



Faculty of Computer Science and Information Technology

Futsal Booking System for Arena Futsal Yayasan Sabah

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Futsal Booking System for Arena Futsal Yayasan Sabah

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This project is submitted in partial fulfillment
of the requirements for the degree of Bachelor
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Faculty of Computer Science and Information
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FACULTY OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
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ABSTRACT

Court Booking System for of Arena Futsal Yayasan Sabah is a Futsal booking system used by the staff to manage the reservation court and time by a user through the web application. This system will help Arena Futsal get the booking information more efficient and user easily attempt a booking through the device. The method makes a booking by a user before this to Arena Futsal Yayasan Sabah using a social media such WhatsApp's, messenger, also make the phone call and walk-in wasting time and the information inaccurate just for asking the available court and time. Another problem faced by staff is keeping the record their booking data in a logbook, the chance of losing data might lose are high.

By proposing this Futsal Booking System, the staff and player can hold management and booking process more efficient and easier online. The methodology that used to develop this proposed system is a Rapid Application Development (RAD).

Abstrak

Court tempahan sistem untuk Arena Futsal Yayasan Sabah adalah sistem tempahan Futsal yang digunakan oleh kakitangan untuk mengurus tempahan gelanggang dan masa oleh pemain menerusi aplikasi mudah alih. Sistem ini akan membantu Arena Futsal mendapatkan maklumat tempahan lebih cekap dan pemain dengan mudah membuat tempahan melalui telefon pintar. Kaedah membuat tempahan oleh pemain sebelum ini kepada Arena Futsal Yayasan Sabah melalui media sosial seperti WhatsApp, messenger, juga membuat panggilan telefon dan berjalan membuang masa dan maklumat tidak tepat hanya untuk membuat tempahan gelanggang dan masa yang tersedia ada. Satu lagi masalah yang dihadapi oleh kakitangan adalah memastikan rekod data tempahan mereka dalam buku log dan peluang kehilangan data mungkin adalah tinggi.

Dengan mencadangkan Sistem Tempahan Futsal ini, kakitangan dan pemain dapat menyelesaikan proses pengurusan dan tempahan lebih efisien dan mudah dalam talian. Metodologi yang digunakan untuk membangunkan sistem cadangan ini adalah Pembangunan Aplikasi Rapid (RAD).

CHAPTER 1: Introduction

1.1 Introduction

Nowadays, as we know the growth of the web application has developed to meet a user requirement. In this modern lifestyle, a significant challenge for the users to find the interesting application in crowded app stores such as Google Play Store with about three billion people using mobile phones worldwide and the number of devices that can access, we can see the future of the web is the mobile phone. As we know, technology growth makes user wish for a system that can assist them in their daily life. With this growing demand, it is recommended to develop the web application that can achieve the user's target and expectation. However, for the users, they will download an application that they like to use, the application that is free and they just want to try it out.

Moreover, the most popular standards applications programming platforms and development tools used to develop applications for mobile devices such as Java ME, Flash Lite and Android Studio provide options to create highly functional mobile multimedia applications that are allowing the use of various technologies like Java, Open C, Objective C, and Python. This project will use a tool called Android Studio. Android Studio is an integrated development environment (IDE) for developing for the Android platform. It was announced on May 16, 2013, at the Google I/O conference by Google's Product Manager, Katherine Chou.

The system that will be developed is Futsal Court Booking Application System using web application. The target users of this project are the people who loves to play futsal and the staff of the Arena Futsal Yayasan Sabah. The people that want to play futsal can book the court by using their mobile smartphone by sending a booking. Then., the staff will book the futsal court for player that request if the court is available. The player also can check the availability using their smartphone before they can book the futsal court.

1.2 Problem Statements

Arena Futsal Yayasan Sabah and the players especially in Kota Kinabalu, Sabah faced problems on the booking system for the futsal court and set the time for each booked. Sometimes, the people or user must come to Arena Futsal to book a court and chat via WhatsApp's application or call the office. They must ask the staff there to check whether the futsal court is available or not. If the futsal court is available, they can book it but if there is no available, it just wastes their time to go to the Arena Futsal. Sometimes, the players chatting through WhatsApp's but no replied or call the office of Arena Futsal got no answered.

The staff also keeps or records their booking data in a logbook. The price of futsal court is not fixed to show makes the player is confused that affected to payment process. The chance and probability the data might lose are high. Another problem that occurs is when the players would to reserve the futsal court and time, there are always happen the clashing between another player. This scenario happens because the manual service does not have the proper management to handle it.

Based on the problems that occur, this project will give benefits to the owner of Arena Futsal Yayasan Sabah or the players in order to make management more efficient and follow up with the technology using nowadays. This system also will make the organization became easily and faster.

1.3 Scope

The Futsal Booking System is about the online service for the booking for the players to make the system efficient and simple. The booking online aims on the internet devices user also the scopes of the project that have been identified are:

- The target users for this proposed project are the staffs of Arena Futsal Yayasan Sabah and players in Kota Kinabalu, Sabah.
- The player could check availability, booking and canceling the booking futsal court via mobile or computer and specific prices for payment in cash only.
- The administration or staff can add, edit, and delete the futsal court details.

