



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

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**SECD2523 - 03 DATABASE**

**GROUP PROJECT**

**PHASE 1**

**PROJECT PROPOSAL & DATABASE REQUIREMENT**

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## TABLE OF CONTENTS

<b>CONTENTS</b>	<b>PAGE</b>
1.0 INTRODUCTION (OVERVIEW OF THE PROJECT)	1
2.0 BACKGROUND STUDY	1
3.0 PROBLEM STATEMENT	2
4.0 PROPOSED SOLUTIONS	2
4.1 FEASIBILITY STUDY	3
5.0 OBJECTIVE	4
6.0 SCOPE	4
7.0 PROJECT PLANNING	
7.1 TIME TO PRODUCE THE SYSTEM	5 - 6
7.2 WORK BREAKDOWN STRUCTURE (WBS)	
7.3 GANTT CHART	
8.0 REQUIREMENTS ANALYSIS (BASED FROM AS-IS ANALYSIS)	7 – 8
8.1 CURRENT BUSINESS PROCESS (SCENARIOS, WORKFLOW)	8 - 9
9.0 TRANSACTION REQUIREMENT (DATA ENTRY, DATA UPDATE/DELETE, DATA QUERIES)	10 - 11
10.0 BENEFIT AND SUMMARY OF PROPOSED SYSTEM	12
10.1 BENEFIT OF THE PROPOSED SYSTEM	13
10. 2 SUMMARY OF THE PROPOSED SYSTEM	
11.0 SUMMARY	14

## **1.0 INTRODUCTION (OVERVIEW OF THE PROJECT)**

In the NexScholar website, the owner is currently dealing with a significant issue related to the event booking system and it is causing a lot of worry. In this specific stage of our ongoing project, our primary focus is on finding effective solutions to address this problem that the owner is facing. Our project has been carefully planned with the clear objective of resolving the challenges within the event booking system. We are committed to making these solutions a reality, ensuring that the system works seamlessly and meets the owner's expectations. The entire project is centered around achieving this goal of enhancing the functionality and reliability of the event booking system on the NexScholar website. Our team is dedicated to implementing practical changes and improvements that will alleviate the owner's concerns and contribute to the overall success of the NexScholar platform. We recognize the importance of a smooth and efficient event booking process and our efforts are geared towards making this a reality for the owner and the users of NexScholar.

## **2.0 BACKGROUND STUDY**

In our daily lives and over the years on the internet, we often use apps and websites to make things easier, especially when it comes to socializing. NexScholar is a social website that offers many services important for our social and educational needs. Many people find it helpful because of all the good services it provides. But there is a problem in the part of the website where you reserve spots for events, and it needs to be fixed urgently.

Think of it like this: NexScholar is like a toolbox full of tools that help us with different tasks in our social and educational life. It has been a reliable toolbox for lots of people. However, right now, there is a wrench missing in the section where you reserve spots for events. Fixing this issue is like putting the missing wrench back in the toolbox. It ensures that the toolbox, or NexScholar in this case, continues to be a handy and reliable resource for all its users, making things smoother for everyone.

### 3.0 PROBLEM STATEMENT

The current problem with the website revolves around the events booking process. As it stands, the website lacks the functionality for users to seamlessly register for events or purchase tickets with the added convenience of making online payments through Visa and MasterCard. This deficiency in the system hinders the user experience and potentially discourages potential participants from engaging with the events hosted on the platform. Without the ability to register or buy tickets online with widely used payment methods like Visa and MasterCard, the website misses out on a significant opportunity to streamline the user journey and enhance overall accessibility.

### 4.0 PROPOSED SOLUTIONS

1. **User-friendly interface:** When a user-friendly interface is made available it will be easier to use.
2. **User Communication:** One other proposed solution is to allow the organizers of the event to communicate with registered users using emails or a messaging path on the website itself.
3. **Payment Integration:** In case the event requires payment, there should be a gateway for payments to accept payments directly through the website. Payment methods may include PayPal, Credit Cards, TNG, GrabPay and others.
4. **Reservation System:** It will be able to make users sign up directly through the website and not redirect them to other websites which might cause a hassle for the users.
5. **Event Information Fields:** The organizers should have a form in order to be able to fill fields required for the event such as event title, description, date and time, location, organizers, event website, and event cost.
6. **Admin Notification:** The admin should get a notification for every event request that needs to be reviewed before placing it.

## **4.1 FEASIBILITY STUDY**

### **TECHNICAL FEASIBILITY**

The suggested solutions involve implementing improvements to the website, such as enhancing the user experience and adding a reservation system and payment integration. These changes are technically feasible given the current state of web development and available technologies.

