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PROJECT TITLE: Online Service Booking

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1. Introduction

In today's busy world, where everyone is overwhelmed with their demanding work schedules, it's very challenging to maintain one's hectic life without some assistance with housework and childcare. Hiring a babysitter or a cleaner to look after the kids or the housework might help people decompress from their stressful lives.

Even in urban houses in Nepal, domestic assistants are growing indispensably. Without them, a significant portion of our lives would be devoted to household tasks, leaving no time for work, reading, or Netflix. Families, newlyweds, and even single professionals who work from home in Kathmandu depend on maids to keep their houses operating smoothly. Despite doing such a necessary service, domestic assistants receive extremely little compensation and frequently face verbal or physical abuse. Over three million women are employed in Nepal as of the 2017–18 labour force survey (Khatry, 2021). Despite this fact it is still difficult to locate domestic help and there aren't many online resources that can assist you as well.

Bearing these facts in mind I want to introduce "Book My Service", a mobile application for booking and providing services. It acts as a bridge between service takers and service providers. It allows you to search and book skilled individuals according to their experience in the field. Different house chores such as housekeeping, babysitting, cooking, caregiving, plumbing etc.

1.1 Problem Scenario

i.   The domestic workers are being under compensated for their work.

ii.   The domestic workers have been found to be abused based on their work status, religious and ethnic background, race etc.

iii. The domestic workers are made to work outside the job profile.

iv.   The clients face problem to find a trust worthy domestic service provider.

v.   The clients also face problem to find experienced service provider for the required job.

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vi.   There have been cases where the middle-man takes extra profit, therefore cheating both service provider and the service receiver.

1.2 Solutions

In order to solve the mentioned problem, this application offers an online platform for both service takers and service providers that bridges the distance between the two parties. This application is more concerned with the issue of a domestic service provider. By allocating their prices in accordance with their work hours and experience, service providers can avoid being under-compensated. Before registering, the system checks the legitimacy of the service providers to ensure that clients are provided with the options of a qualified and dependable service provider.

The 3 major roles in this app are:

Admin:
  i.   View all user's details.
  ii.   View booking details.
  iii. Verify user's

Service Provider:
  i.   Login themselves.
  ii.   Register themselves.
  iii. View client's profile.
  iv.   View ratings and reviews.
  v.   Offer services.
  vi.   Accept and rejecting booking request.

Service Receiver:
  i.   Login themselves.
  ii.   Register themselves.
  iii. Book and cancel the service.
  iv.   View service provider's profile.

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v.   Provide ratings and feedbacks.

vi.   View their booking list.

2. Aims and Objectives

The main aim of this project is to create a dependable and efficient mobile application that connects employers and domestic service providers. This will fill the gap between employers and domestic service providers benefitting both sides. The following objective has been established to accomplish this goal.

i.   To learn about mobile application and its working mechanism.

ii.   To understand and implement usage of relational database.

iii. To learn about the concept API programming and the backend of mobile application.

iv.   To conduct a research among service providers about the possible best way to create an environment for them to work and implement it.

v.   To learn and implement the Flutter and Dart programming language.

3. Expected Outcome and Deliverables

After the completion of this project, the users would be able to book and provide services. The service receiver user side gets to book and view service providers. The user must register and log in to the application to use its features. The app offers a user-friendly UI and an in-app online payment method to provide the best user experience possible.

3.1 Primary Features

The following are the primary features of the BookMyService app:

1. **Book service**

    This feature allows the user to send a booking request to the service provider.

2. **Service Providers Profile Listing**

    This feature allows the user to browse and view service providers ad their profiles.

3. **Notification and alerts**

   The service provider receives a notification when the client sends a booking request. The client also receives a notification of their booking status.

4. **Rating and Feedbacks**

   The user can give their rating and feedback to the service provider according to the quality of their service.

5. **Browse Professionals Using Filters**

   The customer can browse service provider using different filter options such as price and speciality.

6. **Online Payment**

   This feature provides multiple payment options to the users such as online payment and cash payment.

7. **Manage Availability**

   This feature provides flexibility to service providers to choose the start and end times of their service.

8. **Schedule service**

   This feature allows the user to book their service in advance.

9. **Manage and Verify Service Provider**

   This feature allows the admin to manage and verify service providers based on their credentials.

10. **Registration and login**

    The users can be quickly registered into the app using their credentials. Once the registration process is completed, the service providers will get the profile approval notification.

11. Edit profile

   This feature allows to both user and service providers to edit their own profile.

4. Project Risk, Threat and Contingency Plans

Every successful business or organization assembles a team of different individuals to carry out their projects. Each team member is given a certain position and duty. Therefore, doing a project with just one person can be extremely difficult and time-consuming. Therefore, there may be risks and threats that one must overcome while working on this project.

