



## UML Diagram Explanation:

The application initiates with a login page prompting users to authenticate. If users lack an account, they are directed to a registration page where they can create an account, specifying their role as either a student, teacher, or admin. Each role grants distinct privileges and responsibilities within the system.

Upon logging in as a student, users gain access to fundamental tasks such as viewing their reports, courses, and modules, along with a list of teachers within the institution. The main page after login offers multiple options including Dashboard, Courses, Teacher, Mail, Settings, and Logout. Clicking the mail button opens a window for composing emails. Additionally, students can change their passwords for security purposes.

When logged in as a teacher, the primary role involves monitoring students' progress, assigning marks for each module, and generating reports accordingly.

Admin users bear the most extensive responsibilities. They oversee the addition or removal of courses and modules for batches of students and teachers.

Additionally, they manage the assignment of modules to teachers for instruction purposes. Admins are exclusively responsible for adding or removing teachers from the system. In the class diagram, various classes representing users (Student, Teacher, Admin), authentication modules, email functionalities, course management modules, and user interface components are depicted.

Associations between classes illustrate the relationships between users and their roles, as well as interactions between different system modules. The implementation of the class diagram guides the development of classes, their attributes, and methods within the application. Each class encapsulates specific functionalities and interacts with other classes based on defined relationships.