CSIT Courses Registration System

A comprehensive document outlines the project specifications, including the database schema, role-based access controls, stakeholder permissions, and a brief outline related to the project functional requirements, serving as an essential guide for the development and implementation.

Tables:

1. Students

- **StudentID**: PRIMARY KEY, NOT NULL.
- **First_name**: NOT NULL.
- **Last_name**: NOT NULL.
- **Email**: UNIQUE, NOT NULL.
- **Password**: NOT NULL.
- **Major**: FOREIGN KEY (references a major in the Departments table).
- **Year**: CHECK 4 (to ensure it's within a valid range).

2. Courses

- **CourseID**: PRIMARY KEY, NOT NULL.
- **Course_name**: NOT NULL.
- **Department**: FOREIGN KEY (references DepartmentID in the Departments table).
- **Credits**: CHECK (greater than 0 and less than a maximum value).
- **InstructorID**: FOREIGN KEY (references InstructorID in the Instructors table).

3. Instructors

- **InstructorID**: PRIMARY KEY, NOT NULL.
- **First_name**: NOT NULL.
- **Last_name**: NOT NULL.
- **Email**: UNIQUE, NOT NULL.
- **Password**: NOT NULL.
- **Department**: FOREIGN KEY (references DepartmentID in the Departments table).
- **Role:** (Dean, Prof, TA, Academic Advisor).

4. Enrollments

- **EnrollmentID**: PRIMARY KEY, NOT NULL.
- **StudentID**: FOREIGN KEY (references StudentID in the Students table), NOT NULL.
- **CourseID**: FOREIGN KEY (references CourseID in the Courses table), NOT NULL.
- **Semester**: NOT NULL.
- **Grade**: CHECK (NULL until the end of the course which will be assigned to the grade the student got)

5. Departments

- **DepartmentID**: PRIMARY KEY, NOT NULL.
- **Department_name**: UNIQUE, NOT NULL.
- **Head**: FOREIGN KEY (references the InstructorID, for one of the professors).

6. Affairs

- **AdminID**: PRIMARY KEY, NOT NULL.
- **FirstName**: NOT NULL.
- **LastName**: NOT NULL.
- **Email**: UNIQUE, NOT NULL.
- **Password**: NOT NULL

Pages:

1. **Login Page**: students, instructors, and affairs.
2. **Course Catalogue**
3. **Registration Page**: students register for courses.
4. **Student Dashboard**: current enrollment, grades.
5. **Instructor Dashboard**: courses taught, enrolled students.
6. **Affairs Panel**: manage courses, students, instructors, departments.

Constraints and Considerations:

1. Students

- **Can Do**:
  - Browse the course catalog.
  - Register for courses.
  - Drop courses (within a specified period).
  - View their current and past enrollments.
  - View grades.
- **Cannot Do**:
  - Enroll in courses that are at full capacity.
  - Enroll in courses without meeting prerequisites.
- **Prerequisites/Constraints**:
  - Must meet course prerequisites to enroll.
  - Enrollment is limited by credit hours or departmental rules.

2. Instructors

- **Can Do**:
  - View the list of students enrolled in their courses.
  - Enter or update grades for students.
  - View and edit course information they are teaching.
- **Cannot Do**:
  - Modify student enrollment status.
  - Access courses they are not teaching.
- **Prerequisites/Constraints**:
  - Assigned to courses by the admin.
  - Only courses within their department.

3. Affairs

- **Can Do**:
  - Add, update, or remove courses from the catalog.
  - Assign instructors to courses.
  - Manage student and instructor accounts.
  - Override enrollment constraints (e.g., prerequisites, full classes).
  - Change other staff personal information.
- **Cannot Do**:
  - Enroll in courses (unless also registered as a student).
- **Prerequisites/Constraints**: