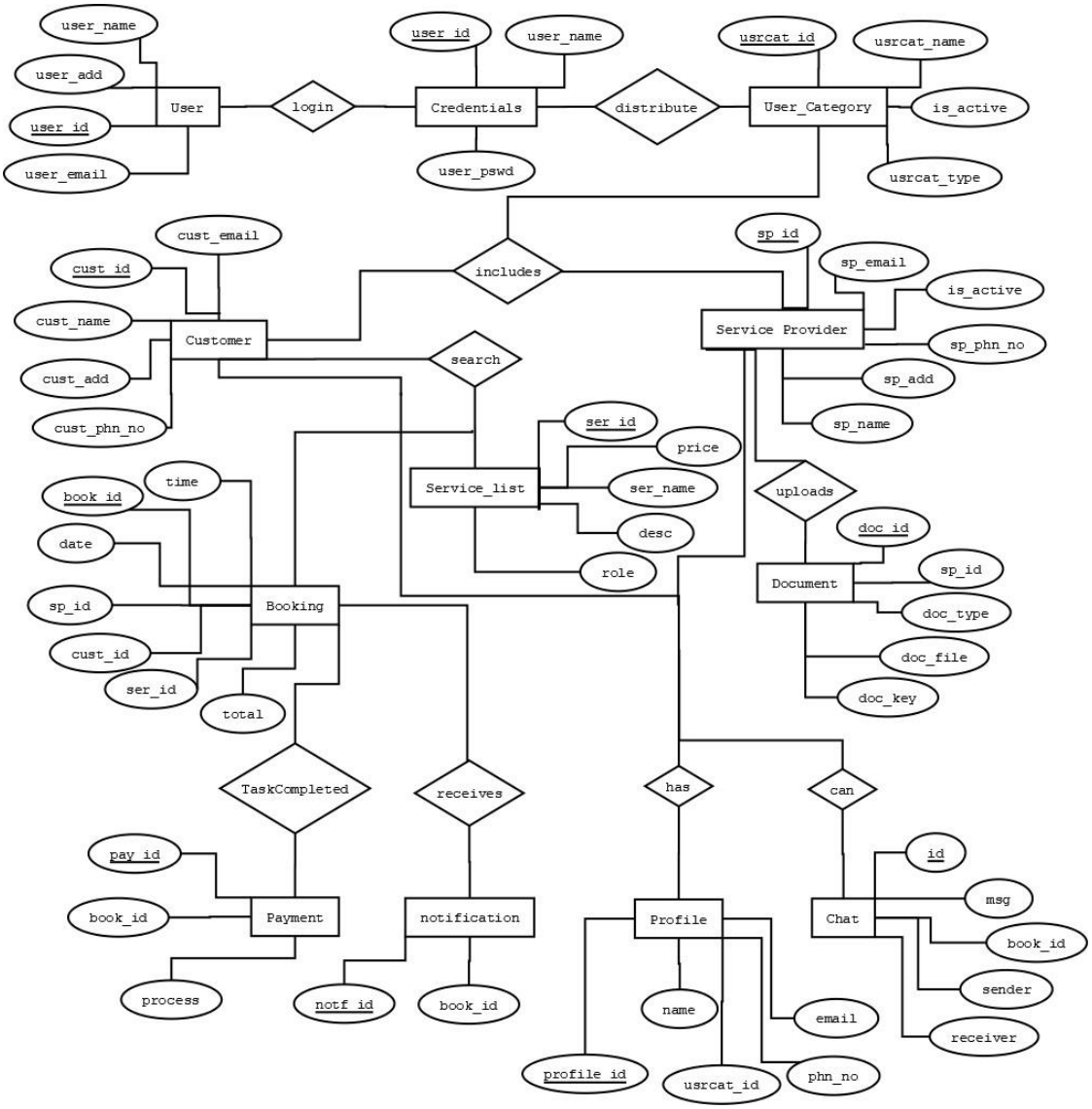

Figure 6.1. 2: ER Diagram

6.3. Data Flow Diagram:

6.3.1. DFD Level-0:

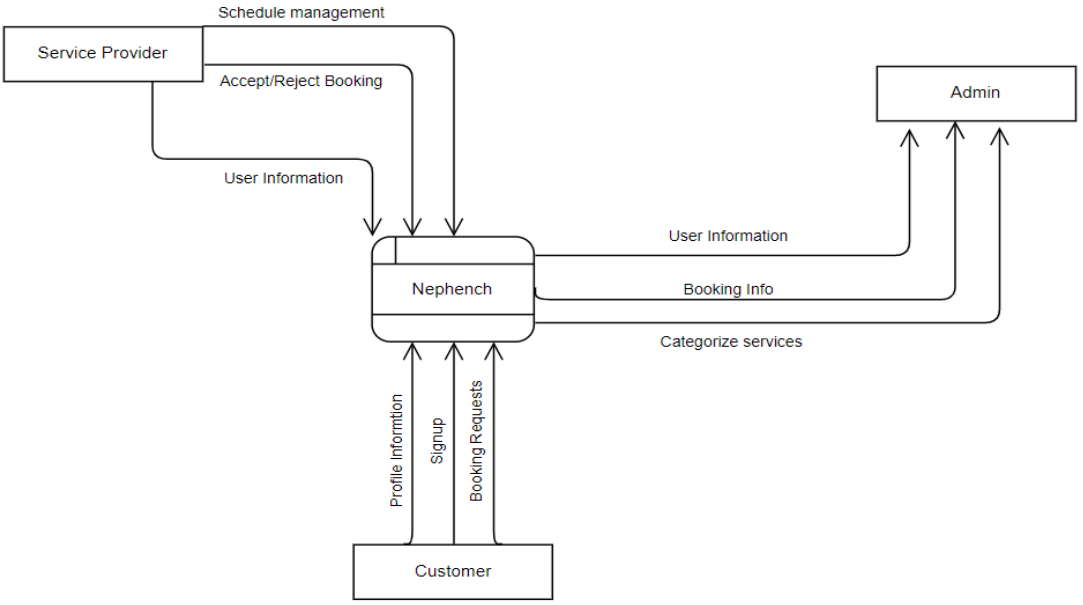

