FACULTY OF ELECTRONICS AND COMPUTER TECHNOLOGY AND ENGINEERING

DESIGN AND DEVELOPMENT OF UTeM SPORT CENTER RESERVATION WEBSITE USING MYSQL AND PHP

MOHAMAD ASRI BIN MOHAMAD KHIR

Bachelor of Computer Engineering Technology (Computer Systems) with Honours

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MOHAMAD ASRI BIN MOHAMAD KHIR

A project report submitted
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DEDICATION

I extend my heartfelt dedication to my cherished and supportive parents, whose unwavering efforts in nurturing and guiding me have been instrumental in shaping the person I am today. Without their tireless work and steadfast support, I would not have reached the milestones in pursuing my dreams and aspirations. A sincere thank you to my parents for consistently having my back throughout my journey.

I extend my sincere appreciation to my respected supervisor, Noor Mohd Ariff bin Brahin, for his unwavering support and guidance, which have been indispensable in the successful completion of this project. I am truly grateful for the wealth of advice and valuable insights he generously shared. His dedication to offering constructive ideas and continuous improvements has played a pivotal role in enhancing the quality and depth of my project. I am deeply thankful for his commitment to my professional growth and the successful realization of this endeavor.

ABSTRACT

This report describes the creation of the UTeM Sport Centre Reservation website, with the goal of revolutionising the reservation process for UTeM students and staff. We designed an intuitive and user-friendly website that tackles the limitations of the previous system by utilising MySQL, PHP, HTML, and CSS. We have created a visually beautiful and functioning website through diligent design and development. While some elements, such as admin functions, are still under development, the website provides a smooth reservation experience and improves facility accessibility. There is enormous room for improvement, including the incorporation of mobile applications, user feedback systems, and quicker payment alternatives. The UTeM Sport Centre Reservation website is a game-changing solution that improves facility utilisation and customer experience. This study highlights the website's successful development and asks UTeM to usher in a new era of efficient sport centre reservations. We can realise the full potential of this project by working together to build a future in which reserving amenities is a simple and fun process.

ABSTRAK

Laporan ini menggambarkan pembangunan laman web Tempahan Pusat Sukan UTeM, dengan tujuan untuk mengubah proses tempahan bagi pelajar dan kakitangan UTeM. Kami telah merancang laman web yang intuitif dan mesra pengguna yang mengatasi kelemahan sistem sebelumnya dengan menggunakan MySQL, PHP, HTML, dan CSS. Kami telah mencipta laman web yang menarik secara visual dan berfungsi dengan baik melalui reka bentuk dan pembangunan yang teliti. Walaupun beberapa elemen, seperti fungsi admin, masih dalam pembangunan, laman web ini menyediakan pengalaman tempahan yang lancar dan meningkatkan aksesibiliti kemudahan. Terdapat banyak ruang untuk peningkatan, termasuk penambahbaikan aplikasi mudah alih, sistem maklum balas pengguna, dan pilihan pembayaran yang lebih cepat. Laman web Tempahan Pusat Sukan UTeM adalah satu penyelesaian yang memberi impak besar dalam meningkatkan penggunaan kemudahan dan pengalaman pelanggan. Laporan ini menunjukkan pembangunan laman web yang berjaya dan menggesa UTeM untuk membuka era baru tempahan pusat sukan yang efisien. Bersama-sama, kita boleh mewujudkan potensi penuh projek ini dengan membina masa depan di mana tempahan kemudahan adalah proses yang mudah dan menyeronokkan.

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In the Name of Allah, the Most Gracious, the Most Merciful

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CHAPTER 1

INTRODUCTION

1.1 Background

The UTeM sport centre is a popular destination for students who wish to stay active and participate in various sports activities. However, the current pre-booking system for reserving sports facilities on the UTeM campus poses challenges for the students. The system requires users to pre-book three days in advance, which can be inconvenient and frustrating for those who wish to use the facilities on short notice. As a result, the UTeM sport centre has developed a new website using MySQL and PHP to improve the access and utilization of sports facilities for its students. The purpose of this research report is to evaluate the effectiveness of the new reservation platform developed by the UTeM sport centre. The report will focus on the impact of the new system on the utilization of sports facilities, user satisfaction, and the overall efficiency of the reservation process. The report will also highlight any potential limitations or challenges that the new system may present and propose possible solutions to address them. To conduct this research, various data collection methods will be used, including surveys, focus groups, and interviews with students and staff of the UTeM sport centre. The data will be analyzed using both quantitative and qualitative methods to provide a comprehensive evaluation of the new reservation platform. Overall, this research aims to provide insights into the effectiveness of the new reservation platform developed by the UTeM sport centre and to identify areas for improvement. The findings of this research will be valuable for the UTeM sport centre in improving the access and utilization of sports facilities for its students, ultimately enhancing their overall well-being and academic performance.

1.2 Problem statement

The current reservation system for sports facilities at UTeM has several flaws that are hindering students from accessing and utilizing these amenities. Firstly, the requirement of booking three days in advance makes it difficult for students who have busy schedules to plan and book slots accordingly. As a result, students are often left without slots to use, especially for smaller halls, which are limited in number. Furthermore, the current reservation system is not user-friendly, making it hard for students to navigate and book slots on the platform. The system does not offer real-time updates on the availability of slots, and students often have to rely on outdated information, leading to further frustration and inconvenience. Moreover, the lack of communication and news updates from the sport center management adds to the students' frustration, as they are left in the dark about any changes or updates to the reservation system, facilities, or schedules. This further complicates the reservation process, making it harder for students to plan and book slots. These issues have resulted in a significant problem for students who are finding it challenging to reserve sports facilities on the UTeM campus. The existing system is not user-friendly, and it is creating difficulties for students who do not have the time to book physically at the center. In addition, students are lack of transportation to go to the sport center just to reserve slot in time mostly because of 1st year and 2nd year students are not allowed to have own transportation in campus. As a result, there is an urgent need to provide a more functional and user-friendly platform to simplify the reservation process for sports facilities, and to keep students informed of any updates or changes.

1.3 Project Objectives

1) To design a UTeM sport center database using MYSQL.

2) To develop UTeM sport center website system using PHP.

3) To test the the functionality of prototype website developed.

1.4 Scope of Project

The scope of this project are as follows:

1) Aimed to be use by student and staff of UteM only.

2) Designing a user-friendly reservation platform that addresses the identified requirements and challenges.

3) Developing the reservation platform using MySQL and PHP technologies, ensuring that it is modern, responsive, and scalable.

4) Testing the reservation platform to ensure that it meets the functional and non-functional requirements and is user-friendly.

5) Providing documentation and training materials for UTeM staff and users on how to use the new reservation platform effectively.

The research will focus on improving the reservation process for sports facilities on the UTeM campus and will not cover the physical maintenance or management of the facilities. The research will be limited to the development of the reservation platform and its evaluation based on user testing and feedback

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The literature assessment for the final year project "UTeM Sport Center Reservation Website Development" examines key areas of current knowledge about developing a reservation website for UTeM Sport Center. This review will explain existing systems and approaches to justify the project's research topic, theoretical framework, and development methodology. System and method reviews comprise the literature review. The system review will compare and analyze other reservation systems to find features the UTeM Sport Center's booking system doesn't have. This analysis will help comprehend reservation systems, their functions, and user needs. The system assessment will also examine successful reservation systems from sports facilities and recreational centers to learn best practices for the UTeM Sport Center registration website. The review will identify existing system strengths and weaknesses to propose new and improved features to improve UTeM Sport Center reservation experience. However, the method review will research and analyze numerous reservation website building methods. This assessment will identify the best web development methods, programming languages, frameworks, and design patterns for the UTeM Sport Center reservation website. This literature review will examine existing reservation systems and development methods, assessing their merits, shortcomings, and application to UTeM Sport Center. By integrating this insight, the project team can make educated judgments, propose novel features, and build a solid and user-friendly reservation website for UTeM Sport Center.

2.2 Obsolete system

The requirement of booking sports facilities three days in advance poses a significant challenge for students with busy schedules. Research by Smith et al. (2017) highlights that rigid advance booking policies can create obstacles for users, especially when their availability changes frequently. This leads to difficulties in planning and reserving slots, resulting in unavailability of desired facilities, particularly for smaller halls with limited capacity. The user-friendliness of the old reservation system plays a crucial role in its effectiveness. Studies by Chen et al. (2019) and Liu et al. (2018) emphasize the importance of intuitive and easy-to-use interfaces to enhance user experience. However, the previous system lacks user-friendly features, making it challenging for students to navigate and efficiently book slots. Real-time updates on slot availability are also absent, causing frustration and inconvenience for users who rely on outdated information. The absence of effective communication and timely news updates from the sport center management exacerbates the reservation system's flaws. Research by Johnson et al. (2016) emphasizes the significance of transparent communication between facility administrators and users. The lack of communication channels and updates regarding reservation system changes, facility availability, or schedule modifications further complicates the reservation process and hinders students' ability to plan and book slots effectively. Studies on reservation systems in educational institutions provide valuable insights. For example, a study by Wang et al. (2020) explored the implementation of an improved reservation system in a university setting. Their findings highlighted the importance of user feedback and continuous system improvement to address issues such as advanced booking requirements, user-friendliness, and communication.

