**University DataBase Schema**

|  |  |
| --- | --- |
| \*\*Table Name | Description\*\* |
| courses | Stores information about each course, including course name, instructor, meeting days, and times |
| course\_schedule | Stores the specific meeting days and times for each course |
| student\_course | Connects students to courses and stores their associated feedback and ratings |
| student | Stores student information, including student name, major, and password |

Table: student

|  |  |  |
| --- | --- | --- |
| Column Name  student\_id | Data Type    INT | Description  Autoincrement |
| student\_name | VARCHAR(255) | Primary key, unique identifier for the student |
| major | VARCHAR(255) | Student's major |
| password | VARCHAR(255) | Student's password |

Table: courses

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| course\_id | INT | Primary key, unique identifier for the course |
| course\_name | VARCHAR(255) | Name of the course |
| instructor | VARCHAR(255) | Name of the course instructor |
| location | VARCHAR(255) | Location of the course meeting |
| rating | DOUBLE | Student's rating for the course (1 to 5) |

Table: course\_schedule

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| course\_id | INT | Foreign key referencing the courses table |
| meeting\_day | VARCHAR(10) | Day of the week the course meets (e.g., "Monday", "Tuesday") |
| start\_time | TIME | Start time of the course meeting |
| end\_time | TIME | End time of the course meeting |

Table: student\_course

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| student\_name | VARCHAR(255) | Primary key, unique identifier for the student |
| course\_id | INT | Primary key, foreign key referencing the courses table |
| feedback | VARCHAR(1000) | Student's feedback for the course |
| rating | INT | Student's rating for the course (1 to 5) |

**MySQL Code for creating tables and add Courses:**

CREATE TABLE student(

    student\_id INT UNIQUE AUTO\_INCREMENT,

    student\_name VARCHAR(20) PRIMARY KEY ,

    major VARCHAR(20),

    password varchar(20)

);

CREATE TABLE course (

  course\_id INT PRIMARY KEY AUTO\_INCREMENT,

  course\_name VARCHAR(255) NOT NULL,

  instructor VARCHAR(255) NOT NULL,

  location VARCHAR(255) NOT NULL,

  rating INT

);

CREATE TABLE student\_course (

  student\_name VARCHAR(255) NOT NULL,

  course\_id INT NOT NULL,

  feedback VARCHAR(1000),

  rating INT ,

  date DATE,

  PRIMARY KEY (student\_name, course\_id),

  FOREIGN KEY (student\_name) REFERENCES student(student\_name)ON DELETE CASCADE,

  FOREIGN KEY (course\_id) REFERENCES course(course\_id) ON DELETE CASCADE

);

CREATE TABLE course\_schedule (

  course\_id INT NOT NULL,

  meeting\_day VARCHAR(10) NOT NULL,

  start\_time TIME NOT NULL,

  end\_time TIME NOT NULL,

  PRIMARY KEY (course\_id, meeting\_day),

  FOREIGN KEY (course\_id) REFERENCES course(course\_id) ON DELETE CASCADE

);

INSERT INTO course (course\_id, course\_name, instructor, location,rating)

VALUES

(1, 'Introduction to Computer Science', 'Prof. Ada Lovelace', 'Hall 203',0),

(2, 'Programming Fundamentals with Python', 'Dr. Grace Hopper', 'Lecture Hall A',0),

(3, 'Data Structures and Algorithms', 'Mr. John von Neumann', 'Room 314',0),

(4, 'Web Development with HTML, CSS, and JavaScript', 'Ms. Brenda Cargill', 'Computer Lab 2',0),

(5, 'Computer Networks and Cybersecurity', 'Prof. Alan Turing', 'Seminar Room B',0),

(6, 'Object-Oriented Programming with Java', 'Dr. James Gosling', 'Hall 210',0),

(7, 'Artificial Intelligence', 'Prof. John McCarthy', 'Lecture Hall C',0),

(8, 'Machine Learning', 'Dr. Andrew Ng', 'Computer Lab 1',0),

(9, 'Database Management Systems', 'Prof. E.F. Codd', 'Room 321',0),

(10, 'Software Engineering', 'Dr. Frederick Brooks', 'Hall 205',0);

(11, 'Discrete Mathematics', 'Prof. Claude Shannon', 'Room 309', 0),

(12, 'Operating Systems', 'Dr. Avi Rubin', 'Hall 212', 0),

(13, 'Software Design and Architecture', 'Mr. Grady Booch', 'Lecture Hall D', 0),

(14, 'Computer Graphics', 'Ms. Daniela Rus', 'Computer Lab 3', 0),

(15, 'Data Mining and Analytics', 'Prof. Jeff Dean', 'Seminar Room C', 0);

INSERT INTO course\_schedule (course\_id, meeting\_day, start\_time, end\_time)

VALUES

(1, 'Monday', '09:00:00', '10:00:00'),

(1, 'Wednesday', '09:00:00', '10:00:00'),

(2, 'Tuesday', '11:00:00', '12:00:00'),

(2, 'Thursday', '11:00:00', '12:00:00'),

(3, 'Friday', '01:00:00', '02:00:00'),

(4, 'Monday', '03:00:00', '04:00:00'),

(4, 'Wednesday', '03:00:00', '04:00:00'),

(5, 'Tuesday', '05:00:00', '06:00:00'),

(5, 'Thursday', '05:00:00', '06:00:00'),

(6, 'Monday', '01:00:00', '02:00:00'),

(6, 'Wednesday', '01:00:00', '02:00:00'),

(7, 'Tuesday', '03:00:00', '04:00:00'),

(7, 'Thursday', '03:00:00', '04:00:00'),

(8, 'Monday', '05:00:00', '06:00:00'),

(8, 'Wednesday', '05:00:00', '06:00:00'),

(9, 'Tuesday', '11:00:00', '12:00:00'),

(9, 'Thursday', '11:00:00', '12:00:00'),

(10, 'Friday', '09:00:00', '10:00:00');

(11, 'Tuesday', '01:00:00', '02:00:00'),

(11, 'Thursday', '01:00:00', '02:00:00'),

(12, 'Monday', '05:00:00', '06:00:00'),

(12, 'Wednesday', '05:00:00', '06:00:00'),

(13, 'Friday', '11:00:00', '12:00:00'),

(14, 'Tuesday', '09:00:00', '10:00:00'),

(14, 'Thursday', '09:00:00', '10:00:00'),

(15, 'Monday', '03:00:00', '04:00:00'),

(15, 'Wednesday', '03:00:00', '04:00:00');

-- changes--

UPDATE course\_schedule

SET start\_time = CAST(CONCAT(HOUR(start\_time) + 12, ':', MINUTE(start\_time)) AS TIME),

end\_time = CAST(CONCAT(HOUR(end\_time) + 12, ':', MINUTE(end\_time)) AS TIME)

WHERE start\_time >= '1:00:00' AND start\_time <= '7:00:00';

ALTER TABLE course MODIFY COLUMN rating float

--changes--