SECD2523 – DATABASE

SEMESTER 1 2023/2024

P1 - SYSTEM PROPOSAL

NexScholar Event System

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PROPOSED SYSTEM

1. Introduction

Web platforms have evolved as critical tools in today's digital age for connecting people with common interests, allowing information sharing, and promoting a feeling of community. However, it is critical that these platforms grow in order to satisfy the changing needs of its consumers. This proposal focuses on resolving the issues and limitations of Nexscholar, a website primarily created for post-graduate students that also functions as a social media platform and expert networking hub. The goal of this proposal is to identify existing website flaws and present a detailed plan for improvement. We hope to convert this platform into a dynamic and vital resource for the post-graduate community by improving its functionality, usability, and overall user experience.

2. Background Study

The current system is an online platform meant to help post-graduate students in a variety of ways. It lets users establish profiles, connect with others, and exchange information as a social media platform, building a sense of community among its members. Furthermore, the system attempts to assist users in locating experts in their particular industries.

3. Problem Statement

1. ***Restrictions on Event Posting:*** *The system only permits the administrator to post events. This restriction severely limits user participation and stops people from sharing their events.*

2. ***Lacking Reservation System:*** *There is currently no method for users to make reservations for events. The lack of a reservation system creates ambiguity about the number of attendees for a specific event.*

3. ***Payment Integration:*** *The system lacks an event payment feature. This presents a big challenge for fee-based events, as users cannot pay and register for events directly through the site.*

4. ***Communication:*** *The procedure of submitting events to the administrator is unclear, making it less user-friendly. Users require a faster way to provide event details, potentially through the platform itself.*

4.   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 in 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 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 needed to be reviewed before placing it.

4.1 Feasibility Study

4.1.1 Technical, Operational and Economical

1.   A technical feasibility study is conducted to determine whether the project is technically feasible, meaning whether it can be successfully developed, implemented, and maintained using the available technology, resources, and expertise. In that case, Nexscholar can be improved in certain aspects such as the website's infrastructure. The website's interaction with students should be simple and not complicated. Other than that, security enhancements are also important in a scholarship platform like

Nexscholar. For example data encryption is an important element in security enhancements.Implementing encryption protocols, such as SSL/TLS, to secure data transmission between users' devices and the platform.Moreover, encrypting sensitive data at rest, including user profiles, academic records, and financial information is also important.

2. The primary goal of an operational feasibility study is to determine whether the project is viable in terms of its operational impact and compatibility with the organization's processes, resources, and objectives. Currently Nexscholar is a website primarily created for post-graduate students that also functions as a social media platform and expert networking hub. It operates with the collaboration of students, university and also a particular organization which wants to provide the scholarship to the students. This operational level can be improved in many levels such as alignment with organizational goals, legal and regulatory compliance, operational sustainability and many more. Other than that, on an operational level we can make this system to recommend more for the users. For example we can develop a recommendation engine that suggests scholarships based on a student's profile, academic history, and interests.We can also use machine learning algorithms to refine and improve recommendations over time.

3. Economical feasibility study assesses whether the proposed project is financially viable and can generate a satisfactory return on investment. It focuses on the economic aspects of the project, including costs, revenue, and financial sustainability. In Nexscholar the main economical feasibility study would be Cost-Benefit Analysis (CBA).Cost-Benefit Analysis (CBA) is a systematic process used to evaluate and compare the costs and benefits of a proposed project, policy, or investment decision. CBA for Nexscholar involves the cost for improvement for a better user interaction. For example there will be expenses when we collaborate with banks and financial management companies. Other than that, there will be maintenance cost for the website too. The profit of this website can be gain by partnership with companies that are providing the scholarships.