The following is the list of risks and threats that might arise in this project:
   i.   It might be challenging to develop a UI for this app because Figma is new to me.
   ii.   It might be complex to work with APIs.
   iii. Configuring the user's location with service providers might be a complex feature of this app.
   iv.   It can take a long time to reach users as most users are unfamiliar with this approach.
   v.   The resources provided on the Internet may not be sufficient to carry out the project.

The following are the contingency plans to prevent and minimize the above risks:

   i.   Watch the Figma tutorials and documentation to get familiar with it.
   ii.   To do immense research on APIs regarding mobile applications.
   iii. Consult with tutors and do immense research on topics related to location configurations.
   iv.   Discuss with the supervisor to resolve problems that arise during project execution.

5. Methodology

People all throughout the world use well-known methodologies such as Agile, Waterfall methodology, Spiral Model etc. to develop software. This project is built using the Scrum methodology. Scrum is one of the Agile methodologies, which is fast, adaptive and focuses on continuous development of product via sprints (two to four weeks). It has several stages like product backlog, sprint planning, sprint backlog, daily scrum, sprint review, and product increment. The product backlog is a set of requirements provided by the client themselves. Following that, a sprint is planned. The planning phase includes sprint backlog, strategy for reaching the goal, and team members and their duties. The team holds daily scrum meetings to plan tasks for the day and errors and bugs since the last scrum. The team provides the completed work for the sprint, which closely matches the client's anticipated output. The increment can be understood as the stepping stones towards the final product which is sum of all the releases of the Sprint (Scrum, 2022).
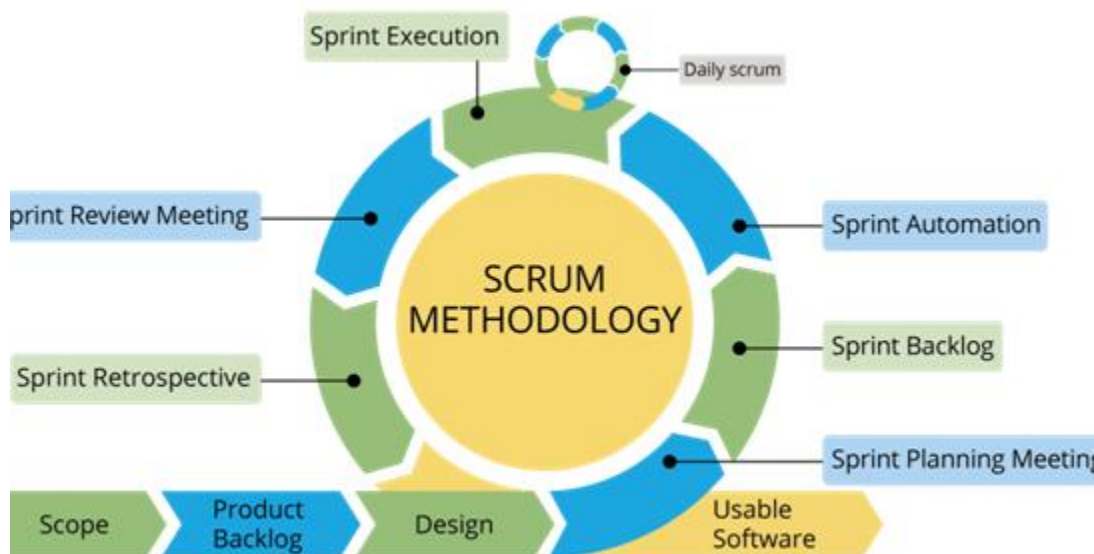
Figure 1: Scrum methodology

The following are the advantages of scrum methodology:

      I.   Short sprints make it much easier to implement changes based on feedback.

     II.   Sprints are used to divide large projects into more manageable chunks.

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III.   It is simple to make the necessary changes because developments are coded and tested during the sprint review.

6. Resource Requirement

The following are the lists of resources for development of this project:

6.1 Software Requirement

The following are the software requirement for this project:

i.   Dart programming language, Flutter, HTML and CSS will be used for the frontend.

ii.   Python programming language, Django framework will be used for backend.

iii.   Figma will be used for designing the UI (User interface).

iv.   PostgreSQL will be used for database.

v.   REST framework will be used to build an API.

6.2 Hardware Requirement

i.   Laptop with windows 10 or above.

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7. Work Breakdown Structure

A work breakdown structure (WBS) is a project management tool that uses a step-by-step process to complete a large project with several moving parts (Organ & Bottorf, 2022). It defines all the work that needs to be completed to achieve the project goals and objectives.