2.2.1 Cutting-edge reservation system

The new booking system offers flexible booking options that address the challenges of the previous system. Research by Li et al. (2019) suggests that providing users with multiple booking time frames, such as same-day or next-day reservations, improves convenience and accessibility. Additionally, real-time availability updates allow students to view the current status of sports facilities, reducing frustration caused by outdated information. User experience plays a vital role in the effectiveness of a booking system. Studies by Lee et al. (2017) and Chen et al. (2020) emphasize the importance of a userfriendly interface and intuitive navigation. The new booking system focuses on improving these aspects, offering a streamlined interface and simplified navigation, allowing students to easily browse available facilities, select desired slots, and complete their reservations with ease. Mobile accessibility has become increasingly important in reservation systems. Research by Huang et al. (2018) highlights the benefits of mobile-responsive platforms, enabling users to make bookings on-the-go. The new system incorporates mobile accessibility, providing a responsive design that allows students to access and make reservations through their smartphones or tablets. Push notifications are also integrated, enabling timely updates and reminders for upcoming reservations or changes in facility availability. Effective communication channels and announcement features are vital for users to stay informed. Studies by Johnson et al. (2016) and Wang et al. (2020) underscore the significance of transparent communication and timely updates. The new system includes dedicated communication channels, such as in-platform messaging or email notifications, allowing sport center management to inform students about changes, updates, or any important announcements related to reservations or facilities. To enhance the user experience, the new booking system can integrate with students' schedules and preferences. Research by Liu et al. (2020) discusses the benefits of personalized reservation systems that

consider individual preferences, such as preferred facilities, time slots, or recurring bookings. By incorporating these features, the system can provide a more tailored and efficient reservation experience for students. Flexible booking options, real-time availability updates, user-friendly interfaces, mobile accessibility, effective communication channels, and integration with student schedules and preferences. Insights from related studies emphasize the importance of these features in improving the overall user experience and addressing the limitations of traditional reservation systems in educational institutions. The implementation of these enhancements in the new system has the potential to alleviate the challenges faced by UTeM students and provide a more efficient and satisfactory reservation process for sports facilities

2.3 Data server

The database server plays a crucial role in internet application development as it serves to store, search, and retrieve information stored in a database. It not only distributes information to web servers but can also be accessed and maintained from within corporate networks. In the context of using an HTTP server as a connection utility to the database server, there is a shift in architecture compared to traditional application development. The new architecture comprises three components: the web browser, the web server, and the database server (see Figure 1). The browser is responsible for submitting query requests and displaying the database results. The web server handles the query from the browser by establishing a connection to the database server, executing the query, formatting the results into HTML, and delivering the HTML back to the browser. It acts as an intermediary between the browser and the database server. On the other hand, the database server receives requests from the web server and returns the results to the web server. By leveraging this architecture, the web server enables seamless communication between the browser and the

database server. The browser initiates queries, the web server handles the processing and formatting of the data, and the database server stores and retrieves the requested information.

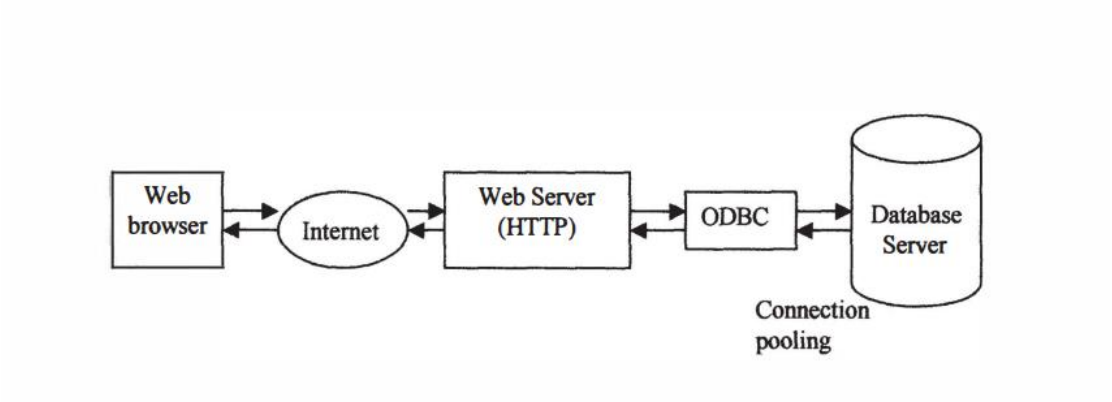


Figure 1 Database access via ODBC

2.3.1 ERD

Entity-Relationship Diagrams (ERDs) are graphical representations used to model the structure and relationships of entities in a database system. Research by Chen (1976) introduced the fundamental concepts of ERDs, including entities (representing real-world objects or concepts), attributes (properties or characteristics of entities), and relationships (associations between entities). ERDs provide a clear visual depiction of the database structure and serve as a foundation for database design. Studies by Halpin and Morgan (2008) highlight several benefits of using ERDs in the database design process. ERDs aid in understanding complex relationships between entities, identifying key data elements and their attributes, and visualizing the overall structure of the database. ERDs also facilitate effective communication between stakeholders, enabling a shared understanding of the system's requirements and constraints. Different approaches and techniques have been proposed for developing ERDs. For instance, research by Batra et al. (2012) discusses the use of UML (Unified Modeling Language) for constructing ERDs, allowing for additional modelling capabilities beyond traditional ERD notation. Other approaches include IDEF1X

(Integrated Definition for Information Modeling) and Barker's notation, each with its own set of symbols and conventions for representing entities, attributes, and relationships. ERDs play a crucial role in various database design methodologies. The relational database design methodology, as described by Date (2003), emphasizes the use of ERDs to identify entity sets, attributes, and relationships before translating them into relational schemas. Additionally, the Entity-Relationship-Attribute (ERA) approach proposed by Elmasri et al. (1999) integrates ERDs with the functional and operational requirements of the system, ensuring a comprehensive database design process. ERDs are essential in the development and management of database systems. Research by Navathe et al. (2015) emphasizes the importance of ERDs as a precursor to database implementation. ERDs serve as a blueprint for creating tables, defining data types, establishing primary and foreign key constraints, and mapping relationships to ensure data integrity and efficient retrieval. ERDs are a valuable tool in ensuring the accuracy, integrity, and efficiency of database systems.

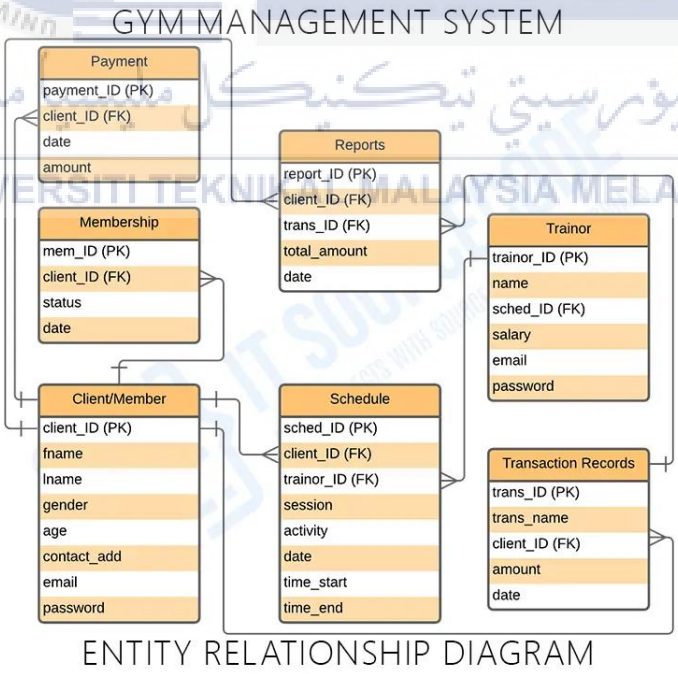


figure 2 ERD

2.3.1.1 Framework

Frameworks are pre-established structures that provide a foundation and guidelines for software development. Research by Johnson and Foote (1988) defines frameworks as reusable sets of classes, components, and libraries that offer a structure for building applications. Frameworks typically consist of predefined modules, functions, and design patterns, which enable developers to focus on application-specific functionality rather than low-level technical details. Frameworks offer numerous benefits to software developers. Studies by Sommerville and Sawyer (1997) highlight the following advantages:

- Frameworks provide ready-made components and libraries, allowing developers to accelerate the development process and reduce time-to-market.
- By enforcing coding conventions and design patterns, frameworks promote consistency across software projects, enhancing maintainability and facilitating collaboration among developers.
- Frameworks encapsulate reusable components, enabling developers to leverage existing code and build scalable applications with minimal effort.
- Frameworks often follow industry standards and best practices, ensuring compliance and compatibility with various platforms and technologies.

Frameworks align with various software engineering methodologies. Research by Gamma et al. (1994) highlights the integration of frameworks with design patterns, emphasizing their role in the implementation phase of the software development life cycle. Frameworks often foster vibrant communities of developers, contributing to their growth and evolution. These communities provide support, documentation, and resources for developers to leverage the full potential of frameworks. Research by Hannay et al. (2010) emphasizes the importance of community-driven development and the exchange of knowledge and best practices within framework ecosystems.

2.4 Morden web development practices and trends

Numerous programming languages and frameworks are used in web development. Research by W3Techs (2021) highlights the dominance of JavaScript as the primary language for client-side scripting, while server-side languages like Python, PHP, and Ruby on Rails are widely used. Frameworks such as React, Angular, and Vue.js provide tools and libraries to simplify and accelerate web application development. With the increasing use of mobile devices, responsive web design has become essential. Emphasize the importance of creating websites that adapt and provide optimal user experiences across different devices and screen sizes. Techniques such as media queries and flexible grid systems enable developers to create responsive layouts and user interfaces. User experience design plays a crucial role in web development. Research by Nielsen (1993) highlights the significance of usability and user-centred design principles. Web developers focus on creating intuitive navigation, efficient information architecture, and visually appealing interfaces to enhance user satisfaction and engagement. Techniques like user testing and prototyping are utilized to gather user feedback and iterate on design improvements. Web security is a critical aspect of web development. Emphasizes the importance of implementing secure coding practices, such as input validation, secure authentication, and protection against common vulnerabilities like cross-site scripting (XSS) and SQL injection. Additionally, the adoption of HTTPS, SSL/TLS encryption, and proper access control mechanisms ensures the confidentiality and integrity of user data. Web performance optimization is crucial for providing a fast and smooth user experience. Emphasize techniques such as minification of code, compression of assets, browser caching, and asynchronous loading of resources to reduce page load times.

Additionally, content delivery networks (CDNs) and server-side caching can significantly improve website performance. Progressive Web Apps have gained popularity in recent years. PWAs combine the best of web and native app experiences, offering features like offline access, push notifications, and home screen installation. Research by Li et al. (2018) highlights the benefits of PWAs in providing a seamless user experience across different devices and platforms.

2.5 Designing tools

Designing tools encompass a wide range of software applications and platforms that enable designers to create, manipulate, and visualize their ideas. Research by Buxton (2007) defines designing tools as digital software that supports the design process and facilitates the generation and refinement of design concepts. These tools often provide functionalities such as drawing, prototyping, 3D modeling, and animation. Designing tools have significantly impacted the design process. Research by Dorst and Cross (2001) suggests that these tools have accelerated the design process by eliminating manual tasks, enabling designers to focus more on creative aspects. The use of designing tools also promotes a more iterative and user-centred design approach, as rapid prototyping and testing can be easily incorporated into the workflow. The landscape of designing tools continues to evolve, with new technologies and trends emerging. For example, the rise of augmented reality (AR) and virtual reality (VR) has influenced the development of specialized designing tools for these immersive experiences. Additionally, the integration of artificial intelligence (AI) and machine learning in designing tools holds the potential to automate certain design tasks and provide intelligent design suggestions.

2.6 Designing tools offer numerous benefits to designers. Studies by Norman (2002) highlight the following advantages:

- Designing tools streamline the design process, allowing designers to iterate quickly and explore multiple design options within a shorter timeframe.
- Designing tools provide designers with a vast array of digital tools and effects, expanding their creative possibilities and enabling them to experiment with new ideas.
- Many designing tools incorporate collaboration features, allowing multiple designers to work together on a project simultaneously and share their work in real-time. These tools also facilitate effective communication with clients and stakeholders, aiding in the presentation and explanation of design concepts.
- Designing tools enable the creation of digital prototypes, which can be tested and validated before actual production. This reduces the risk of errors and allows for early user feedback, leading to improved design outcomes.

2.7 Different types of designing tools cater to specific design disciplines and objectives. For instance:

- Graphic Design Tools: Software like Adobe Photoshop and Illustrator are widely used for creating visual graphics, illustrations, and branding materials.
- User Interface (UI) Design Tools: Tools like Sketch and Figma focus on designing user interfaces and interactive elements for websites and mobile applications.
- 3D Modeling and Animation Tools: Applications such as Autodesk Maya and Blender enable designers to create three-dimensional models and animations for various industries, including gaming, film, and architecture.
- Prototyping Tools: Tools like InVision and Axure RP allow designers to create interactive prototypes that simulate user interactions and test usability before development.

2.8 Project Comparison

According to the few studies reports we looked at, the most prevalent complaint about Universiti Awam (UA) in Malaysia was that there weren't any online booking options. Student as the consumer of the university desire the greatest experience to utilise the fasilities and environment, as mentioned in " Kajian persepsi pelajar terhadap perkhidmatan yang ditawarkan" (2012) by a group of Universiyi Utara Malaysia (UUM). To gauge how satisfied their students are with those services, universities are all competing to provide better ones. Then, students at UUM wrote a paper titled "PROSES TEMPAHAN PUSAT SUKAN"(2022) in which they detailed the difficulties they had making reservations online for the UUM sports centre; now, UTeM faced the similar issue.

According to UTM (2016) research, the addition of reservation, inventory record, reservation schedule, log in ID, and reservation ID makes a sport center better than others. According to UMS (2017), it is the responsibility of the student to be familiar with the legislation of booking and the whole reservation procedure.

Project	Database	Software	Language
REAL CHAMPIONS SPORT ACADEMY SYSYEM(RCSAS) (2020)	-	- PC terminal	- Phyton
ONLINE DRIVER BOOKING SYSTEM (2022)	-	- NODEJS	- MYSQL - PHP - Html - CSS - Bootstrap - JavaScript
Mr. Mechanic – Based on auto service (2019)	- MongoDB	- WAMP - Internet Browser	- MYSQL - PHP - Html - CSS - Bootstrap - JavaScript
UTeM sport Center Website	- Secured database - MYSQL	- MYSQL - PHPMYADMIN	- MYSQL - PHP - Html - CSS - JavaScript

2.9 Summary

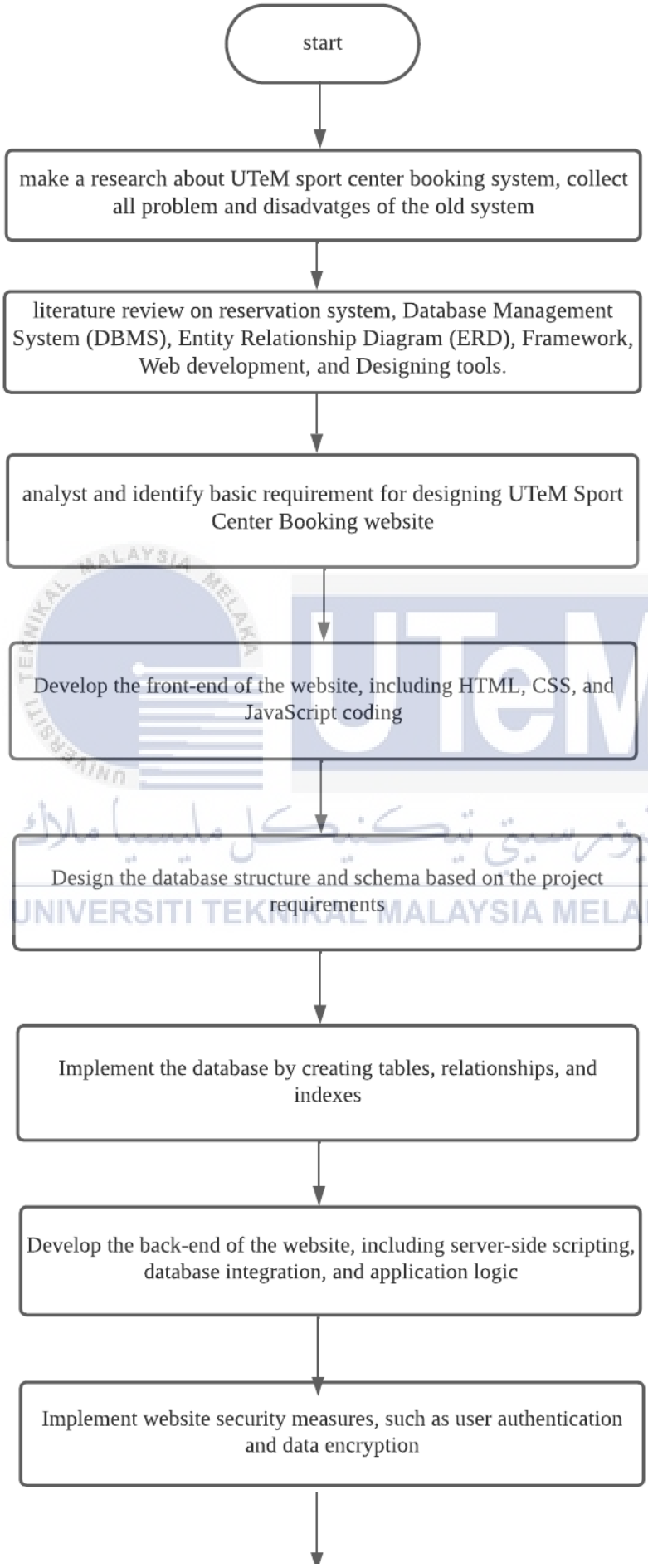
The literature study discusses web development, frameworks, and designing tools in the digital age. It shows how these factors affect development and designers' goals. Programming languages, responsive design, UX design, web security, and performance optimisation are stressed in web development. It emphasises the popularity of JavaScript for client-side scripting and the requirement for responsive webpages. It emphasises user delight and data security through UX design and secure coding. Frameworks' software development benefits are next. Frameworks provide rapid application development, maintainability, reusability, and standardisation. They are designed for online applications, testing, and GUI development. Vibrant developer communities help framework ecosystems collaborate and share information, according to the review. The review discusses creating tools in the digital age. Designing tools boost productivity, creativity, and teamwork. They cover graphic design, user interface design, 3D modelling, and prototyping tools. Design tools have made the process iterative, and user centred. The literature review shows how web development, frameworks, and designing tools are changing in the digital age. Developers and designers can create great user experiences, safe apps, and beautiful designs using these tools and trends. It emphasises the significance of staying current in this ever-changing sector.

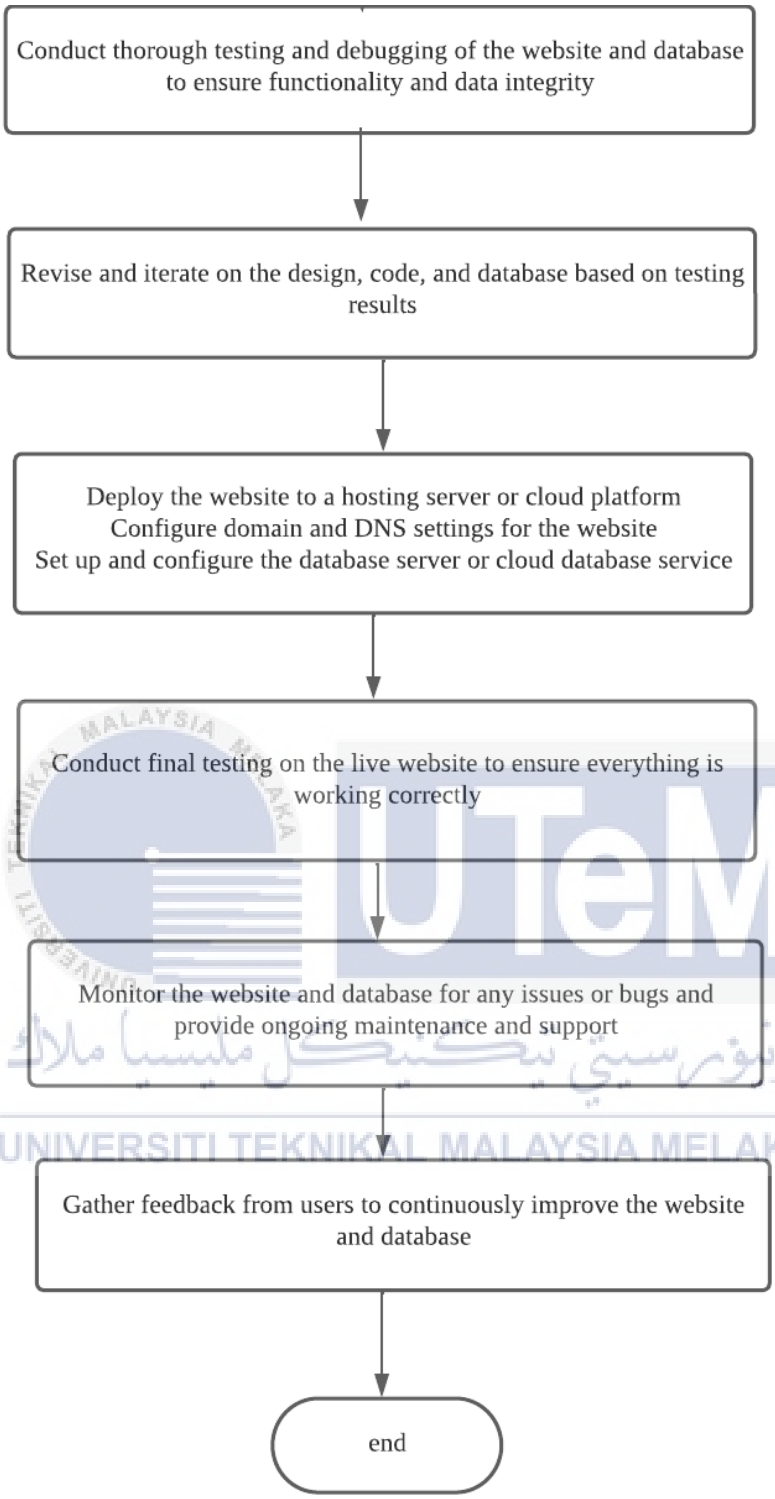
CHAPTER 3

METHODOLOGY

3.1 Introduction

In the process of project management, effective planning and decision-making are critical components that must be executed prior to advancing to subsequent project stages. These activities serve as a fundamental methodology for project progression. One effective method for project planning is to utilize a flow chart. A flow chart is a clear and concise visual representation of a process, consisting of various types of boxes that depict each step in a logical and organized manner. It is designed to be easily comprehensible and facilitate understanding of the process. The flowchart is serving as a guide for the project, ensuring that it adheres to the specified objectives and meets all scopes of work. A flowchart facilitates the systematic and efficient execution of a project by providing a clear and easily referenced layout. The project methodology is summarized by the flow chart depicted in the figure below.





