A logo of a tree and a bird

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# University Of Jordan

# School Of Business

# Management information System

Project Name: Business Hub

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**Introduction**

The growing demand for efficient academic support systems in universities has created a need for innovative solutions that can streamline student activities and enhance the overall educational experience. Currently, students often face difficulties in finding the right academic materials, navigating campus buildings, and connecting with academic staff, which can impede their academic success and productivity. Moreover, there is a lack of centralized platforms where students can easily exchange books, access detailed staff information, and locate classrooms and halls.

To address these challenges, we propose the development of a comprehensive Student Services Platform. This platform will serve as an all-in-one solution for students, offering a book exchange service, academic staff information, and campus navigation tools. Through this platform, students will be able to buy, sell, or trade academic books, find detailed information about their professors and their office hours, and navigate the campus with ease by locating buildings and classrooms.

The value of this system lies in its ability to simplify the student experience by bringing together multiple services in a single, user-friendly interface. The platform will provide students with the tools to save time, enhance learning, and improve their academic performance. By streamlining the processes of acquiring materials, finding faculty, and navigating the campus, students will be able to focus more on their studies and less on logistical challenges.

**Target Customers:** The primary users of this system will be university students, who will benefit from the book exchange feature, easy access to faculty details, and a simplified campus navigation system. Additionally, academic staff and university administrators will benefit by having their information organized and accessible to students, which can lead to better communication and time management.

**Who:** The platform will involve students, academic staff, and university administrators. Students will use the system for book exchange, faculty information, and campus navigation. Academic staff will have their profiles listed on the platform, making it easier for students to find them. Administrators will oversee the management of the platform.

**What:** The business activities include the exchange of academic materials, the provision of academic staff information, and the facilitation of campus navigation. The platform will be a central hub for all these activities, designed to improve student life.

**When:** The platform will be available throughout the academic year, offering students access to services whenever they need them.

**Where:** The platform will operate within the university environment, accessible from any device with internet connectivity—whether on campus or remotely.

**Why:** Students should use this system because it will save them time, reduce confusion, and provide them with centralized resources to support their academic success. By improving access to books, staff, and campus facilities, the platform will foster a more efficient and organized academic environment.

**How:** The current procedures, such as finding books, navigating campus, and contacting staff, are often disjointed and time-consuming. This platform will centralize and digitize these processes, making them more accessible, user-friendly, and efficient.

**Problem Definition**

**a. Problem Statement**

The academic experience for university students can often be hindered by several logistical challenges. These challenges include difficulties in acquiring textbooks, navigating a sprawling campus to locate classrooms and faculty offices, and accessing up-to-date academic staff information. Currently, students are forced to rely on fragmented resources, such as bulletin boards, word of mouth, or outdated websites, to find the materials they need, locate their classes, and contact their professors. This inefficiency consumes valuable time and creates unnecessary stress, making it harder for students to focus on their studies.

The objective of the proposed system is to centralize and simplify these processes into a single platform that allows students to seamlessly exchange academic books, access academic staff information, and navigate campus buildings and classrooms. By addressing these pain points, the system will provide an efficient, user-friendly solution that empowers students to manage their academic experience better. This problem is important to address because it directly impacts student productivity and well-being, which ultimately affects their success in university.

**b. Project Scope**

The Student Services Platform will provide the following key functionalities:

**Book Exchange Service:** A digital marketplace for students to post, buy, sell, or trade academic books, searchable by course, author, and price.

**Academic Staff Information:** A centralized directory of academic staff, where students can access contact information, office hours, and a list of the courses they teach.

**Campus Navigation:** An interactive map of the campus with markers for buildings, lecture halls, and classrooms, allowing students to easily find their way around the campus.

**User Profiles:** Allow students to create accounts to list books for exchange, save favorite staff members, and track course-related information.

The platform will target university students, primarily undergraduates, but also graduate students and academic staff. It will be accessible through web browsers, ensuring that students can easily access the platform both on-campus and remotely.