Figure 2: Work Breakdown Structure

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8. Milestone

Figure 3: Milestones

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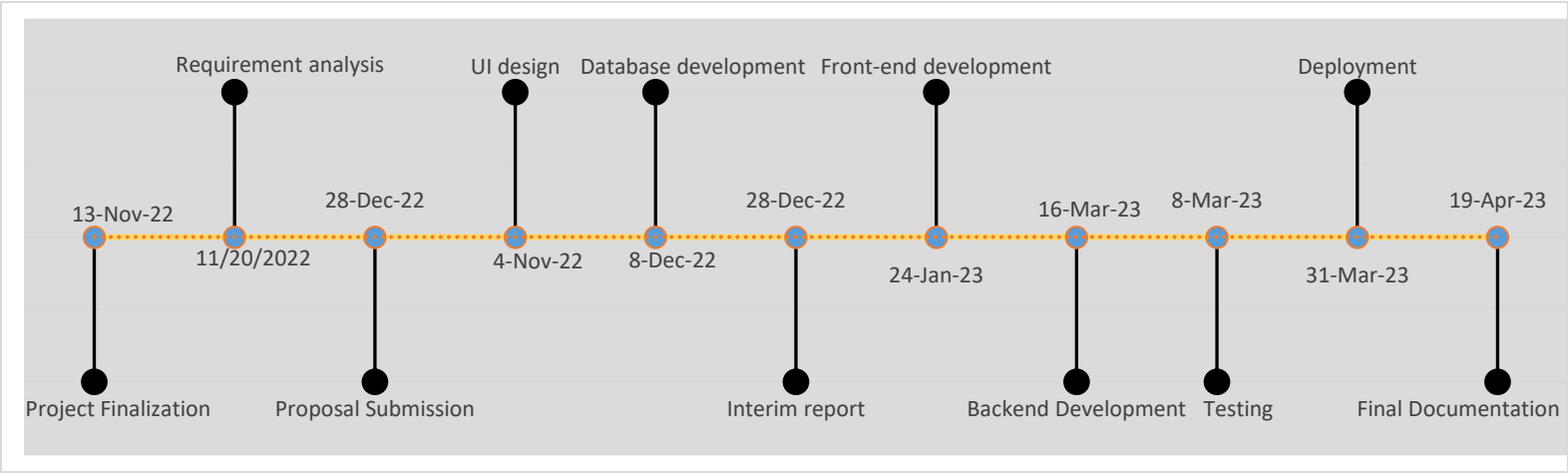
9. Gantt Chart