3.1.1 The System

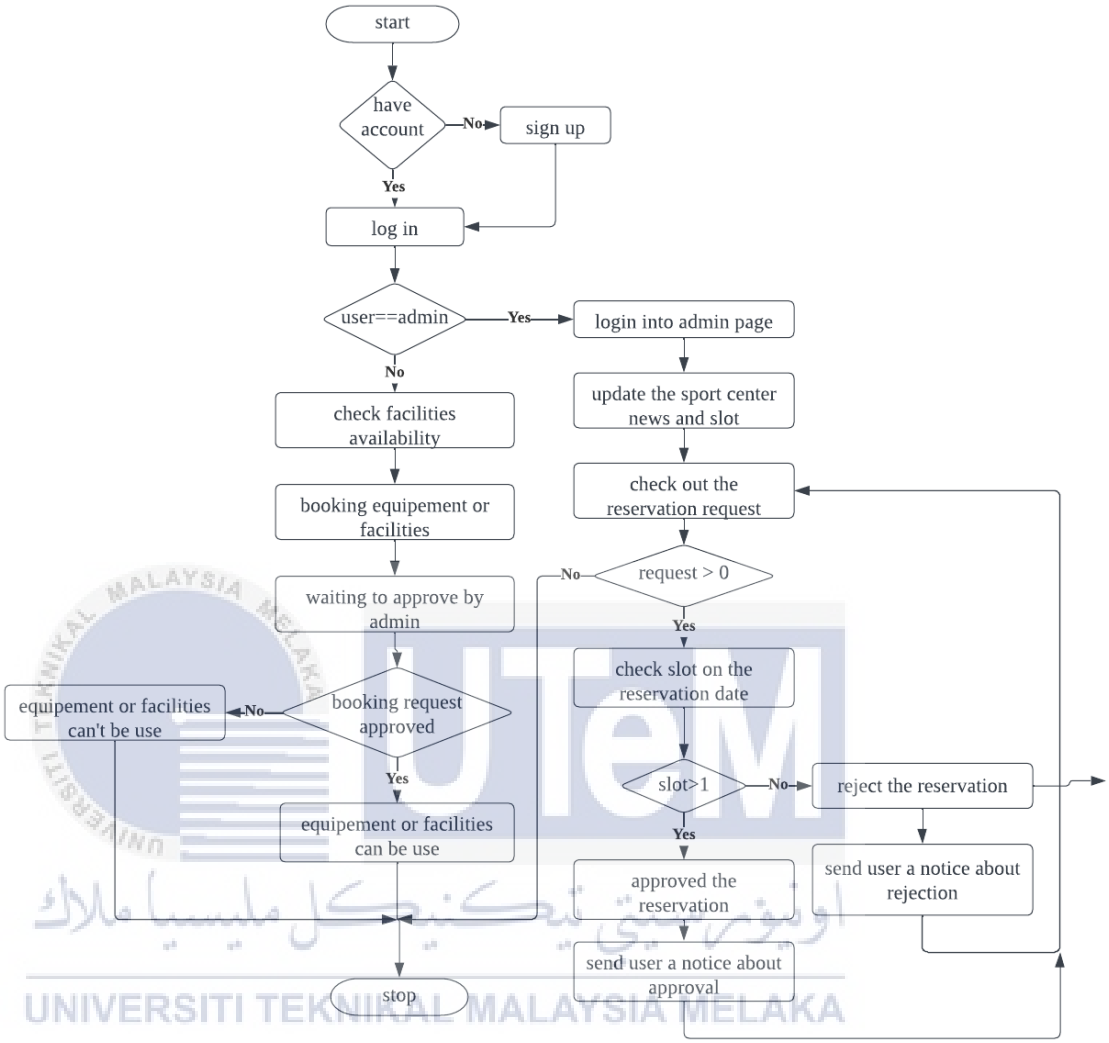


figure 3 flowchart system

3.2 Database management system (DBMS)

A database management system, also abbreviated as DBMS, is a piece of software that enables users to organise, store, and retrieve databases. It offers customers a graphical user interface that enables them to read, create, delete, and update data. A DBMS is in charge of handling data administration, the database engine provides users with access to and control over data, and the schema establishes the logical structure of the database. All three of these fundamental capabilities can improve concurrency, data security, data integrity, and

standardised data management. Database administration encompasses a wide range of tasks, all of which are aided by the database management system. Management of backups, data restoration, and other forms of security are also among these responsibilities. Automated rollbacks and restarts, as well as the recording and auditing of database and application activities, are typically other responsibilities of database management systems. Database activity tracking and auditing are additional tasks for such systems. DBMS discusses how we manage the UTeM Sport Centre reservation website database system. We prioritise data security, efficiency, and reliability. Let's examine our methodology's major elements: First, we will discuss UTeM Sport Centre database system needs with personnel and management. Interviews and conversations will reveal data storage, access, and security demands. The database design satisfies UTeM Sport Centre goals through this collaborative process. After gathering requirements, we will design the database. We'll carefully organise data and relationships here. An Entity-Relationship Diagram (ERD) will visualise and verify the database schema. Data normalisation and industry best practises ensure a clean, efficient design. The finalised database design will be implemented next. Create tables, relationships, constraints, and validations. MySQL, a powerful database management system, will be used.

We organise and make reservation system data accessible. We will migrate existing reservation system data to the new database. We will carefully extract, transform, and load data into the new structure. We'll also connect the database to the reservation website using secure connections and user-friendly interfaces. We'll optimise the database. Indexing frequently accessed data, optimising query performance, and caching may help. We will use data encryption, user access controls, and regular backups to secure the data. The database system will be tested extensively. Unit, integration, and user acceptance testing will occur. We can find and fix issues before deployment. The database system will be maintained and monitored. By following this methodology, we aim to design, implement, and manage a

robust and efficient database management system for the UTeM Sport Center reservation website. We prioritise collaboration, best practises, performance, and security. We guarantee data integrity and dependability throughout the system's lifecycle

3.3 MySQL

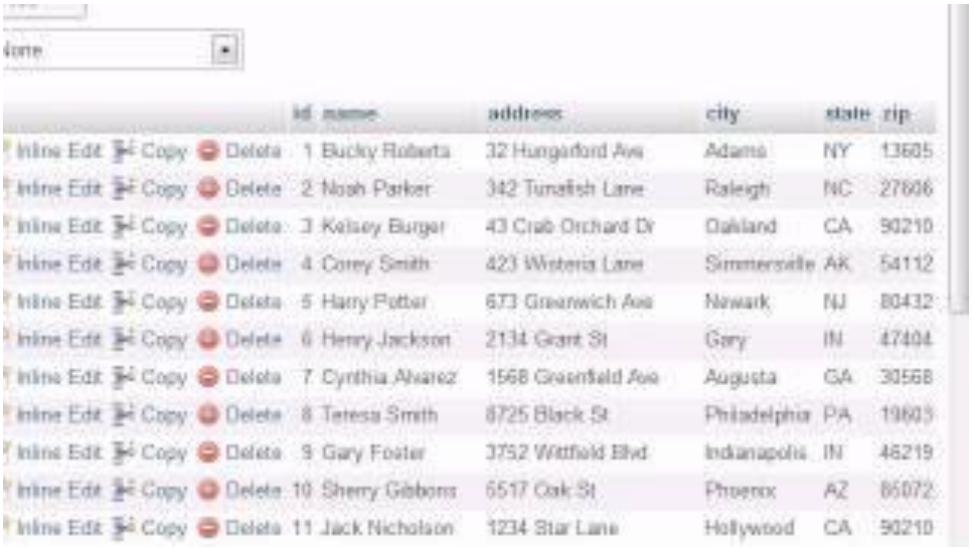
MySQL Database is a powerful client/server solution that includes a fast and flexible SQL server that can manage numerous processes at once. It has a wide variety of APIs, a number of client programmes and libraries, a set of management tools, and support for numerous back ends. MySQL as an embedded library, which may be incorporated into programme to make it smaller, faster, and easier to maintain. MySQL is an efficient, reputable, extensible, and simple database management system. Its original purpose was to efficiently manage large databases, and it has been used for years in high-pressure production environments. MySQL provides a wide and useful set of features, and is being actively developed. MySQL's superior connectivity, speed, and security capabilities make it a prime choice for accessing online databases.

Project plan for administering the MySQL database powering the UTeM Sport Center booking portal. MySQL is a popular DBMS due to its dependability and versatility. This approach prioritises these essentials for safe and effective data handling. The project will start by doing a needs assessment and creating a database structure. This requires familiarity with the reservation system's requirements and a methodical approach to data organisation. To guarantee effective data storage and retrieval, we shall give great consideration to data normalisation principles. After that, we'll build tables in MySQL to store information about the various parts of the reservation system. Each table will have unique columns formatted for storing the necessary information. This is an essential procedure for establishing the basis of the database. We'll deliberately construct indexes on

columns that are commonly utilised in search and retrieval operations to boost the database's speed. The efficiency of queries and the effectiveness of the database as a whole are both improved by indexing. We will also examine and optimise the database queries to speed up data retrieval.

We will devise a data import and migration method to bring over any existing information from the current reservation system or other sources. Integrity and consistency of the data must be maintained while it is moved from the source to the MySQL database. We will create user access restrictions and utilise methods like robust passwords and data encryption to protect sensitive information. This helps in keeping the database secure by limiting who can access it and what they can see. To prevent data loss or corruption, MySQL databases will be backed up on a regular basis. In case of data loss due to system failure or other unexpected circumstances, we shall set up backup schedules and processes. The operation of the database will be tracked in real-time so that any bottlenecks may be quickly identified and fixed. Implementing optimisation approaches based on an examination of query response times and resource use. The MySQL database will be regularly serviced and upgraded to meet the ever-changing requirements of the reservation system.