Figure 6.3. 1: DFD Level-0

6.3.2. DFD Level -1:

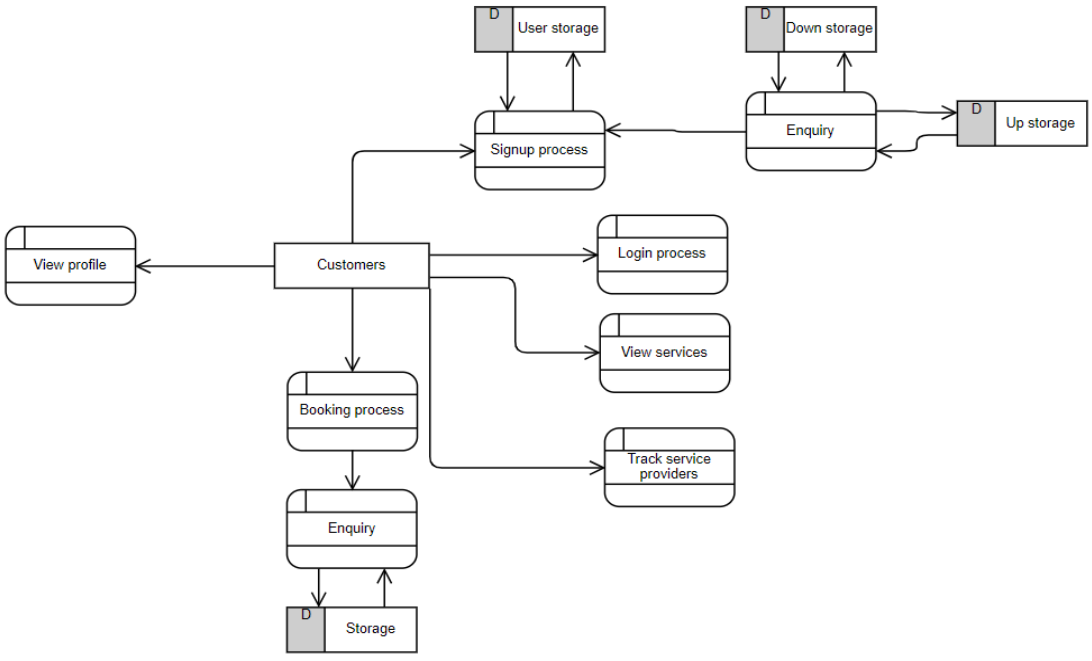

Figure 6.3.2. 1: DFD Level-1(Customer)

