**Practical Assignment Two**

**University Student Enrollment System**

**Scenario:**

You have been hired as a database designer for a university that wants to digitise its student enrollment system. Your job is to design and implement a relational database to manage students, courses, Staff, and enrollments.

**Tasks:**

1. **Design the Database Schema**:
   * Identify the key entities in the system (e.g., Students, Courses, Staff, Enrollments).
   * Define the attributes for each entity, clearly specifying:
     + Primary keys
     + Candidate keys
     + Foreign keys
   * Represent your schema in a clear tabular format or as an ER diagram
   * Create at least two procedures and two functions that can be used to manipulate records.
2. **Define Relational Constraints**:
   * Specify all domain constraints (e.g., student age must be > 16).
   * Define entity integrity constraints (e.g., primary keys must not be null).
   * Define referential integrity constraints (e.g., student\_id in Enrollments must exist in Students).
3. **Create Sample Data**:
   * Insert at least 5 records in each table to satisfy all constraints.
   * Include one example of each:
     + Violation of a domain constraint
     + Violation of an entity integrity constraint
     + Violation of a referential integrity constraint
   * Explain what the violations are and why they are invalid.
4. **Write SQL Queries**
   * Provide sample SQL queries to:
     + Enroll a student in a course.
     + Retrieve all courses taught by a specific professor.
     + List all students enrolled in a specific course.

**Deliverables:**

* A PDF document with:
  + Schema design and constraints
  + Sample data with the explanation of violations
  + SQL queries and outputs