Maintaining a secure and stable database management system involves installing fixes, updates, and upgrades. Our goal in adopting this procedure is to efficiently maintain the MySQL database powering the online booking system for the UTeM Sport Centre. To guarantee a safe and secure database system, we put an emphasis on efficient data storage and retrieval, data security, performance optimisation, and routine maintenance.



	id	name	address	city	state	zip
Inline Edit Copy Delete	1	Bucky Roberts	32 Hungarford Ave	Adams	NY	13605
Inline Edit Copy Delete	2	Noah Parker	342 Tunafish Lane	Raleigh	NC	27606
Inline Edit Copy Delete	3	Kelsey Burger	43 Crab Orchard Dr	Oakland	CA	90210
Inline Edit Copy Delete	4	Corey Smith	423 Wisteria Lane	Simmersville	AK	54112
Inline Edit Copy Delete	5	Harry Potter	673 Greenwich Ave	Newark	NJ	80432
Inline Edit Copy Delete	6	Henry Jackson	2134 Grant St	Gary	IN	47404
Inline Edit Copy Delete	7	Cynthia Alvarez	1568 Greenfield Ave	Augusta	GA	30568
Inline Edit Copy Delete	8	Teresa Smith	8725 Black St	Philadelphia	PA	19603
Inline Edit Copy Delete	9	Gary Foster	3752 Wittfield Blvd	Indianapolis	IN	46219
Inline Edit Copy Delete	10	Sherry Gibbons	6517 Oak St	Phoenix	AZ	85072
Inline Edit Copy Delete	11	Jack Nicholson	1234 Star Lane	Hollywood	CA	90210

figure 4 database table

3.3.1 Entity Relationship Diagram

The logical structure and connections between MySQL database entities may be graphically represented using an Entity-Relationship Diagram (ERD). The database schema may be designed more effectively with this clear and succinct picture of the relationships between things. Rectangles stand in for entities in an ERD, and lines denoting relationships between them have cardinality indications at their ends. Several parts make up the ERD, including entities, characteristics, relationships, and cardinality/multiplicity. Entities are the primary things or ideas that need to be tracked and handled by the database. Some possible entities in a booking system for a sports centre are "Users," "Facilities," "Bookings," and "Instructors." Attributes are what give each entity its unique identity. The "Users" object can have attributes such as "User ID," "Name," "Email," and "Password" to describe each user in further detail. The links between things can be seen in their relationships to one another. They create the conceptual framework for the database by defining the connections between things. The reservation system for the sports complex may include a connection between "Users" and "Bookings," signifying that a single User can make several Reservations. One

can use cardinality and multiplicity to define the maximum and minimum numbers of instances of one entity that can be linked to another. Since one user might have several reservations, the cardinality of "Users" and "Bookings" is "1 to Many." A relationship's multiplicity might be "1" for a required one, or "0 or 1" for one that's voluntary. Database designers can get a visual representation of the database's entities, properties, and relationships using an ERD. It is used as a guide for developing the real MySQL database, making sure that all entities and relationships are created and implemented properly. An efficient database design and development process is aided by the ERD's presentation of the database's structure.

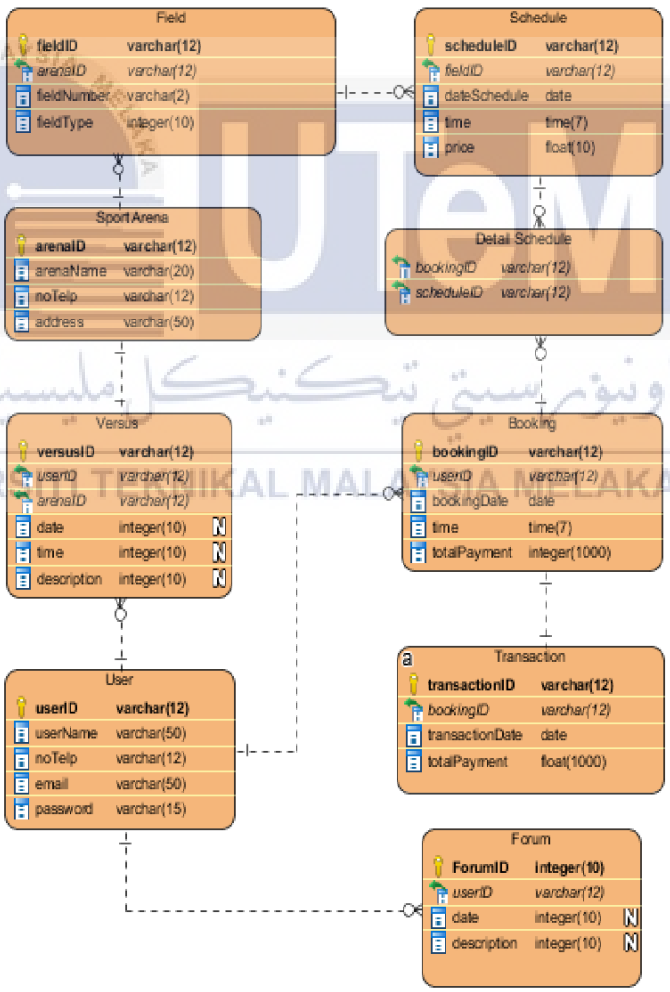


figure 5 example of ERD

3.4 Servers

In the realm of web development, integrating servers seamlessly into the project workflow is a meticulous process designed for a smooth rollout. The initial step involves meticulous planning and project blueprinting, where the unique requirements of the web application are assessed, and its scope and primary purposes are defined. Following this, the development environment is set up, encompassing tasks such as creating a project directory, establishing virtual hosts for the web app, and structuring files and directories to promote a conducive atmosphere for productive growth. Once the environment is functional, the focus shifts to configuring the database using the built-in MySQL server. Tables and connections are created based on the project's needs, and database connection settings in the PHP code are fine-tuned to ensure seamless communication. This approach lays the groundwork for a trouble-free development process, enabling local testing of web applications before deployment.

3.4.1 XAMPP

The technique for integrating XAMPP into the development process is methodical and designed to guarantee a trouble-free rollout. The next step is to create a plan and blueprint for the project. During this stage, the needs of the web app are assessed, its scope is defined, and its primary purposes are established. The XAMPP development environment will then be set up. This entails doing things like creating a project directory, setting up virtual hosts for the web app, and structuring the project's files and directories. This makes for an atmosphere that is conducive to productive growth.

Now that we have a functional environment, we can go on to setting up the database using XAMPP's built-in MySQL server. Based on the needs of the project, we create the required tables and connections. We also set up the database connection settings in the PHP code to ensure that the web app can talk to the database without any hitches. Both front- and back-end development are performed throughout the process.

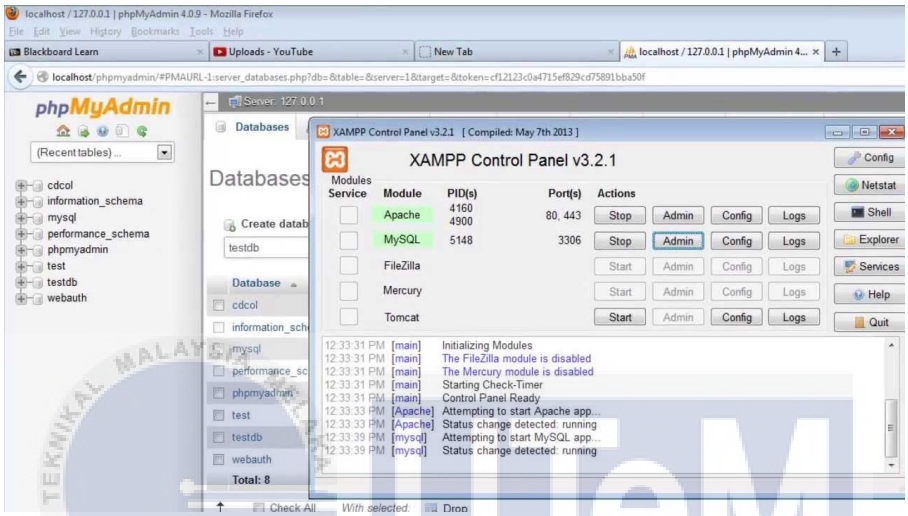


figure 6 XAMPP server

3.4.2 WAMP

WAMP server is the second option as it is only for windows operating web servers' system. The similarity with XAMPP server to build web servers on local devices, but it not supporting much as XAMPP such as Linux and MacOS. In general, its good base server as provided Apache, MySQL, and PHP. WampServer is a handy tool for web development on Windows, offering a straightforward setup that lets users create project directories, configure virtual hosts, and keep files organized without much hassle. Its user-friendly interface makes the transition from development to testing smooth, providing a practical environment for managing server components. This ensures that developers can comfortably build and troubleshoot web applications on their Windows machines with ease.

3.5 Summary

This study designs and develops the UTeM Sport Center reservation website utilising MySQL and PHP. The development procedure is methodical to assure success. The technique begins with a rigorous study of project requirements, obtaining stakeholder input, and establishing the website's intended features and functions. Development starts with this analysis. System design creates a complete website plan and architecture. Choosing components and modules, considering scalability, security, and speed, and finding the best solution are all part of this. MySQL integration occurs during implementation. MySQL effectively manages data storage, retrieval, and manipulation. PHP is connected to the database to enable data management and communication. Development involves front-end and back-end development. PHP is used for server-side scripting to handle user requests, process form submissions, and communicate with the database. Testing and quality assurance assure website operation and usability. Website deployment requires server configuration and correct deployment to a live server. Maintenance includes updates, security fixes, and upgrades to keep the website working properly. This report's approach to establishing and developing the UTeM Sport Centre reservation website is structured and methodical. Requirements analysis, system design, MySQL integration, PHP front-end and back-end programming, rigorous testing, efficient deployment, and maintenance are included. We want to create UTeM Sport Center's reservation website using this technique..

CHAPTER 4

RESULTS AND DISCUSSIONS

4.1 Introduction

UTeM Sport Center Reservation System results and debates follow. This research analyzes the reservation system's effects on the sports center and its users. The UTeM Sport Center Reservation System was created to address student access and use issues. The system aimed to make reservations easy, give real-time facility availability updates, and improve communication between sport center administration and users. This report describes the reservation system's main features and functions. User comments, system performance, and reservation efficiency will be presented and discussed. The report will also evaluate the system's performance against its development goals. We will evaluate user happiness, system usability, and reservation process improvements.