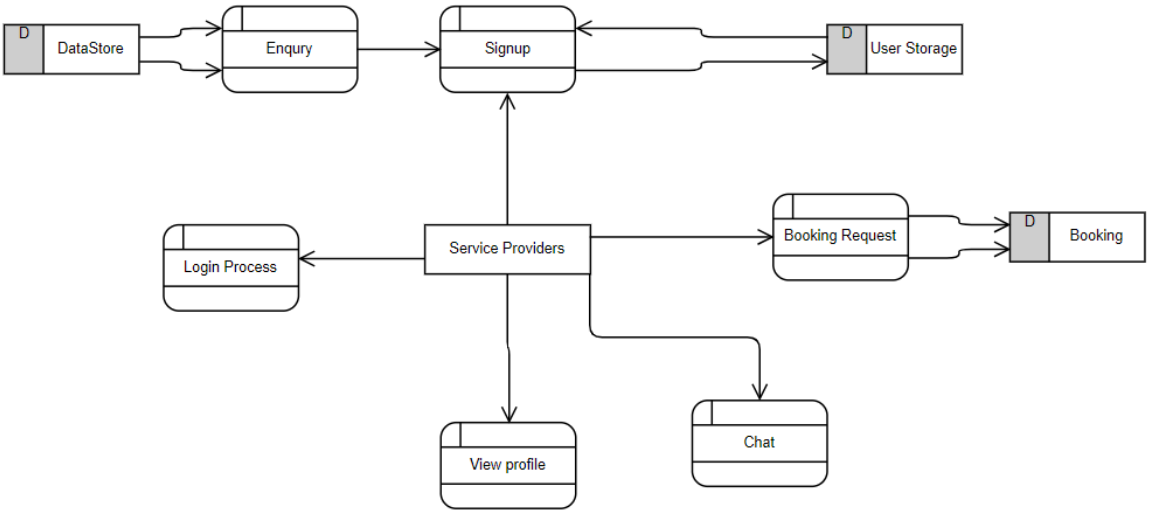

Figure 6.3.2. 2: DFD Level-1(Service Provider)

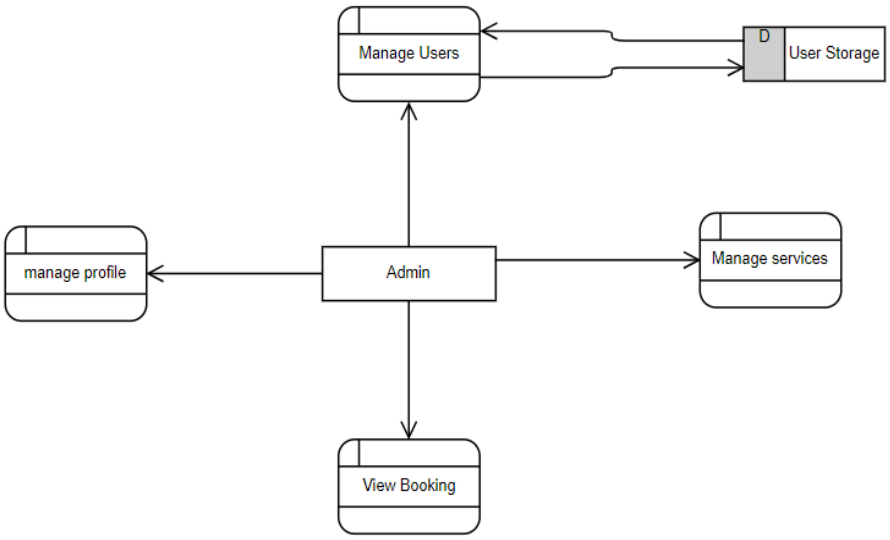

Figure 6.3.2. 3: DFD Level-1(Admin)