5.   Proposed Project Objectives

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.
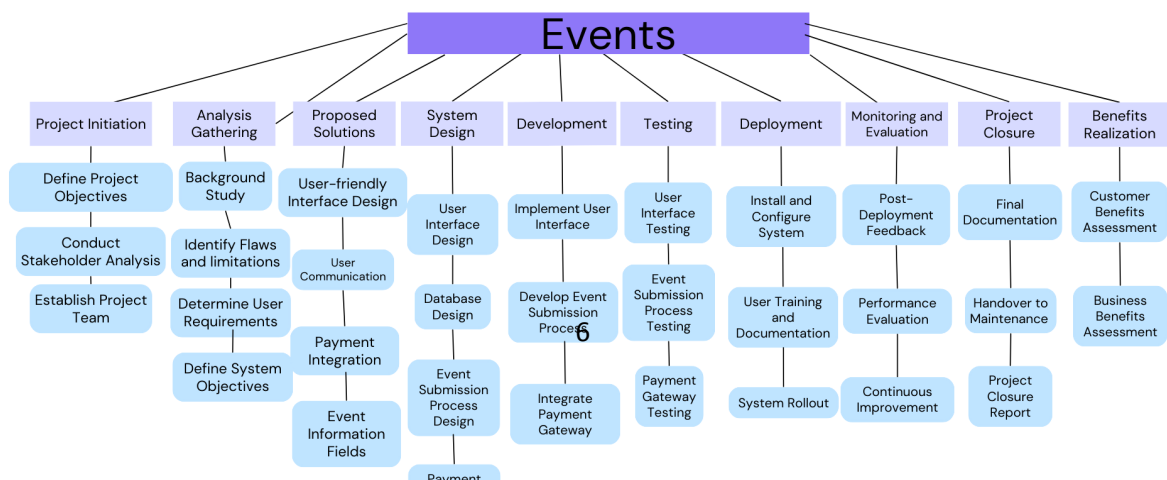
6. Project Scope

1. User interface and user experience improvements to help event registration and reservation.

2. Development of an event submission process to make it easier to approve or disapprove.

3. Integration of a payment gateway for events that require payment.

4. Establishment of a notification system to inform admins about new event submissions from organizers.

7. Project Planning

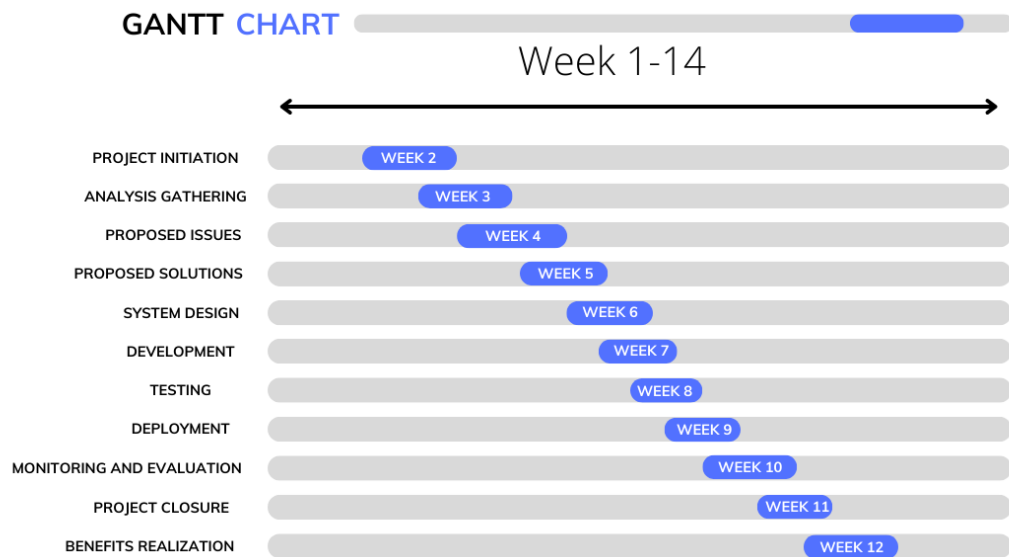### 7.1 Human Resource

1. Omar Mohammed Rezk Ebid Elashry – Background research , identifying issues.

2. Hasan Hatem Hasan – Outlining objectives and identifying solutions.

3. Ahmed Amir – Project planning including Gantt chart , WBS etc..

4. THANES A/L SIVAM – Analysis and Transaction requirements.

5. Zheng Shuoyu – General Overview and Project Summary.

7.2 Work Breakdown Structure (WBS)

7.3 Gantt Chart

GANTT CHART

Week 1-14

PROJECT INITIATION	WEEK 2
ANALYSIS GATHERING	WEEK 3
PROPOSED ISSUES	WEEK 4
PROPOSED SOLUTIONS	WEEK 5
SYSTEM DESIGN	WEEK 6
DEVELOPMENT	WEEK 7
TESTING	WEEK 8
DEPLOYMENT	WEEK 9
MONITORING AND EVALUATION	WEEK 10
PROJECT CLOSURE	WEEK 11
BENEFITS REALIZATION	WEEK 12

8. Requirement Analysis

1. Problem : Security and Encryption
   The scholarship system collects and manages a vast amount of sensitive information about students, including personal details, academic records, and financial information. This information is not secured and encrypted in a proper way.

   Requirement : Implement secure login mechanisms, such as two-factor authentication.Provide users with control over the visibility of their profiles and content.