### **OPERATIONAL FEASIBILITY**

Making the event application and approval procedure more efficient is the goal of the suggested solutions. Enhancing the user experience and minimizing administrative workload are in line with the project's operational goals.

### **ECONOMICAL FEASIBILITY**

- We must weigh the project's advantages and disadvantages in order to determine economic viability. In addition to the possible advantages from higher income and cost savings, these costs also include those of hardware, software, maintenance, and training.
- Increased ticket sales revenue, cost savings via less administrative work, and more money from higher customer happiness and participation are possible advantages. Nevertheless, in order to ascertain the economic viability, precise figures for these advantages must be computed and examined in a Cost-Benefit Analysis (CBA).
- The CBA depends on the selection of the discount rate and sensitivity parameters. Sensitivity factors of 0.9 for benefits and 1.1 for costs have been suggested, along with a 10% discount rate.

## 5.0 OBJECTIVE

The main purpose of the Event section in the NexScholar is to provide a user- friendly experience for users so that they can access event details, register for events, and allow organizers to submit and manage events.

## 6.0 SCOPE

1. Integration of a payment gateway for events that require payment.
2. Establishment of a notification system to inform admins about new event submissions from organizers.

## SYSTEM BOUNDARIES

- **Event Data:** Indicate the kinds of event-related information that the database will hold, including event specifics (title, description, date, time, and location), participant and organiser data, and documents (such as agendas and flyers) connected to the event.
- **User Roles and Access Levels:** Specify the various user roles (such as administrators, event organisers, and participants) and their levels of database access. Administrators, for example, might have unrestricted access, but attendees can observe and sign up for events.
- **Event Registration and Ticketing:** Define the features related to the registration and ticketing process, such as how users can sign up for events, buy tickets, and keep track of their registrations.
- **Payment Processing:** Choose the payment gateways, transaction records, and payment status that will be managed within the database for processing payments.

## 7.0 PROJECT PLANNING

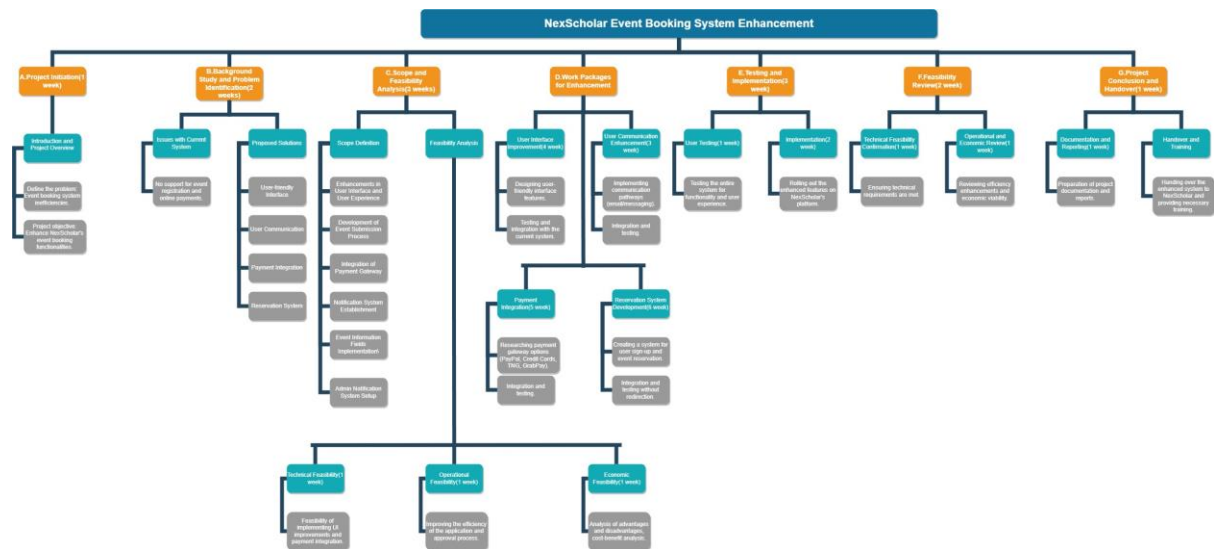
### 7.1 TIME TO PRODUCE THE SYSTEM

- **Project Initiation:** 1 week
- **Background Study and Problem Identification:** 2 weeks
- **Feasibility Analysis and review:** 3 weeks
- **Work Packages for Enhancement:** 3 weeks
- **Testing and Implementation:** 3 weeks
- **Project Conclusion and Handover:** 1-week
- **Total days worked:** 52 days

### 7.2 WORK BREAKDOWN STRUCTURE (WBS)

(CLEAR VERSION GOOGLE DRIVE LINK)