6.3.3. DFD Level-2:

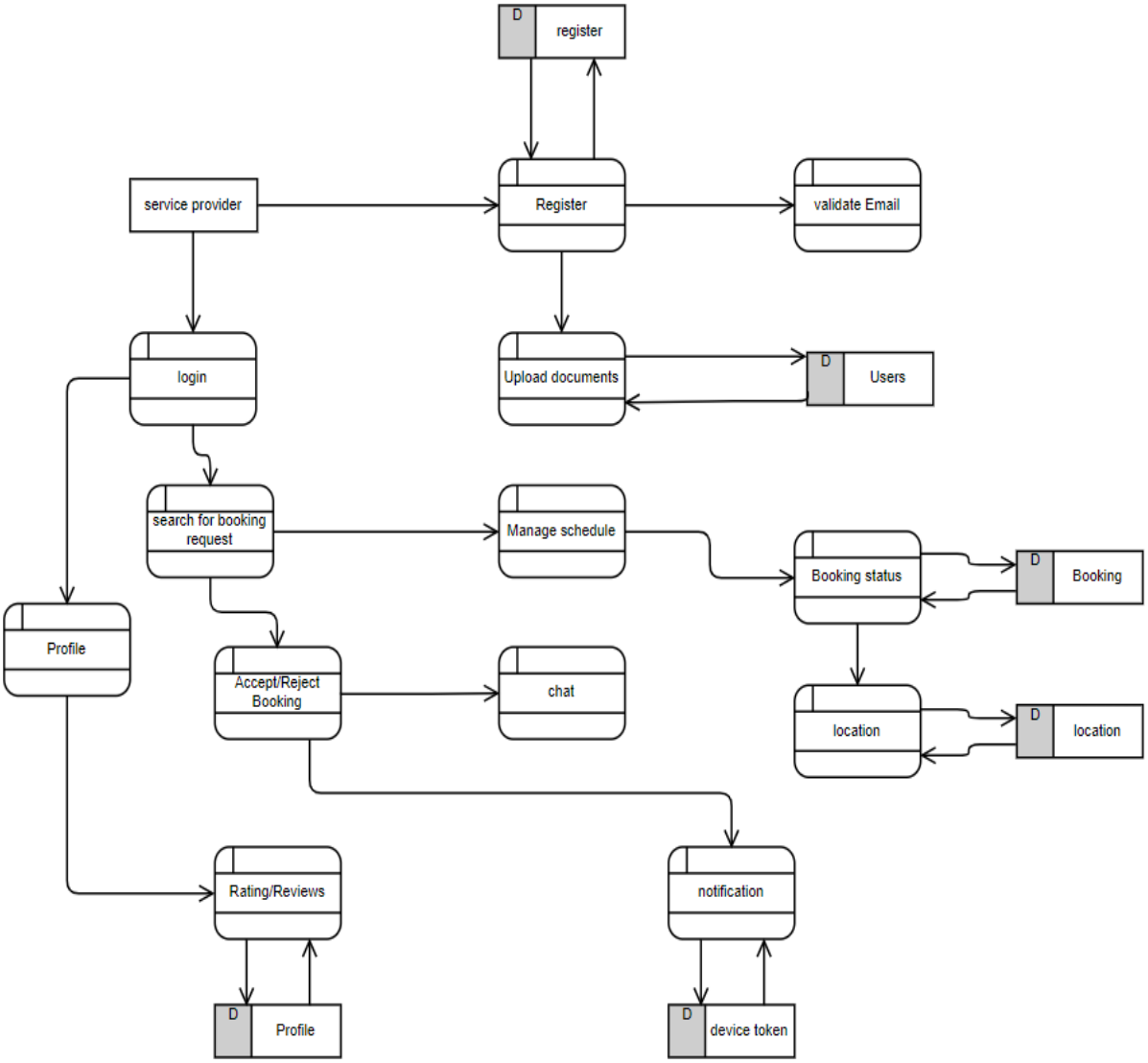

Figure 6.3.3. 1: DFD Level-2(Service Provider)