**c. Uniqueness**

The proposed system stands out from existing platforms in several ways:

**Comprehensive Services:** Unlike typical book exchange platforms or campus maps, this system combines book exchange, staff information, and campus navigation in one unified platform.

**User-Centric Design:** The system is designed with the student in mind. Features such as searchable book listings, the ability to contact professors directly, and a real-time campus map provide unparalleled convenience for users.

**Interactive Features:** The integration of real-time campus navigation and faculty profiles with detailed information (such as office hours, and office locations) is a unique feature that is not widely available in current academic support systems.

**Social Interaction:** The platform will include a rating system for book exchanges and faculty interactions, enabling students to build trust within their community and have transparent experiences.

**Real-Time Updates:** Unlike traditional paper-based systems or static websites, the platform will offer real-time updates for class schedules, book availability, and staff hours.

This platform combines features found in isolated systems (book exchange websites, academic staff directories, and campus maps) into one cohesive, easy-to-use interface, giving it a distinct competitive edge.

**d. Business Model**

The proposed system will operate under a freemium business model, providing basic services for free, with opportunities for premium features. The business model will include the following revenue streams:

**Freemium Model:** Basic services (book exchange, campus map, staff directory) will be available for free to all users. However, premium features, such as priority listing for books, personalized campus tour guides, or exclusive access to faculty office hours, will be offered through subscription.

**Advertising:** The platform will offer ad space to relevant companies (such as textbook sellers, local businesses, or educational services) for targeted advertising, ensuring that ads are useful and relevant to the students.

**Commission on Transactions:** A small commission will be taken from book exchanges where a transaction fee applies. This will help sustain the platform while keeping the user experience free of charge for most students.

**Partnerships:** The platform can explore partnerships with universities to offer it as a white-label solution for schools to integrate into their campus systems, charging schools an annual fee for hosting the platform.

Guidelines Followed to Identify the Problem:

Work Procedures:

**Existing Procedures:** Students currently use multiple platforms and manual processes to access the services offered in this proposal. This creates a fragmented experience, leading to inefficiencies and wasted time.

**Opportunity for Improvement:** By centralizing book exchanges, staff information, and campus navigation in one system, we can significantly streamline these processes and improve the user experience.

Activities:

**Interviews with Students and Staff:** Conducting interviews with students and faculty members reveals the pain points around accessing materials, navigating campus, and contacting staff.

**Summarizing Knowledge:** The insights from interviews clearly highlight the need for a centralized platform to address these challenges.

**Estimating the Scope**: By understanding the most common student problems (difficulty in obtaining books, locating staff, navigating campus), we have identified the core features that the platform will offer.

**Feasibility studies**

1. **Technical Feasibility**

Technical feasibility examines whether the proposed system can be developed and implemented using existing technology and resources.

**Key Considerations:**

**Technology Requirements:**

**Frontend Development:** The system will be built using HTML, CSS, JavaScript, and React for dynamic user interfaces.

**Backend Development:** The backend will be developed using technologies like Node.js with Express or PHP.

**Database:** A relational database (e.g., MySQL) or NoSQL (e.g., MongoDB) will be used to store user data, book listings, faculty information, and campus locations.

**Map Integration:** For campus navigation, Google Maps API or OpenStreetMap can be integrated to provide interactive mapping and building information.

**Search and Filter Capabilities:** The system will include a searchable book listing, searchable faculty database, and campus building directory.

**Technical Skills & Resources:**

**Development Team:** The project will require skilled developers experienced with full-stack web development, database management, and API integrations. The technology stack mentioned is well-established and widely used, ensuring the availability of developers and resources.

**Hosting and Deployment:** The platform will require cloud hosting services like AWS, Google Cloud, or Microsoft Azure for reliable and scalable deployment. These services can handle both web traffic and data storage efficiently.

