মেট্রোপলিটন ইউনিভার্সিটি
Metropolitan University

Project Report

Title: Student Portal System.

Course Name: **Object Oriented Programming Lab.**

Course Code: CSE-222

Submitted to: Golam Mostafa Naeem (Lecturer)

Department of CSE, Metropolitan University.

Submitted by:

Name: Tarek Ahmed, Sami Chowdhury, Syed Hassan, Pritom Barma

Roll: 232-115-353, 232-115-368, 232-115-362, 232-115-367

Section: I+J

Course Name: **Object Oriented Programming Lab.**

Course Code: CSE-222

Date of Submission:06/07/25.

Project Title: Student Portal System

Technologies Used: Java, Java FX /Java Swing, MySQL etc.

1. Introduction:

The Student Portal System is an integrated platform designed to simplify and digitalize academic and administrative activities for university students. The portal provides a centralized solution where students can manage course enrollment, access academic records, view class schedules, and stay updated with campus announcements. Developed using Java, Java FX/Java Swing for GUI, and MySQL for data management, the system is both scalable and secure.

2. Background Study:

In many educational institutions, also in my University, students still rely on manual processes for tasks such as course registration, grade viewing, and submitting feedback. This traditional approach often leads to inefficiencies, delays, and miscommunication. With the advancement of technology, educational institutions are shifting toward digital solutions. This project was undertaken to bridge that gap by developing a robust and dynamic student portal system tailored for streamlined academic interactions.

3. Functionalities:

1. Authentication & Profile Management:

Secure login/logout, registration, and profile management for each student.

2. Course Enrollment & Registration:

Students can view available courses, check prerequisites, and register seamlessly.

3. Class Schedule / Timetable:

Automated generation and display of class schedules based on enrolled courses.

4. Grades & Academic Records:

Real-time access to grades, performance summaries, and academic history.

5. Notices & Announcements:

Admin can post and manage announcements; students are notified accordingly.

6. Student Feedback System:

Students can submit anonymous or logged feedback about courses and instructors.

7. Lost & Found Module:

A unique utility for students to report or claim lost items through the portal.

4. Future Scope:

Mobile App Integration: Expand the portal into Android/IOS platforms for on-the-go access.

Chat-bot Integration: Include AI-driven support for student queries.

E-Learning Integration: Add features like uploading lecture materials, live classes, and quizzes.

Multi-language Support: Support for local and international languages for wider accessibility.

Bus Schedule Notification System: Real-time SMS or email alerts for important Bus routes & time updates.

Online Payment Integration: Facilitating online payment for tuition fees, hostel charges, and other university services through secure gateways.

Digital ID and QR Code System:

Generating digital student ID cards with QR codes for attendance tracking, library entry, and event check-ins.

5. Limitations:

1) The current system is developed as a prototype and may require further security hardening before real-world deployment.

2) User interface customization is limited in its initial phase.

3) No role-based access for faculty or administrative departments (currently student and admin roles only).

4) The system does not support offline access.

5) Sensitive data such as passwords or academic records are not yet encrypted, posing a potential security risk in large-scale deployments.

6. Conclusion:

The Student Portal System provides an efficient, user-friendly platform for students to manage their academic tasks digitally. By automating common processes such as course registration, grade tracking, and communication, the portal enhances the overall student experience. With potential for future expansion, this project lays a strong foundation for smart campus solutions and demonstrates the practical application of Java and database technologies in real-world education systems.