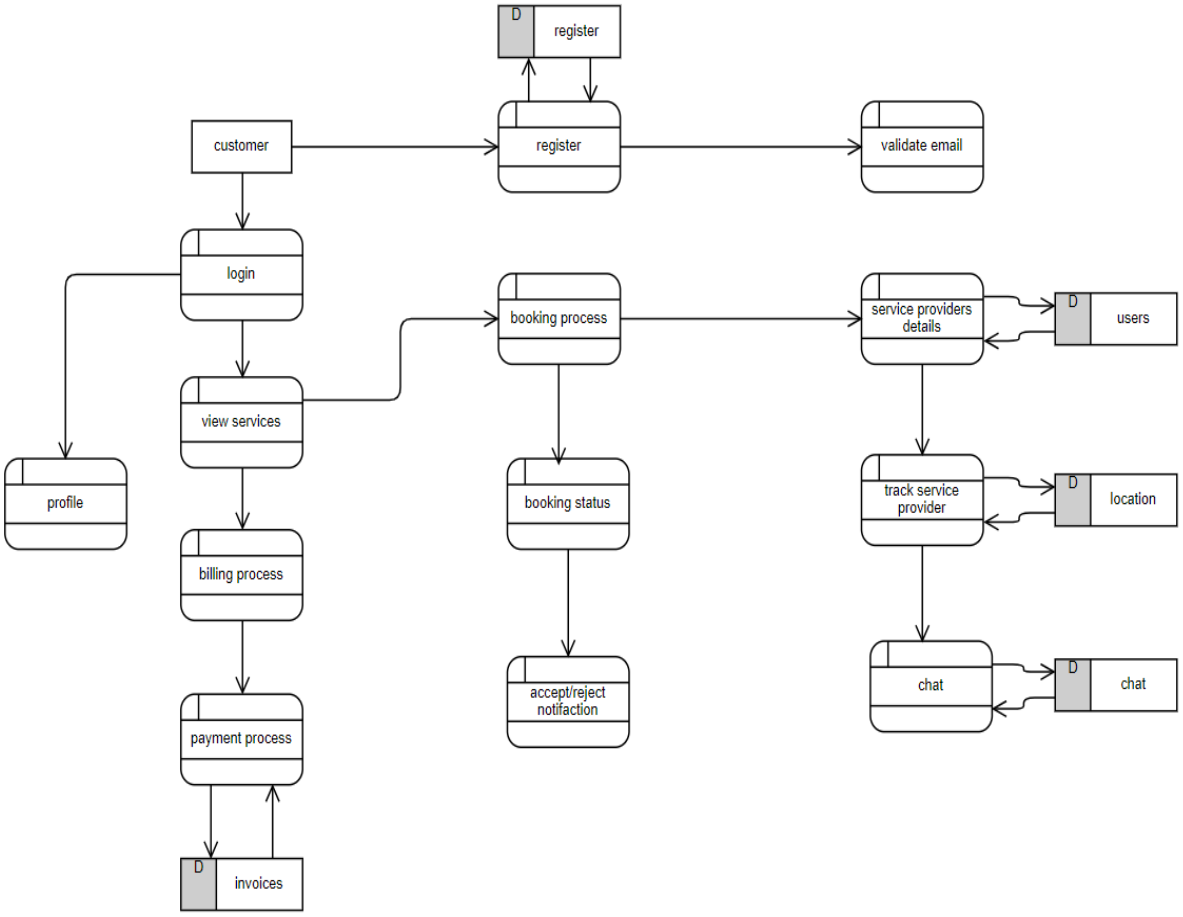

Figure 6.3.3. 2: DFD Level-2(Customer)