**Security:** The platform will store sensitive user information (e.g., login details, transactions). Therefore, using SSL encryption, user authentication (OAuth, JWT), and data protection measures will be essential.

1. **Economic Feasibility**

Economic feasibility focuses on whether the project is financially viable, considering the costs involved in developing, deploying, and maintaining the system.

**Key Considerations:**

**Development Costs:**

**Personnel Costs:**

This project will be developed by three students using their personal laptops and free tools. Since no external contractors are hired, personnel costs are minimal. The students will divide tasks like front-end and backend development, design, and testing based on their skills. The work will be done part-time around their academic schedules, and the budget will be very low, mainly covering minor expenses like hosting or domain registration if necessary.

**Technology Costs:** Licensing costs for third-party services (e.g., Google Maps API, cloud hosting services), software tools, and possibly paid database hosting will contribute to the development budget.

**Platform Design & UI/UX:** If outsourcing the design work, costs for UI/UX professionals could also be factored in, potentially increasing the development budget.

Operational Costs:

**Hosting:** The ongoing cloud hosting (e.g., AWS, Google Cloud) can cost around $35 to $150 per month, depending on user traffic and resource consumption.

Maintenance & Updates: Ongoing software maintenance, bug fixes, and platform updates are crucial for system reliability and will require a small team or freelance developers. This could cost $2,000 to $5,000 per year.

Revenue Streams:

**Freemium Model:** The system will generate revenue through premium subscriptions for exclusive features (e.g., priority book listing, additional profile customization). This could generate substantial recurring revenue.

**Advertising:** Offering advertising space to relevant companies (e.g., textbook sellers, academic tools) will provide another stream of income.

Transaction Fees: A commission-based model on book transactions will add an additional revenue stream.

Cost-Benefit Analysis:

The revenue generated from premium subscriptions, advertising, and transaction fees should more than offset the development and operational costs over time. With a strong user base and effective marketing, the platform has the potential to become profitable within a 1-2 year timeframe.

1. **Operational Feasibility**

Operational feasibility evaluates whether the proposed system can be successfully integrated into the daily operations of the target users (students, faculty, administrators).

**Key Considerations:**

**User Adoption:**

The platform will address clear pain points for students, which increases the likelihood of strong user adoption. Students will benefit from streamlined book exchanges, easy access to staff information, and simplified campus navigation.

To facilitate adoption, the platform will need an intuitive user interface (UI) that requires minimal onboarding. This will ensure that even users with limited technical expertise can use the system effectively.

**System Usability:**

The platform will have a responsive design, meaning it will work seamlessly across different devices (desktop, mobile, and tablets). This ensures students can access the platform anytime and anywhere.

**User Support:** A dedicated support team or a help section with FAQs and tutorials will be necessary to assist students who may face challenges while using the system.

Integration with University Systems:

The platform must integrate smoothly with existing university systems, such as course catalogs, student records, and building directories, if available. Working closely with university IT departments will ensure smooth integration and reduce the risk of technical conflicts.

**Stakeholder Buy-In:**

**Students:** As primary users, students will be motivated to use the platform if they see clear benefits (such as saving time on campus navigation and accessing staff info more easily).

**Faculty:** Faculty participation is crucial for the success of the academic staff directory. Professors will need to actively manage their profiles to keep information up to date.

Administrators: University administrators will need to support the platform for it to be fully integrated into campus life. Administrators could also benefit from easier tracking of student needs and communication.

**Overall Feasibility**

**Technical Feasibility:** High - Existing technologies and resources can be leveraged to build the platform.

**Economic Feasibility:** High - The project has the potential for profitability through subscription models and advertising revenue.

**Operational Feasibility:** High - The platform will integrate well with the student and faculty experience, with a focus on ease of use and strong user adoption.

**1. Project Planning Phase (1 Week)**

Define Project Scope: Clarify features, user requirements, and project objectives.

Estimated Time: 1 day

Completion Date: Day 1

Team Formation and Resource Allocation: Assign roles to developers, designers, and other resources.