1.4 Aims and Objectives

The aims for creating the booking system are to solve the problems in Arena Futsal Yayasan Sabah that always happened to the user. Otherwise, Arena Futsal Yayasan Sabah management can save their time that usually for checking available court and time through the WhatsApp's or make the call. The objectives for developing Booking System:

- To improve an efficient platform for online booking via Website for the user.
- To develop a new system that improved the efficiency and organize management booking than the system before for the staffs and players.
- To evaluate collecting and storing data accurately from player details.
- To conduct the usability test of this proposed system.

1.5 Brief Methodology

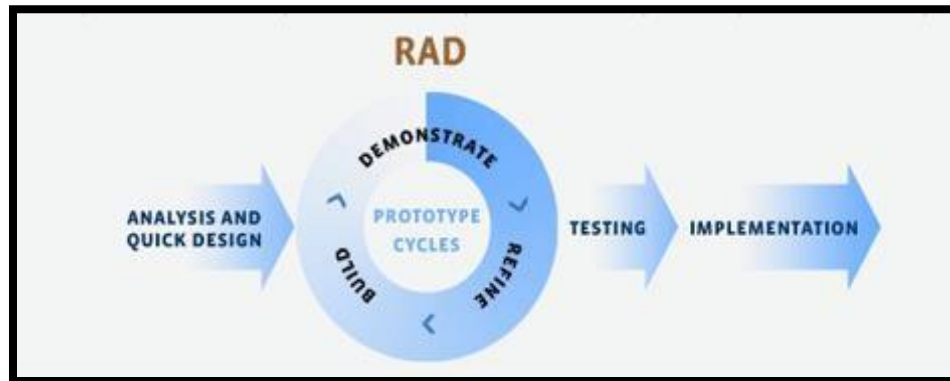


Figure 1.1: Rapid Application Development (RAD) Model

In this project, the methodology that has been chosen is Rapid Application Development (RAD) because it is a flexible method and can be adaptive to the changing requirement of the users with minimal time. Besides, this method also can help the developer to improve the system by getting the feedback and suggestions from the users and develop the best quality system in a short time.

Phase: Analysis and Design

This phase, the developer needs to start collecting all the information and requirement needed to develop and create this project regarding the booking management system especially at Arena Futsal Yayasan Sabah Kota Kinabalu, Sabah. Next, the developer also can start analyzing and review the currently existing system for the references. Therefore, the developer can be more understanding about the requirement of the project and can start on the designing.

Phase: Prototype Cycles

At this phase, there are three steps which are built, demonstrate, and refine that will keep iterate if changes are required. At the development stage, it will be carried out once the analysis phase is done. After the development stage is done, the prototype will be demonstrated to the

stakeholders. This stage is called the demonstration stage. This stage is to ensure that the prototype meets the goals. If the demonstrated prototype does not satisfy, the stakeholders, the refining stage will be undergoing. At the refining stage, if any changes are required, the prototype will be refined in terms of interface design, features, and concept. Then, the prototype is being redeveloped, it will be demonstrated again to make sure the stakeholder's expectation founded. This cycle will keep iterate until the stakeholders satisfied with the final prototype.

Phase: Testing Phase

After that, the testing phase for the prototype will be tested. This is to ensure that the system is functioning as expected. Lastly, the phase is the implementation phase. After completed all the testing, the application will be implemented in the user environment.

1.6 Significance of Project

The Booking system web-based flow is same as the manual booking method, but the user needs to book the futsal court and time with new platforms in website. There is no more walk-in to Arena Futsal office to ask about futsal court or contact via WhatsApp's and call the office. The user needs to go search engine to find web application on their mobile devices and sign-up. This is important for user to check the availability of the futsal court and time. Futsal booking system is different in the traditional way because all player details and booking will be stored in one proper database are a more appropriate and reliable approach compared to the traditional way where all data is written on the paper. Besides that, the price is fixed according to futsal court and time set up on schedule. The user goes to the counter tell the court number and time picked to make payment in cash only, staff can look it in the system will appear the details and prices.