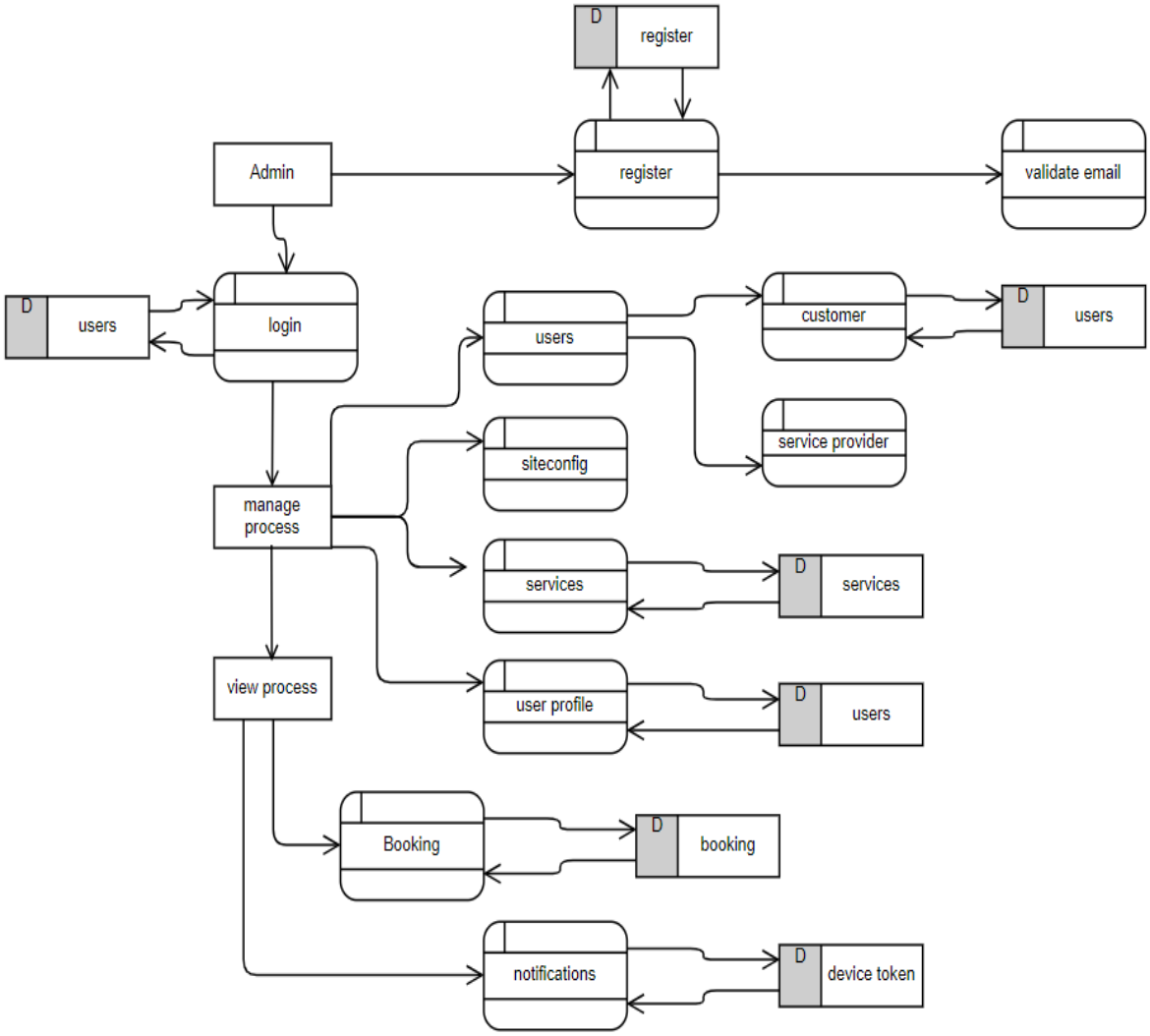

Figure 6.3.3. 3: DFD Level-2 (Admin)