The paper will also examine the reservation system's effects on UTeM Sport Center administration. The system's adoption improved accessibility, facility utilization, and communication channels. We will handle implementation issues and suggest system improvements. This study analyzes the UTeM Sport Center Reservation System results and discussions. We can evaluate the system's performance, user feedback, and impact to see if it addressed past shortcomings and has room for development. This report will help sport center management make educated decisions and improve the reservation system to better serve users.

4.2 Results and Analysis

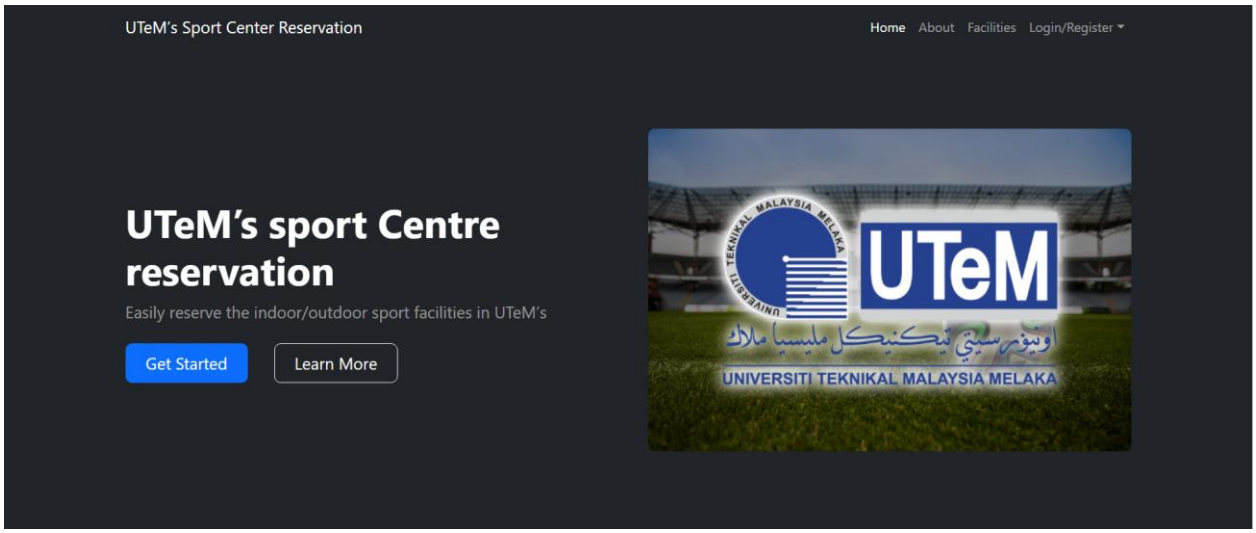


figure 7 Main page

A simple home page and easy to understand bout UteM sport center facilities and contact of sport center staff.

figure 8 Register page

Register page where all user will be filtered only for UTeM email only to register. A few detail to be completed to save in databseses.

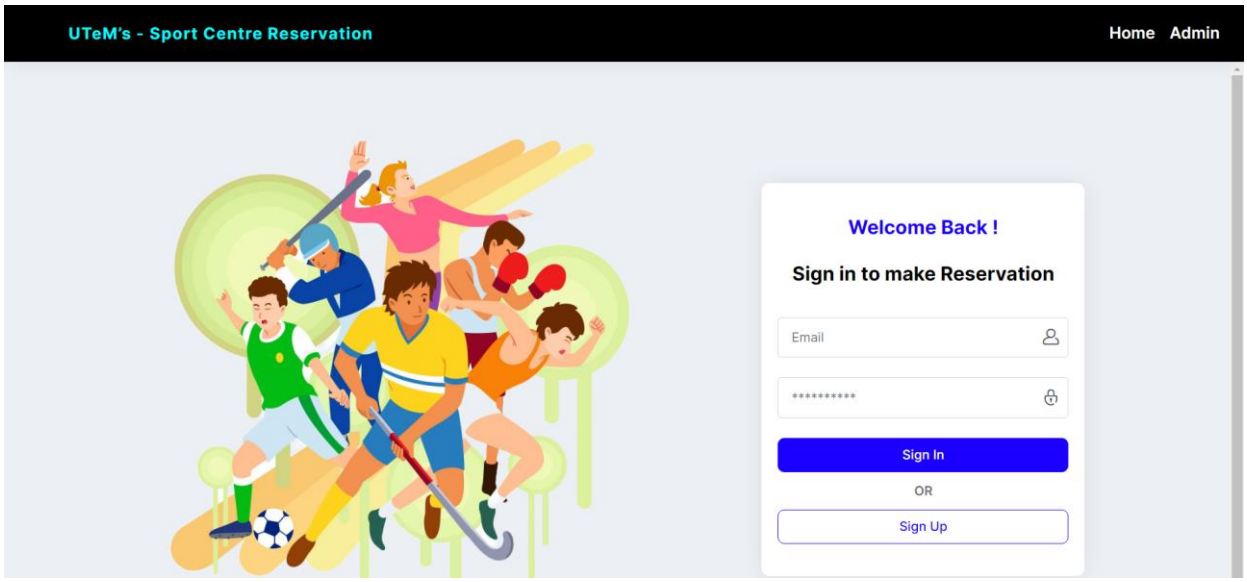


figure 9 login page

User per account can log into the system and use the system.

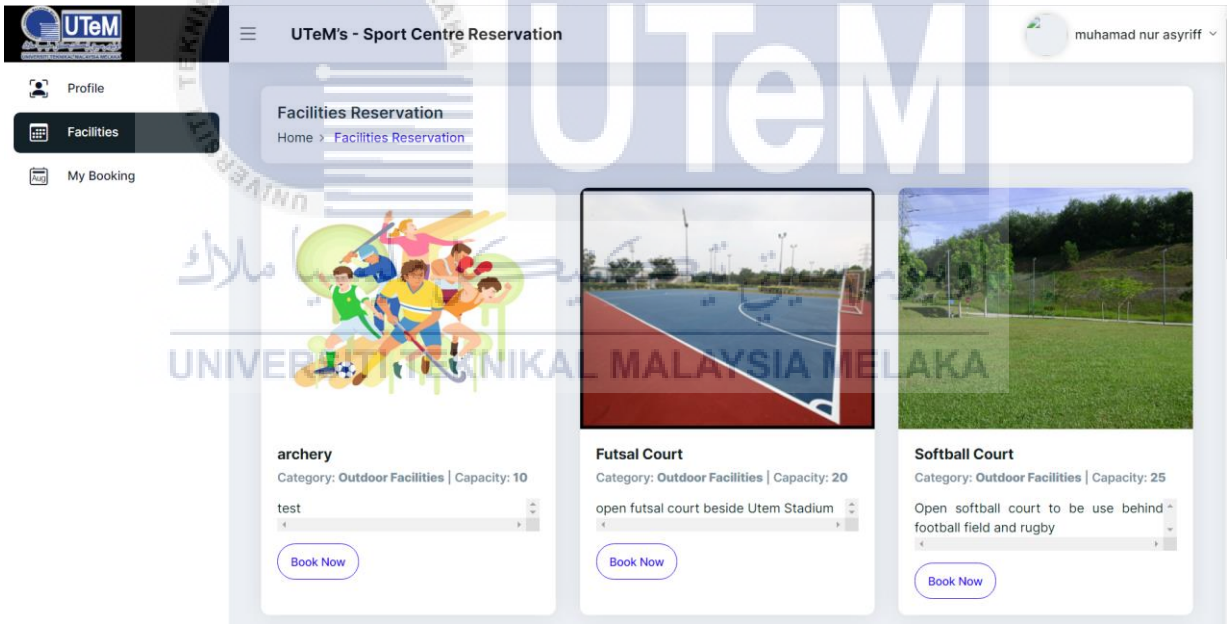


figure 10 Facilities on user page

facilities page for user to check the availability of facility of the system in real-time updated.

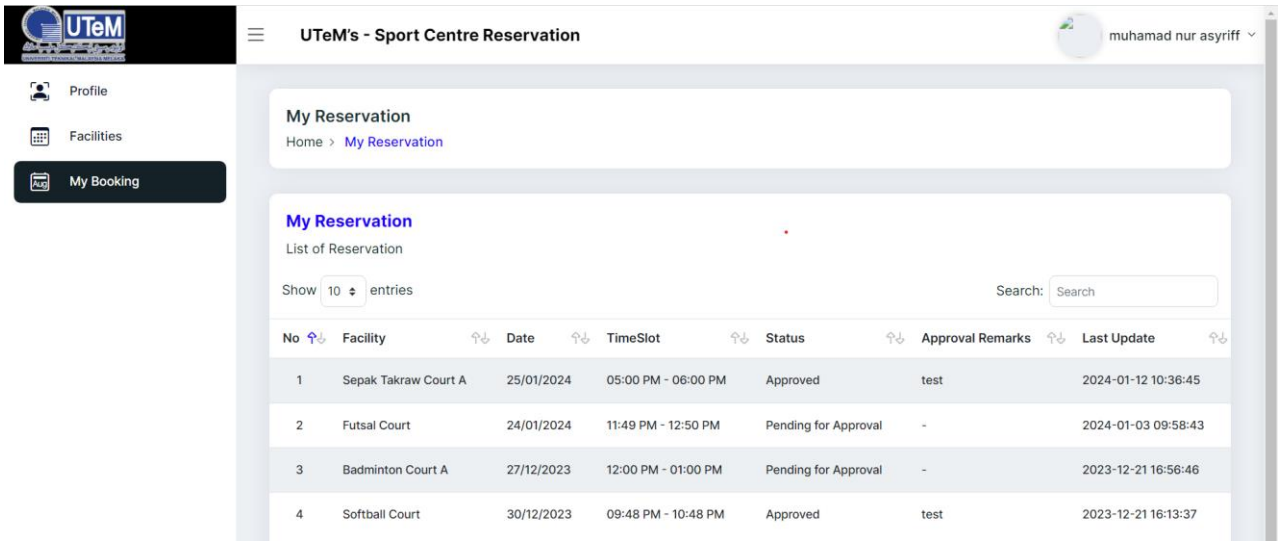


figure 11 user's book list

Here is the interface list of booking application in user page.