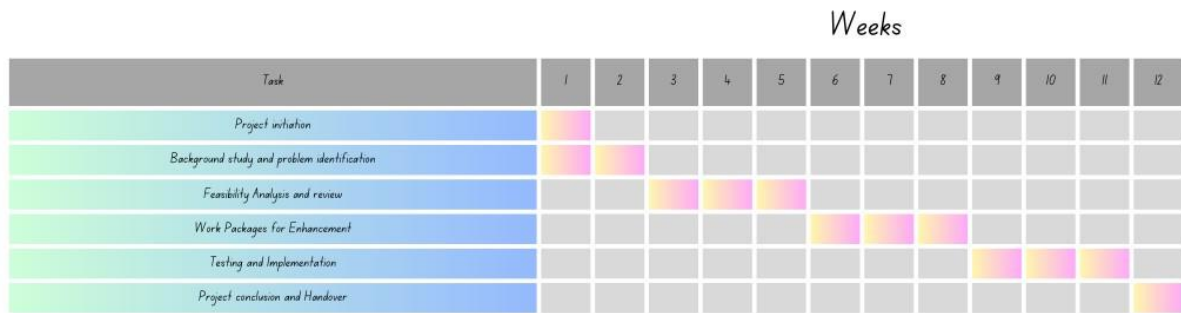
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## 7.3 GANTT CHART

(CLEAR VERSION GOOGLE DRIVE LINK)

[https://drive.google.com/file/d/1mQC\\_QIJ5Zzov9m2O3Tp9UIPFfF4PAJur/view?usp=sharing](https://drive.google.com/file/d/1mQC_QIJ5Zzov9m2O3Tp9UIPFfF4PAJur/view?usp=sharing)





## **8.0 REQUIREMENTS ANALYSIS (BASED FROM AS-IS ANALYSIS)**

### **1. Current Business Process:**

#### **Event Registration:**

- Users are unable to register for events on the NexScholar website.
- The event registration UI is not user-friendly.
- There is no way to record important event information while registering.
- Lack of a secure way to store data about events.

#### **Communication:**

- Limited avenues of contact for registered users and event organizers.
- No email feature or built-in message system for direct contact.
- Facilitating the effective dissemination of information to attendees is a difficulty for organizers.

#### **Payment Processing:**

- There is no specific payment mechanism for events that require payment.
- Users are unable to make online payments with Visa, MasterCard, PayPal, Credit Cards, TNG, GrabPay, and other ways.
- Possible payment redirection to third websites, creating annoyance.

#### **Reservation System:**

- Users are sent to external sites to register for events, which is inconvenient.
- The NexScholar website lacks a simplified reservation method.
- There is no direct sign-up procedure for users, which might contribute to user irritation.

#### **Event Information Fields:**

- Insufficient fields for event organizers to provide vital event information.
- Incomplete event details may cause participant misunderstanding.

#### **Admin Notification:**

- A lack of a systematic notification mechanism for administrators regarding new event submissions
- Event requests may go ignored, leading approval processes to be delayed.

## **2. AS-IS Analysis Summary:**

- The present system is deficient in key aspects for smooth event management and user involvement.
- The lack of a user-friendly UI and a simplified event registration procedure degrades the user experience.
- Communication breakdowns between organizers and attendees influence the overall success of event planning.
- The lack of a specialized payment channel restricts the accessibility and simplicity of making online payments.
- The event submission and approval processes are inefficient owing to the lack of an administrator notification mechanism.

## **8.1 CURRENT BUSINESS PROCESS (SCENARIOS, WORKFLOW)**

### **1. Event Registration Workflow:**

- The user goes to the event registration page.
- The user encounters an unfriendly interface.
- The user is requested to submit event information but encounters difficulties owing to insufficient instruction.
- Inadequate validation and secure storage of submitted data.

### **2. Communication Scenario:**

- There are no direct communication routes between event organizers and registered users.
- Information propagation is dependent on external communication channels.
- Limited connection and involvement between organizers and participants.

### **3. Payment Processing Scenario:**

- Users interested in fee-based activities experience difficulties completing online payments.
- Possible payment forwarding to external websites.
- Limited payment choices, which makes it difficult for users to pay.

#### **4. Reservation System Scenario:**

- Users are redirected to external sites for event registration.
- No direct sign-up process on the NexScholar website.
- Potential user frustration due to complex registration procedures.

#### **5. Event Information Fields Scenario:**

- Organizers face challenges in providing comprehensive event details.
- Limited fields for capturing crucial information, impacting the clarity of event descriptions.

#### **6. Admin Notification Workflow:**

- Lack of a systematic notification system for administrators.
- Event requests may go unnoticed, causing delays in the approval process.
- Inefficient handling of new event submissions.

