**"Design and Implementation of a Centralized Departmental Management Web Application for NACOSMAPOLY"**

**1. Project Title**

**Design and Implementation of a Centralized Departmental Management Web Application for NACOSMAPOLY**

**2. Introduction**

In tertiary institutions, student bodies like NACOS (Nigeria Association of Computer Science Students) play a vital role in coordinating academic and administrative activities. However, most departmental-level processes are still handled manually or through fragmented digital tools, which results in inefficiency, miscommunication, and lack of transparency. This project proposes the development of a centralized, web-based application to streamline and automate the management of departmental tasks, communications, and resources within NACOSMAPOLY (Moshood Abiola Polytechnic).

**3. Problem Statement**

The current administrative process in NACOSMAPOLY is largely manual, involving the use of paper records, group chats, and scattered file-sharing methods. This has led to:

* Inefficient communication among executives and students
* Poor record-keeping and data retrieval
* Difficulty in accessing departmental information and resources
* Lack of transparency in executive duties and event coordination

There is a need for a centralized digital solution that simplifies, secures, and automates these departmental processes.

**4. Aim and Objectives**

**Aim:**

To design and implement a centralized web application that facilitates efficient departmental management for NACOSMAPOLY.

**Objectives:**

1. To analyze the current administrative workflow of NACOSMAPOLY
2. To design a multi-user web-based platform for managing departmental records and communications
3. To implement role-based access control for executives, students, and admins
4. To provide features such as event management, announcements, file sharing, and reports
5. To ensure data security and ease of access for all users
6. To evaluate the effectiveness of the developed system through user feedback and testing

**5. Scope of the Project**

This project will cover the following modules:

**NACOS WEBSITE MODULES**

Adminstration Modules:

* Admin Login Form
* Admin Dashboard

1. Dashboard – To view statistic module count
2. Staff – To add new staff i.e Lecturer, View all staffs and update a staff profile
3. Executives – To ass new executives, view all executives and update a executive profile
4. Event – To add new event, view all events and update a event
5. Gallery – To add new gallery, view all galleries and update a gallery
6. Blog – To add new blog, view all blogs and update a blog
7. FAQ’s (Frequently Asked Questions) – Add new FAQ, view all FAQ’s and update a FAQ
8. Testimony – Add new testimony, view all testimony and update a testimony
9. Settings – Update settings, password, academics calendar

**NACOS EXCO PORTAL MODULES**

Adminstration Modules:

* Admin Login Form
* Admin Dashboard

1. Dashboard – View all statistics count
2. Bursary – Add new payment, view all students transactions, Add new wallet, and view all wallet
3. Students – Add new student, view all students, and update a student.
4. Executives – Add new executive, view all executives, and update a executive
5. Voting – Add executives aspirant, view all aspirant, and update aspirant
6. Settings – Update settings, password, academics calendar, voting date

**NACOS STUDENT PORTAL MODULES**

* Student Registration Form
* Student Login Form

1. Email or Matric Number – Provide registered email or matric number to login
2. Password

* Student Forgot Password
* Student Dashboard

1. Dashboard – To view their profile and payment details
2. Project – Able to view their project supervisor and update their seminar and project info
3. Attendance – Student enrollment from admin, clock in attendance.
4. Time Table – View department academics time table.
5. GP Calculator – Student able to calculate their GP for all courses.
6. Bursary – Pay for department due, and view all transactions by session.

CBT – Students are eligible to take CBT test for department mid test after departmental payment is successful by the student.

1. Voting – Eligible to vote after departmental payment is successful by the student.
2. Settings – Update Profile, and updated new password.

**NACOS STUDENT ATTENDANCE SYSTEM PORTAL**

* Adminstrative Login

1. Admin and Lecturer Login Form
2. Forgot Password Form

* Adminstrative Dashboard

1. Dashboard - View all statistics modules count
2. Courses – Add new course, view all courses, update course, and assign course for lecturer
3. Staff (Lecturer) – Add new staff, view all staff, and update a staff
4. Student – Add new student
5. Class – Add new class, view all classes, and update a class
6. Attendance – Set a new attendance, view all student attendance, and update attendance
7. Setting – Update Academics calendar, and update new password

**6. Methodology**

The project will follow the **Software Development Life Cycle (SDLC)** using the **Agile model**:

* **Requirement Gathering**: Interviews with NACOS executives and students
* **System Design**: UI/UX design, database schema, and use-case diagrams
* **Implementation**: Using web technologies like:
  + **Frontend**: HTML, CSS, JavaScript (possibly with React or Vue)
  + **Backend**: PHP or Node.js
  + **Database**: MySQL
* **Testing**: Unit testing, integration testing, and user acceptance testing
* **Deployment**: Hosting on a local or cloud server

**7. Expected Outcome**

At the end of the project, the system should:

* Improve communication and data management within the NACOS department
* Provide centralized access to announcements, files, and events
* Increase transparency and organization in departmental operations
* Be easy to use, secure, and scalable

**8. Project Timeline (Simplified)**

| **Phase** | **Activities** | **Duration** |
| --- | --- | --- |
| Week 1–2 | Requirement Analysis | 2 weeks |
| Week 3–4 | System Design | 2 weeks |
| Week 5–8 | Development | 4 weeks |
| Week 9–10 | Testing & Debugging | 2 weeks |
| Week 11 | Deployment | 1 week |
| Week 12 | Documentation & Final Report | 1 week |

**9. Tools and Technologies**

* **Frontend**: HTML, CSS, JavaScript
* **Backend**: PHP / Laravel or Node.js
* **Database**: MySQL
* **Version Control**: Git & GitHub
* **Server**: XAMPP / WAMP / Cloud Hosting
* **Design Tools**: Figma / Adobe XD

**10. References**

(To be filled in with scholarly and web sources during research, e.g. IEEE journals, developer documentation, etc.)