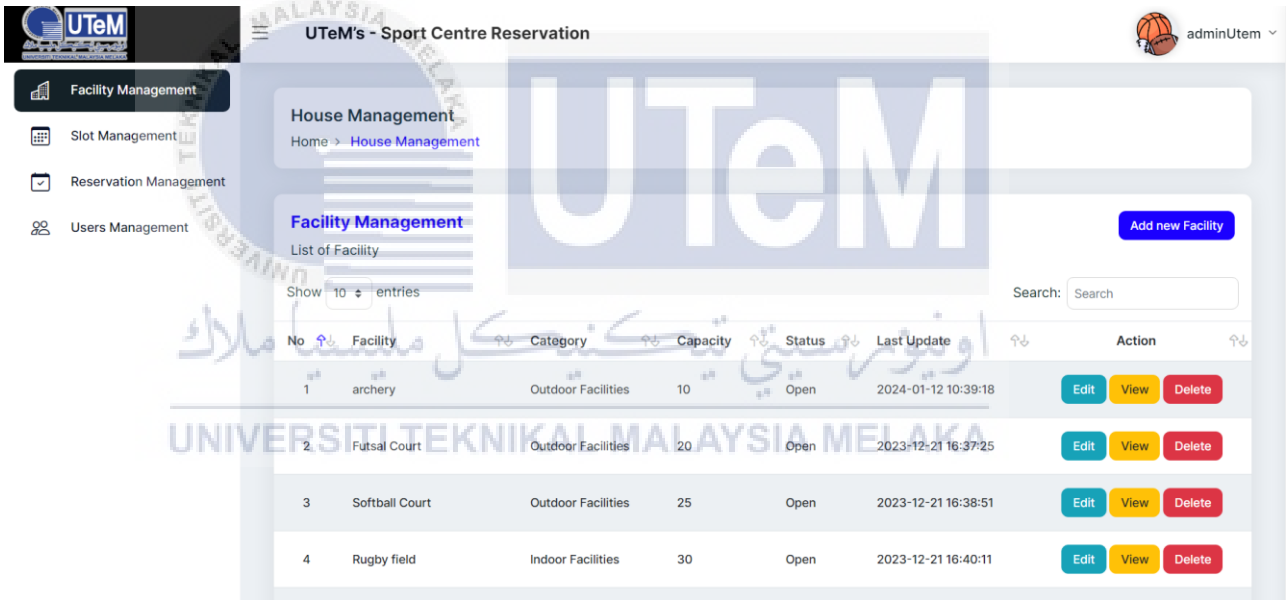


figure 12 facilities management

From admin page this is interface of facilities. Admin can add, edit, view, and delete the facilties. Admin will manage the facility availability.

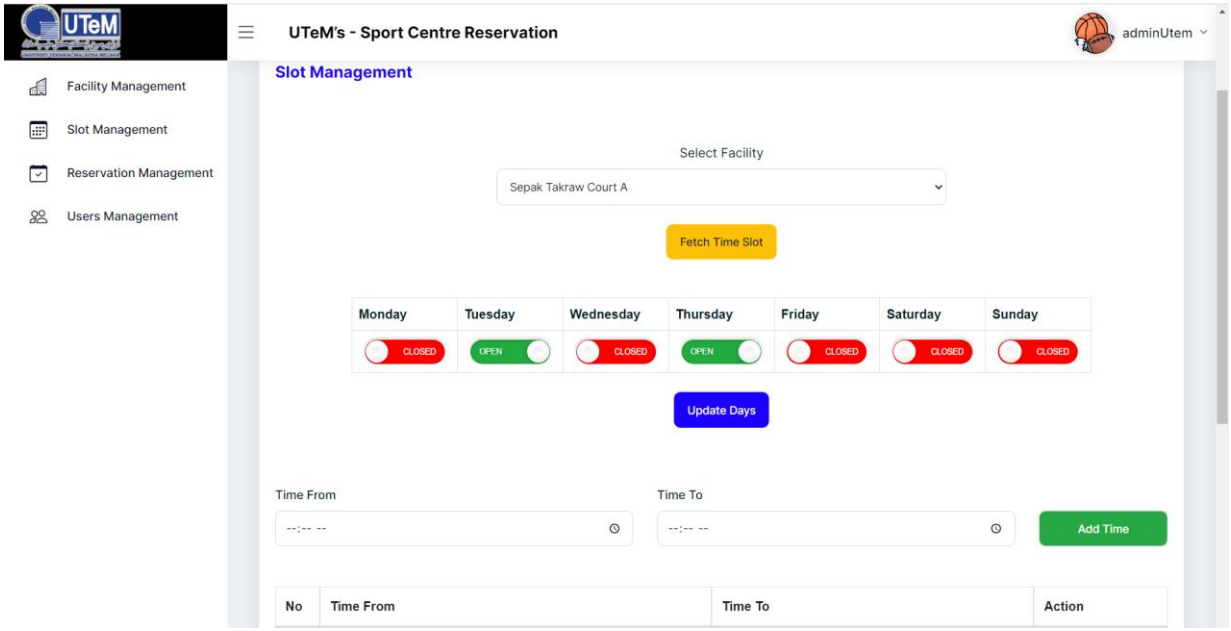


figure 13 slot management

Here is slot management where admin incharge to set up day and time for all facility available.

figure 14 book management

In admin page, reservation management is where admin can see the booking application from all user, approve or reject the application. Then the system will email to the user about approval or rejection.

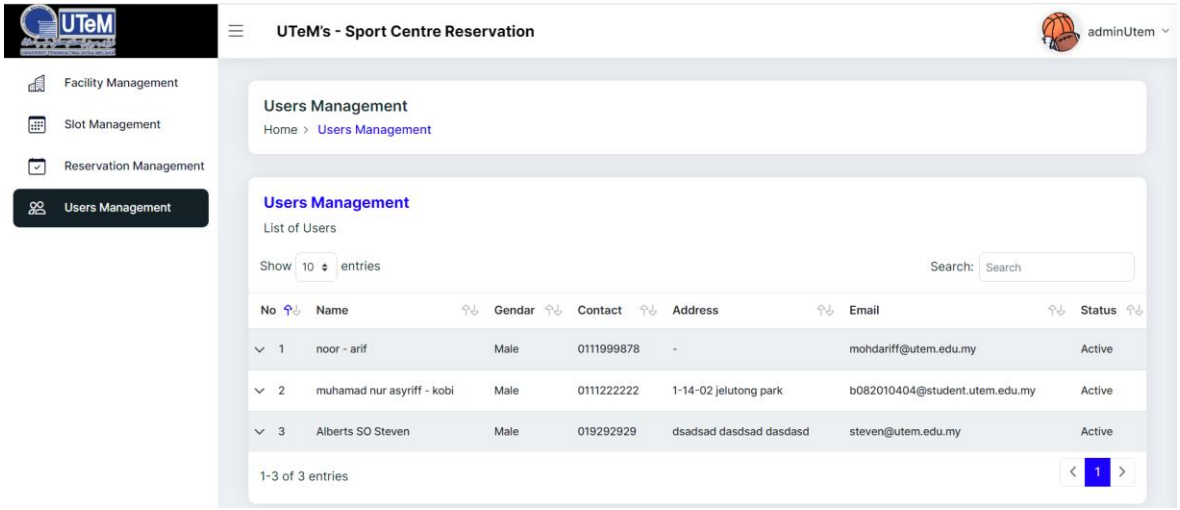


figure 15 user list

Admin are able to see the list of all user in the system that register on the system.

This is example of email that user and admin will be receive if system send email to them.

4.3 Summary

The results and discussions of the UTeM Sport Center Reservation System indicate a substantial advance in enhancing the accessibility and efficiency of the reservation procedure. The implemented reservation system successfully solved various issues faced by students in accessing and utilizing the sport center resources. Users reported a great experience with the system's user-friendly interface, allowing them to simply browse through the website and make bookings. The real-time notifications on facility availability proved to be advantageous, enabling users to arrange their activities appropriately.

The admin pages of the website, which is responsible for managing reservations, has completed to manage the facilities and users. Also, admin page provide a comprehensive administrative interface using extra information. Despite these constraints, the system has demonstrated encouraging outcomes in terms of greater facility utilization and enhanced communication channels. Users indicated pleasure with the reservation procedure, claiming greater convenience and simplicity of access to the sport center features. The system's display, although not fully comprehensive, provided a visually pleasing and engaging experience for users.

In conclusion, the results and discussions illustrate the good influence of the UTeM Sport Center Reservation System in enhancing the reservation process for users. The system has proven to be user-friendly, giving real-time updates on facility availability and expanding communication channels. On its full capability, the system shows significant potential for subsequent developments. The findings of this research serve as significant insights for future enhancements and modifications to establish a complete and efficient reservation system for the UTeM Sport Center.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The UTeM Sport Centre Reservation System has effectively tackled the obstacles encountered by students when trying to access and utilize the sport center facilities. Improvements have been demonstrated by the system in reservation processes, convenience, and communication channels. The system exhibits promising potential for augmenting facility utilization and user satisfaction, despite some pending functionalities. Continued improvements and upgrades will guarantee a smooth booking process for users and optimize the functioning of the UTeM Sport Centre.

5.2 Potential for Commercialization in UTeM

The UTeM Sport Centre Reservation website is a highly utilizable technology within UTeM (Universiti Teknikal Malaysia Melaka). The technology boasts a user-friendly interface and optimized reservation processes, providing a convenient solution for students and staff to book and manage sport center facilities.

The implementation of this website at UTeM would significantly improve user experience. Real-time facility availability information can be accessed effortlessly, allowing users to secure their preferred slots seamlessly. Efficient coordination and scheduling of facilities are ensured by the centralized database management system, which minimizes conflicts and simplifies administrative tasks.

Additionally, the website optimizes communication channels between the sport centre administration and its patrons. The dissemination of crucial updates and maintenance

schedules can be efficiently executed, ensuring that all parties are well-informed and preventing any potential misunderstandings. This website at UTeM enhances accessibility, convenience, and user experience for utilizing the sport center facilities. The system maximizes facility management and resource allocation while offering a cutting-edge platform for students and staff

5.3 Future Works

There are various additions that can be considered for future enhancements to the UTeM Sport Center Reservation project:

i) Include web page for new and update about UTEM Sport Center event..
ii) Include student and staff feedback for make this website more user-friendly.
iii) Extend this website into mobile phone application.
iv) Including the message and notification from mobile phone using contact number about approval of reservation.

REFERENCES

[1] Norman, D. A. (2021). The design of everyday things. Basic Books.

[2] Norman, J. (2002). Two visual systems and two theories of perception: An attempt to reconcile the constructivist and ecological approaches. Behavioral and Brain Sciences, 25(1), 73–144.

[3] Dorst, Kees and Cross, Nigel (2001). Creativity in the design process: co-evolution of problem–solution. Design Studies, 22(5) pp. 425–437

[4] Buxton, W. (2011). Sketching user experiences : getting the design right and the right design. Elsevier.