In project management, a Gantt chart is frequently used to plot activities (tasks or events) against time. It makes it simpler to plan, coordinate, monitor, and complete tasks on schedule. The scrum approach is used to build the Gantt chart for this project. An online program called team Gantt was used to generate the entire structure of the Gantt chart.
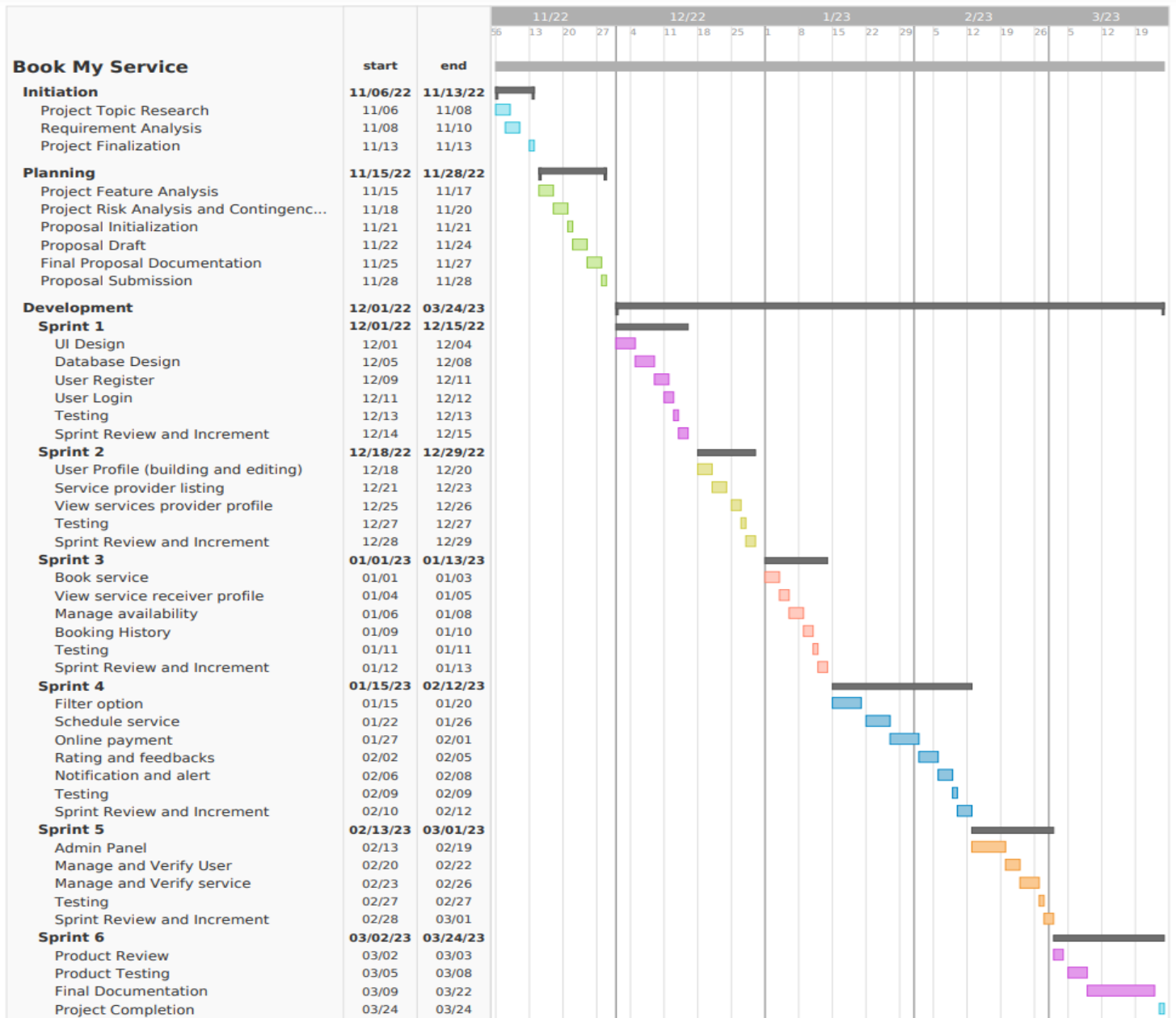
Book My Service	start	end
Initiation	11/06/22	11/13/22
Project Topic Research	11/06	11/08
Requirement Analysis	11/08	11/10
Project Finalization	11/13	11/13
Planning	11/15/22	11/28/22
Project Feature Analysis	11/15	11/17
Project Risk Analysis and Contingenc...	11/18	11/20
Proposal Initialization	11/21	11/21
Proposal Draft	11/22	11/24
Final Proposal Documentation	11/25	11/27
Proposal Submission	11/28	11/28
Development	12/01/22	03/24/23
Sprint 1	12/01/22	12/15/22
UI Design	12/01	12/04
Database Design	12/05	12/08
User Register	12/09	12/11
User Login	12/11	12/12
Testing	12/13	12/13
Sprint Review and Increment	12/14	12/15
Sprint 2	12/18/22	12/29/22
User Profile (building and editing)	12/18	12/20
Service provider listing	12/21	12/23
View services provider profile	12/25	12/26
Testing	12/27	12/27
Sprint Review and Increment	12/28	12/29
Sprint 3	01/01/23	01/13/23
Book service	01/01	01/03
View service receiver profile	01/04	01/05
Manage availability	01/06	01/08
Booking History	01/09	01/10
Testing	01/11	01/11
Sprint Review and Increment	01/12	01/13
Sprint 4	01/15/23	02/12/23
Filter option	01/15	01/20
Schedule service	01/22	01/26
Online payment	01/27	02/01
Rating and feedbacks	02/02	02/05
Notification and alert	02/06	02/08
Testing	02/09	02/09
Sprint Review and Increment	02/10	02/12
Sprint 5	02/13/23	03/01/23
Admin Panel	02/13	02/19
Manage and Verify User	02/20	02/22
Manage and Verify service	02/23	02/26
Testing	02/27	02/27
Sprint Review and Increment	02/28	03/01
Sprint 6	03/02/23	03/24/23
Product Review	03/02	03/03
Product Testing	03/05	03/08
Final Documentation	03/09	03/22
Project Completion	03/24	03/24

Figure 4: Gantt Chart

10. Conclusion

In conclusion, BookMyService (An online service booking system) is a mobile application that works as the bridge between service providers and customers. This application primarily focuses on making home service easier. This application offers multiple features to its users like online payment, an admin panel, and more. To provide the best user experience the UI was designed in Figma. The application was developed using Dart language, flutter, and Django Framework. This project is very time-consuming and complex. The most complex task of this project is to fetch the location of the users. This project will be the milestone for my career as a Mobile Application Developer.

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