Estimated Time: 2 days

Completion Date: Day 3

Research and Selection of Tools and Technology: Decide on programming languages, frameworks, and APIs (e.g., React, Node.js, Google Maps).

Estimated Time: 3 days

Completion Date: Day 6

Create Detailed Project Schedule: Plan all future activities and assign deadlines.

Estimated Time: 1 day

Completion Date: Day 7

**2. Design Phase (3 Weeks)**

UI/UX Design: Develop wireframes and mockups for the platform.

Estimated Time: 1 week

Completion Date: End of Week 2

Platform Architecture Design: Design database schema, backend structure, and APIs.

Estimated Time: 1 week

Completion Date: End of Week 3

Review and Approval of Designs: Get feedback from stakeholders and make necessary revisions.

Estimated Time: 1 week

Completion Date: End of Week 3

1. **Development Phase (6 Weeks)**

**Frontend Development:**

Tasks: Develop website layout, book exchange system, staff directory, and campus map integration.

Estimated Time: 3 weeks

Completion Date: End of Week 6

**Backend Development:**

Tasks: Set up server, database, user management system, and API endpoints.

Estimated Time: 3 weeks

Completion Date: End of Week 6

System Integration: Integrate frontend and backend, including API connections.

Estimated Time: 1 week

Completion Date: End of Week 7

**4. Testing Phase (2 Weeks)**

Unit Testing: Test individual components for functionality.

Estimated Time: 1 week

Completion Date: End of Week 8

Integration Testing: Test the integration of all components.

Estimated Time: 4 days

Completion Date: Day 4 of Week 9

User Acceptance Testing (UAT): Test with real users (students, faculty) for feedback.

Estimated Time: 3 days

Completion Date: End of Week 9

**5. Deployment Phase (1 Week)**

Prepare Hosting Environment: Set up cloud hosting services (AWS, Google Cloud, etc.).

Estimated Time: 2 days

Completion Date: Day 2 of Week 10

Deploy to Production: Upload the platform to the live environment and test deployment.

Estimated Time: 3 days

Completion Date: Day 5 of Week 10

Final Testing: Run final tests after deployment to ensure everything is working as expected.

Estimated Time: 2 days

Completion Date: End of Week 10

**6. Post-Deployment Phase (Ongoing)**

Monitoring & Bug Fixing: Address any issues or bugs identified by users.

Estimated Time: Ongoing

Completion Date: Ongoing, with regular updates as needed

User Training & Documentation: Create user guides and FAQs for students and staff.

Estimated Time: 1 week

Completion Date: Week 11

Collect User Feedback & Iterative Improvement: Collect feedback from initial users and iterate it on the platform to make improvements.

Estimated Time: Ongoing

Completion Date: Ongoing, with a major review every 3 months

High-Level Gantt Chart (For MS Project)

Here’s how to input this into MS Project:

Create tasks and assign start dates and end dates for each.

**Dependencies:** Some tasks depend on the completion of others (e.g., Frontend Development depends on Design completion).

**Resources:** Assign your team members to specific tasks, ensuring the right skills are applied where necessary.

Example Structure for **MS Project:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task Name** | **Duration** | **Start Date** | **End Date** | **Dependencies** |
| Project Planning | 1 week | Day 1 | Day 7 |  |
| Design Phase | 3 weeks | Day 8 | Day 21 | Project Planning |
| Frontend Development | 3 weeks | Day 22 | Day 42 | Design Phase |
| Backend Development | 3 weeks | Day 22 | Day 42 | Design Phase |
| System Integration | 1 weeks | Day 43 | Day 49 | Frontend & Backend Dev. |
| Testing Phase | 2 weeks | Day 50 | Day 63 | System Integration |
| Deployment Phase | 1 weeks | Day 64 | Day 70 | Testing Phase |
| Post-Deployment | Ongoing | Day 71 | Ongoing | Deployment phase |