

Aadim National College

(Tribhuvan University)

Chabahil, Kathmandu



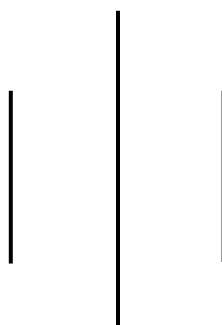
Project Proposal on

“Your Project Title”

Faculty of Humanities and Social Science

Tribhuvan University

Kirtipur, Nepal



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Aadim National College

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1. Introduction

In this dynamic world of sports, football/soccer is the most popular and entertaining sports. It is known and played almost everywhere. There are only few places on Earth where football is not played as we only need a ball and a ground to play it [1]. In the past, football used to be played anywhere where there was open space, but gradually in the city areas, Futsal has become a popular place to play because of overpopulation and all the open spaces being covered by houses, buildings, malls etc.

Futsal which is preferred by football enthusiasts, is affordable but is limited. Thus, we need proper booking system. For this, our project named "BookPlay", a user-friendly system designed for hassle-free futsal booking system, aims to ease the entire booking process for both the players and futsal owners. BookPlay seeks to revolutionize the way Futsal enthusiast access and enjoy the game by providing user friendly, efficient and technologically advanced platform. From seamless court reservations to real-time updates, BookPlay promises to be a game-changer for both facility owners and players alike.

2. Problem Statement

Without a futsal booking system, people looking to play futsal will face several significant challenges. The lack of a futsal booking system means that users face difficulties in planning their futsal matches [2], Users may experience frustration and interruptions in their plans due to possible double bookings or lack of clear information on when Futsal will open.

Some of the major problems are:

- It is time consuming for people to physically search or call/message for available futsal facilities.
- Difficult to Access information about prices, available time slots, and facility details is limited without the app.
- Without real-time updates, there is a risk of double bookings creating conflicts between users

[Note: You need to mention the citations properly in IEE format as shown above referencing to research paper/ journals or books e.g. [1]]

3.Objectives

The main objectives of this project are as follows:

- To develop a system with full CRUD functionalities allowing users and staff to create, read, update, and delete futsal details, bookings, and user information.
- To implement a booking system where users can check availability, book futsal slots, view their bookings, and make payments securely.
- To integrate roles and authentication ensuring only authorized users, staff, and owners can manage bookings, view customer details, and access specific features based on their roles.

[Note: Objective Should be in 3-4 Points clearly overviewing your project aim/goal]

4.Methodology

4.1Requirement Identification

4.1.1 Study of existing system

In conducting a study of existing futsal booking systems, it becomes evident that the current landscape is characterized by a mix of traditional and digital approaches, each with its own set of strengths and weaknesses. The analysis encompasses various aspects, including booking methods, accessibility, payment systems, and user feedback mechanisms.

1. Manual Booking Systems:

Strengths:

- Some futsal facilities still rely on manual booking through phone calls or in-person visits.
- This method may suit small-scale operations with a limited number of bookings.

Weaknesses:

- Prone to errors and miscommunications, leading to scheduling conflicts.
- Lack of real-time updates on court availability.
- Time-consuming and inconvenient for both users and facility owners.

2. Basic online futsal bookings

Strengths:

- Provides a digital platform for users to check court availability and make bookings.
- May offer basic information on pricing and location.

Weaknesses:

- Limited features, often lacking real-time updates.
- Inconsistent user interfaces across platforms.

[Note : Make necessary research on the projects and identify their strength and weakness]

4.1.2 Literature Review

This part contains the literature review of the previous research done on futsal booking systems. But as of now, there has been no research done on futsal booking systems as there is not much futsal booking systems that are in operation. There is not a decided system for this. Thus, we will see few futsal booking systems that are in existence and find out about its strength, lacking and weaknesses.

1. Kick Futsal Lalitpur

Kick Futsal Lalitpur is a futsal booking system powered by Skedda. It allows allows the user to book for Kick Futsal which is in Sankhamul.

Strengths:

- Good interface for booking

Weaknesses:

- Limited to one futsal
- Not running at the moment

2. Pitchbooking

Pitchbooking Ltd, founded in 2018 and headquartered in Belfast, is a scheduling and payments solution for sports facilities. From football to ultimate frisbee, it makes it easy for the public to get more active by encouraging sports participation in local communities and protecting the future of sports clubs and their facilities. Their award-winning pitch booking system and online management solution hosts over 1000 bookable facilities on the platform. Ranging across the UK, Ireland and the US, Pitchbooking has been recognised as industry-leading by prominent organisations including Google for Startups, TechNation and Invest Northern Ireland. In 2022, their product suite expanded to include Pitchbooking Events, enabling users to host & collect payment for a variety of sports events on the platform. Pitchbooking Events launched in partnership with the Irish Football Association (IFA), successfully processing over 10,000 bookings for the IFA's McDonald's sponsored Fun Football programme. Pitchbooking has recently secured financial backing from Silicon Valley based investment firm Vertex Capital, in a funding round that was supported by local investment firms and a number of professional athletes.

3. WePlay, Vakundo

WePlay and Vakundo is a nepalese product but it has only been started and initiated but is not in operation at the moment. There are many more systems like this which has been initiated but not in operation.

Reviewing this all booking systems, we find out that there is not a dedicated futsal booking system for Nepalese market. There are initiations but is not operable. We also find futsal booking system for a specific futsal only.

[Literature Review should be done from research Papers with IEE Formats and proper citation]

4.1.3 Requirement Analysis

Requirement analysis is done while developing a system and before implementing it, it is necessary to analyze the whole system requirement. It is categories into mainly two parts:

1. Functional requirements
2. Non-functional requirement

4.1.3.1 Functional Requirements

Login/Logout System: All users, facility owners and admin can login/logout the system using their own username and password.

Admin side:

- Admin views the list of the users registered. Admin can delete the user in case anything occurs.
- Admin views the lists of all the registered. Before being registered admin approves it. Admin also add a new futsal and can also delete it.

User side:

- User registers into the system before logging in.
- User views the list of futsal available to book.
- User views list of time that is booked and available for booking
- User books futsal for a specific time for a specific date.
- User cancels the booking and choose to pay either by cash or online via Khalti.

Futsal side:

- Futsal can register itself so that the users can see it in the list of futsal which has to be approved by the admin.
- Futsal staff/owner can see the list of bookings.
- Futsal staff/owner can view the details of the person who has booked for a specific time.
- Futsal can modify its information.

[Note: It is Better to describe this part with Use Case diagram with Use case scenarios description]

4.1.3.2 Non-functional requirement

1. Security

- User must log in with a username and password or email.
- All users are required to have a Login ID and password.
- Only ward administrators can modify the database (insert, delete, update).
- Administrators have full access to view and modify all system information.

2. Maintainability

- The system provides the capability to back-up the Data
- This system have less downtime with proper backup and recovery options.

4.2 Feasibility Study:

Feasibility analysis is a part of system analysis carried to confirm that the system being developing is actually feasible or not. Following feasibility analysis is performed to working on the project:

- **Technical Feasibility:** For this demo project all the tools required to build this app is freely and easily currently available. So, it is technically feasible.
- **Operational Feasibility:** All the required operations such as internet service are available and there isn't any legal issue. So, this project can be considered operationally feasible.
- **Economic Feasibility:** This project is developed using software selling kits of which all are opensource, so it does not incur any costs. Hence, this project is economically feasible and can be implemented easily.

4.3 Tools and Techniques

1. Frontend

- HTML
- CSS
- JS

2. Backend

- Node Js

3. Database

- MySQL

4. Integrated Development Environment

- Virtual Studio Code

4.3 High Level Design of System

4.3.1 System flow chart

1.User

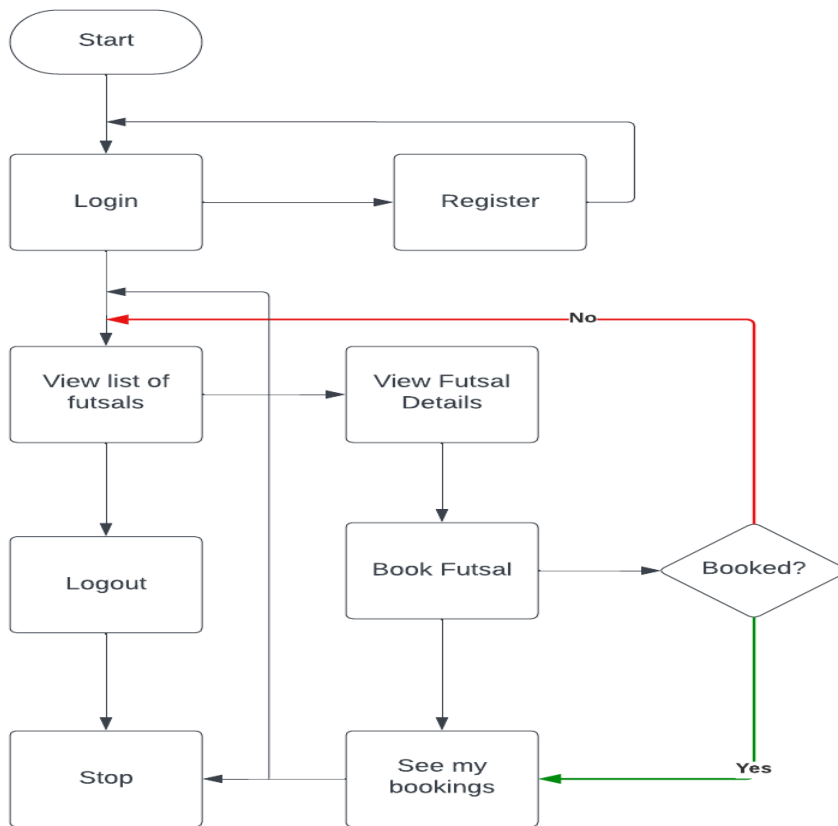


Figure 1: Flowchart of User

2.Admin

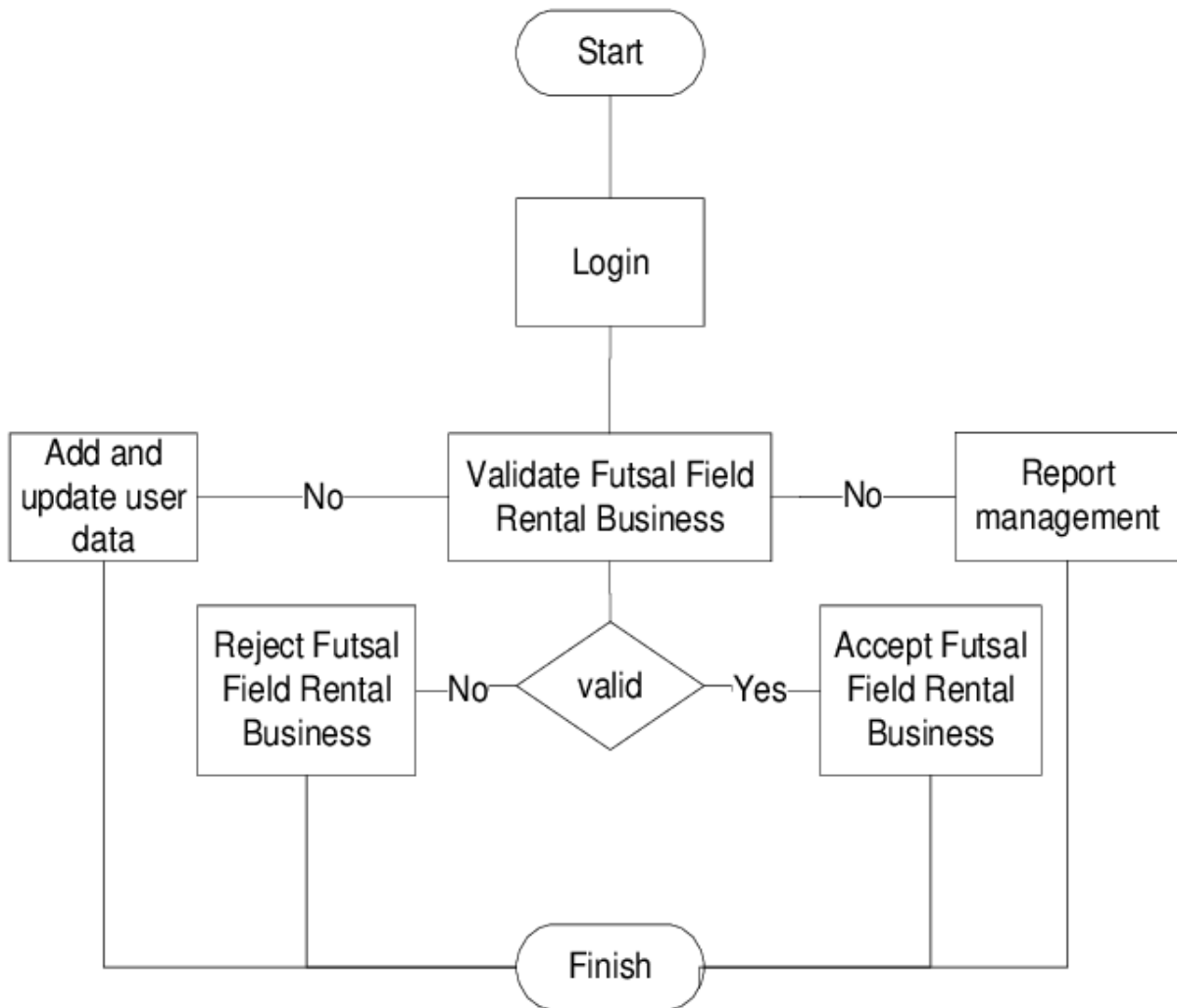


Figure 2: Flowchart of Admin