## **9.0 TRANSACTION REQUIREMENT (DATA ENTRY, DATA UPDATE/DELETE, DATA QUERIES)**

### **1. Data Entry:**

#### **Event Registration**

- Users should be able to enter details for new events, including title, description, date, time, location, organizers, event website, and cost.
- The system should validate and store this information securely in the database.

#### **User Registration**

- Users need to register for events, providing necessary details.
- The system should verify user information and store it securely.

### **2. Data Update/Delete:**

#### **Event Editing**

- Organizers should be able to update event information.
- Changes made by organizers should be validated and updated in the database.

#### **Event Cancellation**

- Organizers or administrators should be able to cancel events.
- Cancellation updates should be reflected in the system and communicated to registered users.

#### **User Profile Updates**

- Users should have the ability to update their profiles.
- The system must validate and securely update user profile information.

### **3. Data Queries:**

#### **Event Details**

- Users should be able to query and view details of upcoming events.
- Queries could involve filtering events based on date, location, or organizer.

#### **Participant Lists**

- Organizers and administrators should be able to query and view lists of participants for specific events.

#### **Financial Transactions**

- Queries related to financial transactions, including ticket sales and payment status for paid events, should be available for administrators.

#### **User Engagement Statistics**

- Queries for user engagement statistics, such as event attendance history, could be useful for administrators.

### **4. Transaction Security:**

- All transactions, whether data entry, updates, or queries, should adhere to strict security standards.
- Encryption should be implemented for sensitive information, such as user data and financial transactions.

### **5. Logging and Auditing:**

- The system should maintain logs of all transactions for auditing purposes.
- Detailed logs can aid in identifying and resolving issues, as well as ensuring accountability.

### **6. Error Handling:**

- Robust error handling mechanisms should be in place for all transactions.
- Users should receive clear error messages, and administrators should have access to detailed error logs for troubleshooting.

## **10.0 BENEFIT AND SUMMARY OF PROPOSED SYSTEM**

### **10.1 BENEFIT OF THE PROPOSED SYSTEM:**

- 1. Enhanced User Experience:** The proposed system will feature a user-friendly interface, making it easier for users to navigate, register for events, and interact with the platform seamlessly.
- 2. Improved Communication:** Event organizers can communicate directly with registered users through email or an in-app messaging system, fostering better engagement and information dissemination.
- 3. Efficient Event Booking:** The introduction of a reservation system eliminates the need for users to be redirected to external sites, streamlining the event booking process for a more user-centric experience.
- 4. Secure and Convenient Payments:** Payment integration with multiple gateways, including PayPal, Credit Cards, TNG, GrabPay, ensures a secure and convenient transaction process for events that require payment.
- 5. Streamlined Event Management:** The system provides an easy-to-use event submission process for organizers, reducing administrative workload and enhancing the efficiency of managing events.

## **10. 2 SUMMARY OF THE PROPOSED SYSTEM:**

The proposed system for NexScholar is a comprehensive solution to address the current challenges in the events booking process. By focusing on user experience, communication, payment integration and efficient event management, the system aims to create a seamless and user-friendly platform for both event organizers and participants.

The user-friendly interface ensures easy navigation, while the reservation system eliminates unnecessary redirects, simplifying the event booking process. Communication improvements facilitate better interaction between organizers and attendees, fostering a sense of community.

The integration of multiple payment gateways adds flexibility and convenience, catering to a wider audience with varied payment preferences. The streamlined event management process reduces the administrative burden, allowing organizers to focus on creating successful events.

In summary, the proposed system not only addresses the identified problems but also aims to elevate the overall user experience, efficiency, and effectiveness of the NexScholar platform in managing events and engaging its user base.

## **11.0 SUMMARY**

The NexScholar project seeks to resolve issues in its event booking system by introducing comprehensive solutions. The primary objectives include improving the user experience, streamlining event management and incorporating secure online payment options. Proposed solutions encompass a user-friendly interface, enhanced communication features, payment integration, and the implementation of a reservation system.

Feasibility studies confirm the project's technical, operational, and economic viability. A detailed project plan outlines a 52-day timeline with specific work breakdowns and a Gantt chart for effective execution. The project's scope covers user interface enhancements, streamlined event submission processes, payment integration, and a notification system.

Requirements analysis delves into data entry, update/delete transactions, queries, security measures, and logging to ensure robust functionality. The proposed system promises benefits, including an enhanced user experience, efficient communication, simplified event booking, secure payment options, and improved event management.

In conclusion, the NexScholar project aims to address current challenges while enhancing the overall efficiency and user engagement of the platform. The proposed system focuses on providing a seamless user experience, flexibility in payment methods, and simplified event management for both organizers and participants.