

Assignment

Project: Sunbeam Online Student Portal

Given Database Schema

The following database `institute_management_db` contains the tables:

- `courses`
- `students`

The database is created using the provided SQL schema.

Q1. Database Connectivity

Using **Python** and **mysql-connector**, establish a connection with the MySQL database `institute_management_db`.

- Install and configure the required MySQL connector.
 - Create a reusable database connection function.
 - Verify the database connection using the terminal / console.
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Q2. Retrieve Data from Tables (SELECT)

Using Python and mysql-connector, write programs to retrieve and display data from the following tables using the terminal:

- Retrieve all records from the `courses` table.
 - Retrieve all records from the `students` table.
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Q3. Insert Data into Tables (INSERT)

Using Python and mysql-connector, write programs to insert data into the database tables:

- Insert a new record into the `courses` table.
 - Insert a new record into the `students` table.
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Q4. Update Table Records (UPDATE)

Using Python and mysql-connector, write programs to update existing records in the database:

- Update the fees of a course in the `courses` table.
 - Update the mobile number of a student in the `students` table.
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Q5. Delete Records from Tables (DELETE)

Using Python and mysql-connector, write programs to delete records from the database:

- Delete a student record from the **students** table.
 - Delete a course record from the **courses** table.
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Terminal-Based Execution

Execute all database operations using **terminal / console only**. Display outputs directly in the console.