3.Futsal

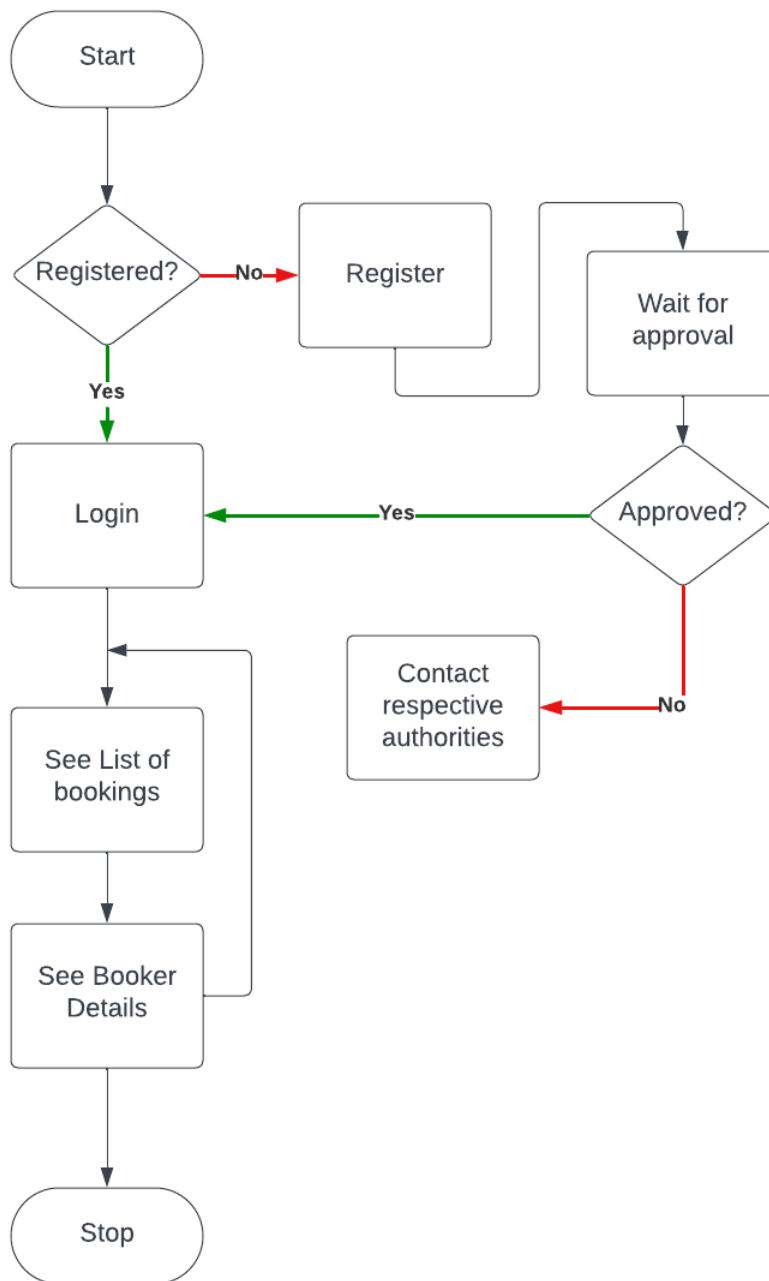


Figure 3: Flowchart of Futsal

4.3.2 Methodology of proposed system

The commonly used methodologies include agile development methodology, waterfall method and rapid application development. There are few other methodologies depending upon the nature and objective of the software.

In developing entire system, I will be using the Waterfall Development Model. This is the most suitable model for our system. In addition, this model is very simple and easy to understand then others model. It is easy to manage and arrange tasks. Each phase must be completed before the new phases start, so there is no overlapping in the phases. The following illustration is a representation of different phases of the waterfall model:

