NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

WAD621S PROPOSAL (EVENT TICKETING SYSTEM)

Project Title:	**Event Ticketing System**
Module:	**WAD621S – Web Application Development**
Student Name(s) and Numbers	**Bernard K Fotolela (224065335)** **Diego T Paulus (222018135)** **Haloloye Paulus (224058525)**
Lecturer's Name	**Ms. Muntuumo**
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Contents

2. Introduction & Background

The enhancement of social and cultural activities and academic events, support for sporting activities and general participation of the members of the University and the general public at such events constitutes a significant part of the ethos of NUST. Currently, there are multiple problems associated with event clearing and ticketing processes. The registration and attendance systems are still manually filled and tracked, which takes unnecessary amounts of efforts. Also, the event interest and registration tickets are largely tracked with a 'first come, first serve' approach, which renders a clear overselling scenario possible. Slow processing of paper tickets also leads to diminishing attendance on site. An online pre purchasing system that eliminates attendance lines, redundancy, and ticket system aids participation which, on the whole, reduces the efforts on organizers' part.

3. Problem Statement

There is no online ticketing system. It creates additional administrative work, reduces event visibility, worsens the booking experience for both students and staff, and NUST is less efficient. This simplification project focuses developing a user-friendly NUST online ticketing system on event management for all stakeholders. It will have booking forms with direct and real-time booking functionalities, secure backends for booking management with seamless QR ticketing, and real-time tracking seat availability, SMS confirmations with reminders. It will automate the creation of reminders, and event organizers will have real-time management dashboards for bookings and event tracking.

4. Proposed Solution

NUST Event Ticketing System will be a web based application to centralize all events on NUST campus. It will allow students and staff to effortlessly browse events, purchase tickets, view hosting venues with booked seats, and real-time ticket availability. It will simplify event management for organizers with elimination of manual tasks and event driven management capabilities. The application will enable booking through secure forms showcasing mapped seats, event listings with filters, ticketing with QR codes, and reminder SMS notifications. Event organizers will have a central dashboard to simplify event management, tracking attendance and user reminders for automated event start approvals.

5. Scope & Limitations

The functionalities concerning observance of the organized events, simultaneous reservation of seats, ticketing via QR codes, SMS notifications, and the organizer's dashboard are the core highlights of the project. Payment gateways are omitted in the initial phase, however users are allowed to upload proof of payment or execute basic transfers. Use of sophisticated marketing modules and interface with student systems of NUST will also be omitted in the initial phase. The principal constraints are time, project resources, and technology capabilities. The approach to the project is pragmatic and optimistic, because the boundaries of the project are clearly stated, and the future steps are clearly defined.

6. System Design (First Draft)

Website users will encounter a basic and well organized webpage with a streamlined structure. As a public user, one will be able to access the homepage, lists of organized events, particulars of events with booking forms and seat maps, and other static pages (About, Contact, etc). The participants of the event will also be provided a portal that enables them to view their tickets and other bookings. The event organizer will in turn, through a dashboard, be able to create, edit and manage events, processes related to bookings and ticket sales, and report generation. The wireframes will represent event pages that have been designed with booking forms, ticket generation with QR codes, and an administrative dashboard. The system is designed to navigate users for events, tickets, SMS confirmation receipts, QR codes, and to the event organizers for booking approvals, report event data, and event marketing.

7. Target Audience

The system is intended for both students and staff of NUST who attend events as well as organizers including student societies, faculties, departments, and the university administration, Event details can be accessed anytime even by students and staff who can instantly check availability, use QR-coded tickets, and receive text message notifications. Organizers can also easily create events as well as manage bookings and attendance for streamlined productivity. Improved event management, resource savings, and a more active campus contributes to benefits enjoyed by the university as a whole.

8. Methodology

The NUST team will be approached using the Agile methodology, implementing campus needs in the system to be developed in increments while gathering feedback from the stakeholders. VS Code, XAMPP, GitHub for version control, and Figma for user interface design will be used for the proposed development tools. The rest of the team will be coordinated using WhatsApp and MS Teams, collaborating during sprint meetings and shared code.

9. Timeline

The project consists of multiple phases, the first of which is the design phase. The design phase will last for two weeks and will include the user interface, seat maps, and the layout for QR tickets. The development phase will take five weeks, focusing on real-time updates and SMS/QR functionalities in addition to work on the front and back ends. For the subsequent two weeks, the focus will primarily be on testing QR code scanning, SMS deliveries, and bookings with real-time seat updates. The last week is to be utilized for the system launch, project documentation, and system presentation. Successful completion of this phase would represent the completion of the project.

10. Expected Outcomes

The primary focus is the creation of the working prototype for the NUST Event Ticketing system, comprising real-time seat updates, SMS notifications, and QR code tickets. The completion of the project will enable the students to obtain proficient knowledge in the stack technologies: HTML, CSS, JavaScript, PHP, MySQL, and project administration. Down the line, this proposed solution may serve as the official event platform for NUST, with added functionalities such as payment processing and venue management.

11. Reference

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