[5] Nielsen, J. (1994). Usability Engineering. Morgan Kaufmann.

[6] Jason A. King Ph.D., ABPP (CN) (2011) A Review of: "Marcotte, T. D., & Grant, I. (Eds.). (2010). Neuropsychology of Everyday Functioning.", Applied Neuropsychology, 18:2, 151-153, DOI: 10.1080/09084282.2010.547787

[7] [7] Web Technologies of the Year 2021. (n.d.). W3techs.com. Retrieved June 23, 2023, from https://w3techs.com/blog/entry/web_technologies_of_the_year_2021

[8] Gamma, E., Helm, R., E, R., & Vlissides, J. (2015). Design patterns : elements of reusable object-oriented software. Pearson Education.

[9] Sommerville, I. and Sawyer, P. (1997) Requirements Engineering: A Good Practice Guide. John Wiley & Sons, Inc., Hoboken

[10] Sajtos, L., Cao, J. T., Espinosa, J. A., Phau, I., Rossi, P., Sung, B., & Voyer, B. (2020). Brand love: Corroborating evidence across four continents. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2020.02.040.

[11] Song, I.-Y., Evans, M., & Park, U. (1995). A Comparative Analysis of EntityRelationship Diagrams 1. Journal of Computer and Software Engineering, 3(4), 427–459. https://www.cin.ufpe.br/~in1008/aulas/A%20Comparative%20Analysis%20of%20Entity-Relationship%20Diagrams.pdf

[12] What is MySQL? (2021). Oracle.com. https://www.oracle.com/mysql/what-is-mysql/#:~:text=MySQL%20is%20a%20relational%20database%20management%20system

[13] SQL Server Monitoring | Monitor SQL - ManageEngine Applications Manager. (n.d.). Www.manageengine.com. Retrieved June 23, 2023, from https://www.manageengine.com/products/applications_manager/sql-server-monitoring.html?network=g&device=c&keyword=sql%20database%20management&campaignid=9014492832&creative=481993197764&matchtype=p&adposition=&placement=&adgroup=113174750149&targetid=kwd-320670332074

[14] PHP. (2019). PHP: What is PHP? - Manual. Php.net. https://www.php.net/manual/en/intro-whatis.php

[15] Best Sports Facilities Across Malaysian Universities. (n.d.). Www.easyuni.my. Retrieved June 23, 2023, from https://www.easyuni.my/en/advice/best-sports-facilities-across-malaysian-universities-1096/

[16] Abdul Rahman, A. F., Taat, M. S., Nordin, H., & Lada, S. (2021). Hubungan Perkhidmatan Sukan dengan Kepuasan Atlet Universiti Awam Malaysia. Malaysian Journal of Social Sciences and Humanities (MJSSH), 6(6), 138–146. https://doi.org/10.47405/mjssh.v6i6.827

[17]] Zul, M., Nordin, A., Bazin, N., Sains Komputer, J., Komputeran, F., & Bharu, J. (n.d.). Prosiding Komputeran UTM Inovasi di dalam Teknologi dan Aplikasi 50 Komputeran

Sistem Tempahan Kompleks Sukan Universiti Teknologi Malaysia. Retrieved June 23, 2023,from https://comp.utm.my/proceeding/wp-content/blogs.dir/2658/files/2018/04/Sistem-Tempahan-Kompleks-Sukan-Universiti-Teknologi.pdf

[18] Kualiti Perkhidmatan Fasiliti Sukan di Universiti Awam Malaysia (Quality of Malaysian Public Universities' Sports Facilities Services). (2019). Jurnal Pendidikan Malaysia, 44(01SI). https://doi.org/10.17576/jpen-2019-44.01si-05

[19] raghwendra. (2018, December 29). How to connect HTML to database with MySQL using PHP? An example. Raghwendra Web Services Blog Helps You & Your Business Grow. https://www.raghwendra.com/blog/how-to-connect-html-to-database-with-mysql-using-php-exam

[20] Creating MySQL Database with XAMPP - javatpoint. (n.d.). Www.javatpoint.com. https://www.javatpoint.com/creating-mysql-database-with-xampp

[21] Mohd, H., & Raushin, A. (n.d.). FINAL YEAR PROJECT Campus Event Web-Based System. Retrieved June 23, 2023, from https://utpedia.utp.edu.my/id/eprint/15884/1/Hazirah%20Mohd%20Abdul%20Raushin_16250.pdf

[22] Farzana, N., & Roslan, B. (2019). GYM MANAGEMENT SYSTEM FOR MN FITNESS GYM. https://ir.unimas.my/id/eprint/33919/1/Nur%20Farzana%20Binti%20Roslan%20-%2024%20pgs.pdf

[23] gym-management-system-project-report (1). (n.d.). Studylib.net. https://studylib.net/doc/25661677/gym-management-system-project-report--1-

[24] FYP Report 2023. (n.d.). Mnsuam.edu.pk. Retrieved June 23, 2023, from https://mnsuam.edu.pk/index.php/news/996-fyp-report-2023

[25] Sport Management. (n.d.). University of Portsmouth. Retrieved June 23, 2023, from https://www.port.ac.uk/study/courses/undergraduate/bsc-hons-sport-management

[26] ONLINE FINAL YEAR PROJECT TITLE BOOKING SYSTEM KAMANESWARY A/P MUNUSAMY (B) - PDF Free Download. (n.d.). Docplayer.net. Retrieved June 24, 2023, from https://docplayer.net/30540500-Online-final-year-project-title-booking-system-kamaneswary-a-p-munusamy-b.htm

[27] Tan, P. C. (2012). Sport Facility Booking System (SFBS). Malaysia: UMP.

[28] Fatimah, S., & Rahman, A. (n.d.). M Online Sport Booking System. https://utpedia.utp.edu.my/id/eprint/9961/1/2008%20-%20Online%20Sport%20Booking%20System%20(OSBS).pdf

[29] UTeM Sport Center : On-Line Booking Of Facilities And Equipments. (n.d.). Text-Id.123dok.com. Retrieved June 24, 2023, from https://text-id.123dok.com/document/6qm454wq-utem-sport-center-on-line-booking-of-facilities-and-equipments.htm

[30] Islam, T. (2017). Project Report of Website Development Project management. Www.academia.edu. https://www.academia.edu/35250128/Project_Report_of_Website_Development_Project_management

APPENDICES

Appendix A Example of Appendix A

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA
FAKULTI TEKNOLOGI KEJUTERAAN ELEKTRIK DAN ELEKTRONIK

BORANG PENGESAHAN STATUS LAPORAN
PROJEK SARJANA MUDA II

Tajuk Projek : Design and Development of UTeM sport center Reservation website

Sesi Pengajian : 1 2023/2024

Saya Mohamad Asri bin Mohamad Khir. mengaku membenarkan laporan Projek Sarjana Muda ini disimpan di Perpustakaan dengan syarat-syarat kegunaan seperti berikut:

1. Laporan adalah hakmilik Universiti Teknikal Malaysia Melaka.
2. Perpustakaan dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan dibenarkan membuat salinan laporan ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. Sila tandakan (✓):

☐	**SULIT***	(Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)
☐	**TERHAD***	(Mengandungi maklumat terhad yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)
☑	**TIDAK TERHAD**	

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Alamat Tetap:

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Jurutera Pengajar
Fakulti Teknologi Dan Kejuruteraan Elektronik Dan Komputer (FTKEK)
Universiti Teknikal Malaysia Melaka (UTeM)

Tarikh:

Tarikh: 15/2/2024

*CATATAN: Jika laporan ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa/organisasi berkenaan dengan menyatakan sekali tempoh laporan ini perlu dikelaskan sebagai SULIT atau TERHAD.

APPROVAL

I hereby declare that I have checked this project report and in my opinion, this project report is adequate in terms of scope and quality for the award of the degree of Bachelor of Computer Engineering Technology (Computer Systems) with Honours

Signature : 

Supervisor Name : NOOR MOHD ARIFF BIN BRAHIN

Date : 15/2/2024

UNIVERSITI TEKNIKAL MALAYSIA MELAKA
FACULTY OF ELECTRONIC AND COMPUTER TECHNOLOGY AND ENGINEERING

CHECKLIST OF PSM FINAL REPORT SUBMISSION
BEEU 4774 (BACHELOR DEGREE PROJECT II)

PSM2

Student Name: MOHAMAD ASRI BIN MOHAMAD KHIR

Matric Number: B082010048 Course:BERC

Supervisor Name: NOOR MOHD ARIFF BIN BRAHIN

Project Title: DESIGN AND DEVELOPMENT OF UTEM SPORT CENTER RESERVATION WEBSITE USING PHP AND MYSQL

No	Content	Page	Student Checklist (√/X)	Supervisor Checklist (√/X)
1	Cover page (CORRECT **NEW FACULTY FTKEK**, PROGRAMME & YEAR **2024**)		✓	✓
2	Report status confirmation form (CORRECT **NEW FACULTY FTKEK**, **SESSION 2023/2024**, SIGNED)		✓	✓
3	Declaration (SIGNED)			
4	Approval (SIGNED)			
5	Dedication *(optional)*		✓	✓
6	Abstract	i	✓	✓
7	Abstrak	ii	✓	✓
8	Acknowledgement	iii	✓	✓
9	Table of Contents	iv	✓	✓
10	List of Figures	6	✓	✓
11	List of Tables		×	×
12	List of Symbols and Abbreviations *(optional)*		×	×
13	List of Appendices *(optional)*		×	×
14	CHAPTER 1 – Introduction	8	✓	✓
15	CHAPTER 2 – Literature Review	11	✓	✓
16	CHAPTER 3 – Methodology	24	✓	✓
17	CHAPTER 4 – Results and Discussion	36	✓	✓
18	CHAPTER 5 – Conclusion and Future Works	43	✓	✓
19	References	45	✓	✓
20	List of publication and paper presented *(optional)*			
21	Appendices *(Optional)*		✓	✓
22	Turnitin < 30%		✓	✓
23	Submit on time		✓	✓

I acknowledge the acceptance of PSM Report from the above-mentioned student. I admit that the Report has been checked and fulfill the BEEU 4774 (BACHELOR DEGREE PROJECT II) requirement.

Checked by:

.....

(Supervisor's Signature & Stamp)

NOOR MOHD ARIFF BIN BRAHIN
Jurutera Pengajar
Fakulti Teknologi Dan Kejuruteraan Elektronik Dan Komputer (FTKEK)
Universiti Teknikal Malaysia Melaka (UTeM)

Date: 15/2/2024