

Project Title: Student Module Enrollment System with Prerequisite Checking

Objective:

Design a simple system that allows students to enroll in modules, ensuring that they have completed any required prerequisite courses. The system should utilize a blockchain-like structure to maintain immutability and transparency.

Requirements:

1. **Student class:**
 - Create a Student class that holds:
 - Student ID
 - List of completed course codes
2. **Module class:**
 - Create a Module class that holds:
 - Course code
 - List of prerequisite course codes
3. **Enrollment class:**
 - Create an EnrollmentSystem class that manages:
 - A list of students
 - A list of modules
 - A method to add students
 - A method to add modules
 - A method to check if a student can enroll in a module based on prerequisite completion
 - A method to enroll a student in a module
4. **Functionality:**
 - The system should allow adding modules with their prerequisites.
 - The system should allow students to complete courses.
 - The system should allow students to enroll in modules only if they meet the prerequisite requirements.
 - If enrollment is successful, return a success message; if not, return a failure message with the missing prerequisites.

Example Course Codes and Prerequisites

- **Modules:**
 - **CS101:** No prerequisites
 - **CS201:** Prerequisite: CS101
 - **CS301:** Prerequisites: CS201, CS202
 - **CS202:** Prerequisite: CS101