Final Project Proposal

Enterprise Name

Xavier University Athletics Office

Nature of the Enterprise & Type of Business

The Xavier University Athletics Office (UAO) is a university-based sports management unit responsible for overseeing and maintaining athletic facilities, organizing events, and managing reservations for students, faculty, and external clients. The office ensures the efficient allocation of sports resources while promoting an active and engaging athletic environment within Xavier University - Ateneo de Cagayan.

Overview/Background of the Enterprise

Traditionally, facility reservations and sports event management at Xavier University were handled manually, leading to inefficiencies such as scheduling conflicts, miscommunication, and administrative burdens. To address these issues, the UAO has transitioned towards digital transformation by developing the UAO Reservation System, a web-based platform designed to streamline facility booking, improve transparency, and enhance user experience.

Through this system, students and faculty can conveniently reserve sports venues, check real-time availability, and receive automated confirmations, reducing operational inefficiencies and administrative workload.

Mission:

To provide an efficient and accessible athletic facility management system that enhances sports engagement, promotes well-being, and ensures a seamless reservation process for the Xavier University community.

Vision:

To be a leading university athletics office that leverages technology to enhance facility management, support athletic excellence, and cultivate a culture of sportsmanship and fitness.

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Goals:

The Xavier University Athletics Office aims to enhance facility management through a modernized reservation system that optimizes scheduling and usage. It ensures a seamless and transparent booking process while supporting athletic development with well-maintained facilities. By automating workflows and real-time tracking, the office improves efficiency and

minimizes errors. Lastly, UAO embraces digital transformation through innovative solutions like the UAO Reservation System to enhance service delivery and user engagement.

Include the geographical location

The Xavier University Athletics Office (UAO) operates within Xavier University - Ateneo de Cagayan, located in Cagayan de Oro City, Philippines. The office manages several sports facilities, including the university gymnasium, covered court, and soccer field, ensuring they are well-maintained and available for academic, athletic, and extracurricular use.

Challenges/Issues/Opportunities for Integration

1. Manual Booking Inefficiencies: The current reservation system is done manually, thus slowing the process of booking. Also, the administration spends an unnecessary amount of time managing reservations
2. Lack of real-time updates: Students, faculty, and staff won't have access to any updates regarding facility availability.
3. User Authentication & Security: With the current system, anyone could tamper with the reservations, but the proposed system ensures unauthorized bookings are prevented.

Opportunities for Integration

1. Automated Reservation System: The Web system will allow Real-time updates and reservations and an interactive calendar.
2. Role based access: Secure login features for students, faculty, and administrators, with each of them having different access levels to ensure only authorized users can approve reservations.

Current Technology Systems Specifications

Information Systems / Application Systems / Network Systems

1. Information Systems / Application Systems / Network Systems

- The UAO Reservation System will be built using Django and Django REST Framework for backend development.

- MySQL will be used as the database management system to ensure scalability and efficient data handling.

- The frontend will be developed using HTML, CSS, JavaScript, and Bootstrap 5.3 to ensure a responsive and user-friendly interface.

- The system will incorporate version control (Git/GitHub) for collaboration and code management.

2. **Host Environment**

A cloud-hosted environment will be used to run the UAO Reservation System. This setup offers the freedom to easily scale resources during peak times, ensures high availability with multiple data centers, and is more cost-effective.

Proposed Solution

To address the inefficiencies in facility reservations and prevent booking redundancy, the UAO Reservation System will be developed as a web-based platform using Python Django and MySQL. This system will automate scheduling, eliminate conflicts, and enhance the user experience through real-time validation and redundancy prevention mechanisms.

Key Features & Implementation

1. **Real-Time Availability Checking**

    - Users will see an interactive calendar displaying available and booked slots before making a reservation.

    - Once a slot is booked, it will be immediately marked as unavailable to prevent duplicate reservations.

2. **Automated Conflict Detection & Prevention**

    - The system will validate every booking request against existing reservations. If a conflict is found, the user will be prompted to select another available slot.

    - A time-lock feature will temporarily reserve slots while a user is completing their booking to prevent simultaneous duplicate requests.

3. **Database Constraints & Validation**

    - The backend will enforce unique constraints to prevent double-booking for the same facility, date, and time.

    - Transactions will be validated before being saved, ensuring only conflict-free bookings are recorded.

4. **Admin Approval & Override System**

    - UAO administrators will have a dashboard to approve, reject, or modify reservations when needed.

    - Admins can override bookings for special events while keeping a detailed audit log of changes.

5. **Automated Notifications & Logs**

    - Users will receive email or SMS alerts for booking confirmations, changes, or cancellations.

    - A reservation log will track all booking actions, ensuring transparency and accountability.

6. **Integrated Payment System**

    - The platform will support online payments for paid reservations, reducing manual processing delays.