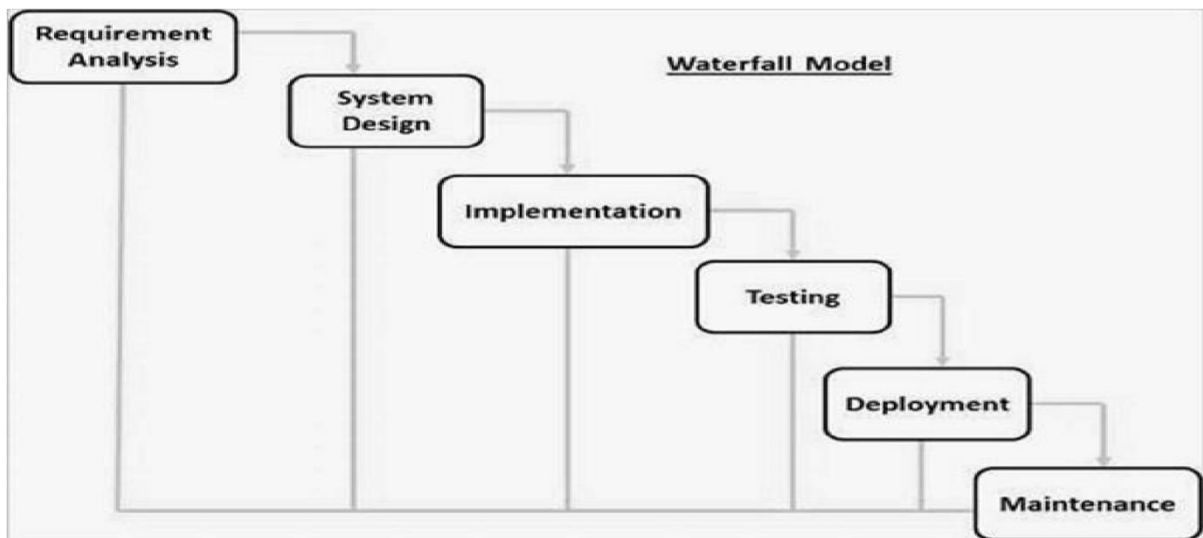


Figure 4: Waterfall Model

4.3.3 Working mechanism of proposed system

CRUD Operation

CRUD refers to the four major functions implemented in this application. The CRUD functions are the user interfaces to databases, as they permit users to create, view, modify and alter data. CRUD works on entities in databases and manipulates these entities.

5. Gantt Chart (Project Timeline)

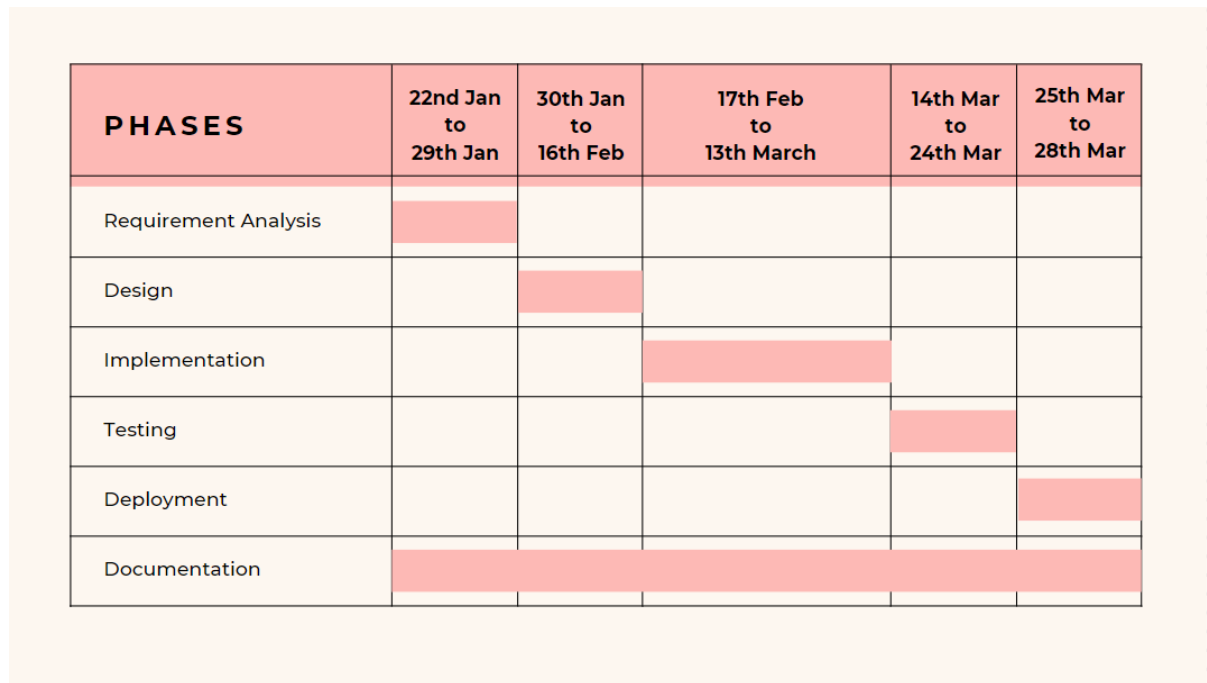


Figure 5: Gantt chart

[Note: Use Microsoft Project tool to make Gantt Chart and Work Breakdown Structure (WBS)]

6. Expected Outcomes

The expected outcome of BookPlay is easy and seamless bookings of futsal with all objectives fulfilled completely.

5. References

[1] Your Research Paper citation here 1

[2] Your Research Paper citation here 2

[3] Your Research Paper citation here 3

[Note: It should be in IEE Format (Go to References then citation to use it)]