7. Project Gantt chart:

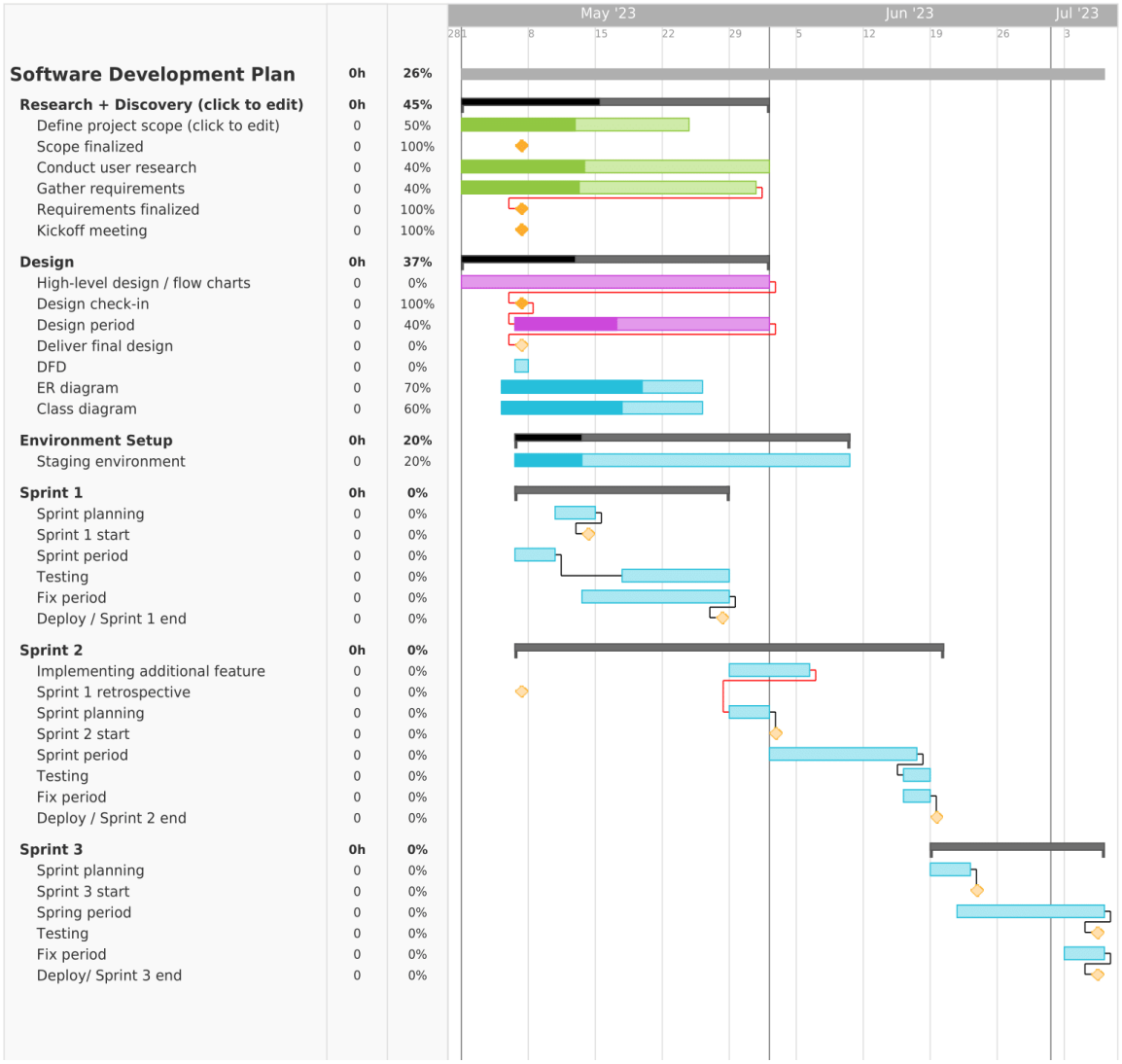

Figure 7. 1: Gantt chart

8. Completed Task:

Mobile App:

- Implemented the UI pages like login, signup, service list, service provider list, booking etc.
- Integrated the APIs required for those pages.
- Implementation of email token verification when the user registers and the users must be verified to be logged in to app.
- Categorized the roles of the users either the user is customer or the service provider and navigating them to their respective homepages.
- Integrated the notification process on service provider side when the customer books the service provider at certain time period.
- Integrated the notification process on customer side when the service provider accepts/rejects the booking request from customers.

Web App:

- Created the homepages defining the different services provided by our mobile app, feedbacks by the customers.
- Created about us pages and the service provider list having highest ratings.
- Different blogs written by the service provider according to their experience.
- Contact page to contact to the admin for any other information about the app.
- Render can be done by admin using the admin dashboard.
- Created admin dashboard to manage all the databases tables.
- Integrated all the GET APIs for viewing the information of all the services in the app.
- Integrated site config to render both the web app and the mobile app.

9. Incomplete Task:

Mobile App:

- Integration of map feature to track the service provider.
- Integration of payment gateways for the payment process.
- Task progress status.

10.Deliverables:

Once the system is created, there are certain criteria it'll need to fulfill in order to be called a successful system. So, this app is built with features such as user account management, admin account functionality, service provider user functionality, and homeowner, office and hotel user functionality. When we will complete our project, we will provide the following things:

- A functional and user-friendly Android application that allows users to accessthe app’s features and services on their Android devices.
- Seamless integration with Android-specific features and APIs, such as locationservices, notifications, and authorized service provider.
- Provides features for tracking the status of appointments, providing feedbackand reviews, and making payments securely.
- Transparent pricing and information about the service providers, so that userscan make informed decisions when booking appointments.

11.Conclusion:

In conclusion, developing a home service Android app can provide several benefits for both users and service providers. By using an app to connect users with qualified service providers, users can save time and hassle, while service providers can expand their customer base and increase revenue.

To develop a successful home service Android app, it is important to use a user- centers approach that focuses on understanding user needs and behaviors. This can involve conducting user research, creating user personas, and testing designs with users to ensure that the app is user-friendly and effective.

Agile methodology can be a good fit for this app development, offering benefits such as flexibility, iterative development, collaboration, and faster time-to-market.

Overall, a well-designed and user-friendly app can provide significant benefits for both users and service providers, helping to streamline the service process and improve the overall customer experience.

12. References

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