2. Problem : Notification System
   There is no notification system for this website where the users can miss important messages or important offers. As most of the users are students' without a notification system it will be hard for them to cope up with their busy schedule.

Requirement : A notification system that can notify the users at times where they need the information.

3. Problem : Currency Exchange

There is no currency exchange system when payments are made for a particular event. This will be a problem for international students. It can also prevent the development of this system on a global level.

Requirement : Build a system for currency exchange when payments are made to reach a global approach.

4. Problem : Training and Support

The system is large and has many options which can be a downside when it comes to user friendly. Users might get confused when registering events which can lead to misinterpretation and users can register the wrong thing.

Requirement : The system can provide the users with manuals and also tutorials on accessing the website which can be very helpful for the user.

8.1 Current business process

The business process from the user point of view starts by logging in the website by entering the username , email address and the password. Then the Nexscholar website opens up its main front page. Next as the user wants to register a particular event they should select the Event and Conference section. In that section they will have two options which are the Event Calendar and the Event List. When the user chooses the event list, Nexsholar will show the list of events that have been registered and done by the user. Other than that it'll also display the latest events that are going on. Moreover the system also shows the event's details and users can get all the information from this option. Users can also leave additional comments on the particular chosen event and they can also add the event to their event calendar. Under event calendar other than date users can also have information about the location, organizers, event website and event cost.

9. Transaction requirements

The purpose of transaction requirement in the database project is to ensure the completeness and consistency of the data. Databases can be accurate by checking two forces which are integrity and consistency, thus achieving data consistency.

Data entry:

Create Event:

Requirement: Allow organizer to add event with details like name of the event, description, time and date and if it is online or not.

Payment:

Requirement: Allow users to use pay by entering their payment method details then provide them with a valid ticket.

Data Update/Delete:

Updating Event Info:

Requirement: The organizer should be able to edit event info at their will and make sure participants get alarmed.

Canceling Event:

Requirement: The organizer should be able to cancel an event and refund the participants if they paid.

Data Queries:

Being able to view the amount of visits on a certain event: Queried data should be able count the amount of visits on a certain event to help make it trend more.

Event Notification: The user should be able to receive notifications regarding the event whether it is as a form or reminder or the event was updated or maybe even canceled.

10. Benefit of Proposed System

Improved User Experience:

Enhanced Interface: The redesigned platform will provide a visually appealing and intuitive interface, significantly improving the overall user experience.

Streamlined Navigation: Users will experience seamless navigation, reducing frustration and encouraging more extended engagement on the platform.

Personalized Content Delivery:

Advanced Algorithm: The implementation of a sophisticated content algorithm ensures that users receive information and updates tailored to their academic interests and preferences.

User-Generated Content: Allowing users to create and share content promotes a sense of ownership and ensures a diverse range of information on the platform.

Effective Networking Opportunities:

Expert Matching Algorithm: The introduction of an expert matching algorithm facilitates meaningful connections between post-graduate students and experts in their respective fields.

Virtual Events and Webinars: The platform becomes a hub for knowledge exchange and networking through organized virtual events and webinars.

Mobile Accessibility and Convenience:

Responsive Design: Optimizing the mobile version ensures that users have a consistent and convenient experience across various devices.

Mobile App Development: A dedicated mobile app increases accessibility and allows users to engage with Nexscholar on the go.

Community Building and Collaboration:

User-Generated Content Features: Encourages collaboration and community-driven content creation, fostering a sense of belonging among post-graduate students.

Virtual Events: Facilitates interactions and collaborations between users, promoting a supportive and collaborative community.

Increased Platform Utility:

Comprehensive Resource: Nexscholar evolves into a comprehensive resource, serving not only as a social media platform but also as an essential tool for academic and professional growth.

Dynamic Learning Environment: The platform becomes a dynamic space where users can not only connect but also actively contribute to the growth and knowledge-sharing within the post-graduate community.

11. Summary of Proposed System

The proposed system for Nexscholar focuses on a comprehensive transformation to meet the evolving needs of post-graduate students. Through a strategic redesign of the user interface, streamlined navigation, and the implementation of advanced algorithms, the platform aims to enhance user experience and deliver personalized, diverse content. Networking features will be improved with expert matching algorithms and virtual events, fostering meaningful connections and knowledge exchange. Mobile accessibility will be optimized, and community building will be emphasized through user-generated content, establishing Nexscholar as a dynamic learning environment. These enhancements collectively position Nexscholar to become an indispensable resource, going beyond a social media platform to empower post-graduate students with a robust and collaborative digital space for academic and professional growth.