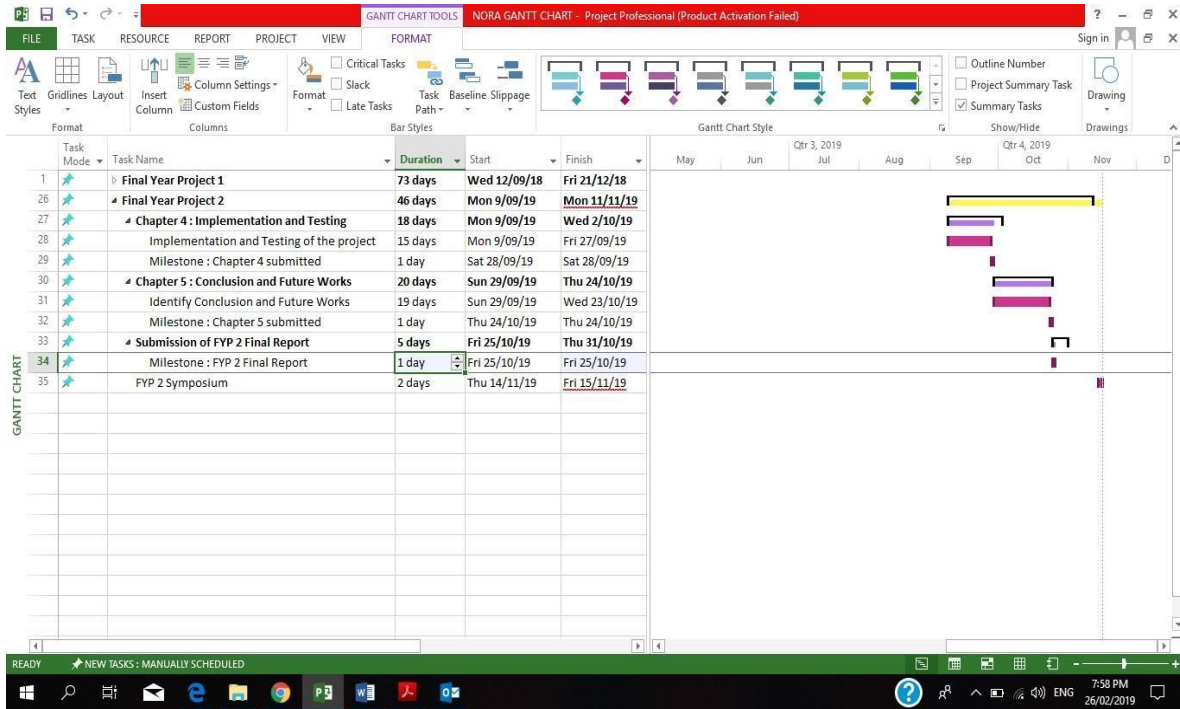
Besides, this system can act as a medium between a futsal player and the staffs in

booking via smartphone or computer. This Arena Futsal Yayasan Sabah Booking system is hoping to be friendly user and low maintenance for the owner of the futsal court.

1.7 Project Schedule

Project Schedule from Final Year Project 1 until Final Year Project 2.





Graph 1.1: Project Schedule TimeLine of FYP 1 and FYP 2

1.8 Expected Outcome

Basically, this system has made the Arena Futsal staff and the player's tasks become easier than before. The system will help the futsal player to check the futsal court availability compared to the manual system where they must go to the Arena Futsal to book the futsal court. The system is a user-friendly system. This can make a user comfortable in using the system. The developer has made the process and function of the system are smooth and effective. The functionality of this system makes it easy to be used by Arena Futsal Yayasan Sabah staffs.

1.9 Report Outline

1.9.1 Chapter 1: Introduction

Chapter 1 describes the introduction of the proposed system inclusive of the problem statement, project scope, aims and objectives, brief methodology, the significance of the project, project schedule, expected outcome, project report outline, and conclusion. The problem statement explains the current problems faced by the user using the old manual method and thus provides the main reason this project must be developed. On the other hand, project scope lists out the limitation of the project to be developed as for the objectives defines the goals of the proposed project and how it can help to solve current problems. The methodology describes the type of methodology used to develop the proposed system which is the Agile Method – Rapid Application Development (RAD) Model while the project schedule describes the milestones and works going to be done within a certain period. The expected outcome describes the expected results of the proposed system

1.9.2 Chapter 2: Literature Review

Chapter 2 discusses the review based on existing methods or similar system which can be referred on any related journals and articles. This chapter will help to provide a clear view of the proposed system. Besides, the limitations and scope of the existing system is mentioned and discusses in this chapter. Several suggestions and guidelines can be found in this chapter.

1.9.3 Chapter 3: Requirement Analysis and Design

Chapter 3 mentioned and discussed more the methodology to be used in the proposed system. The methodology that will be applied is the Agile Method – Rapid Application Development (RAD) Methodology. On the other hand, this chapter also discusses the steps on the way to obtain user requirement and analyze the information obtained to useful information. After the discussion of user requirement analysis, the design for the proposed system, mainly on database design, for example, Entity Relationship Diagram (ERD), Data Flow Diagrams (DFD), Data Dictionary and Flow Charts will be drawn out and show in this chapter.

1.9.4 Chapter 4: Implementation and Testing

Chapter 4 discuss the implementation to take place in the proposed system. Besides, the design layout of the proposed system will be shown. Thus, the structure of the proposed system can show clearer and easier to understand. Also, the importance of testing in developing a proposed system or software is being discussed in this chapter.

1.9.5 Chapter 5: Conclusion and Future Work

In chapter 5, a conclusion regarding the development of the proposed system is made. On the other hand, future enhancement of the developed proposed system is being outlined.