



DATABASE MANAGEMENT SYSTEM
DEPARTMENT OF SOFTWARE ENGINEERING
UNIVERSITY DATABASE

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ROLE OF DATABASE IN UNIVERSITY DATA

A database plays a vital role in university data by storing and managing data for university , enabling dynamic content , user interactions, and data retrieval. It ensures data consistency, integrity, and scalability, supporting search capabilities, and facilitating efficient data manipulation and retrieval. Common databases used in university data include relational databases like MySQL databases .



NOW LETS MAKE A TABLES OF UNIVERSITY DATA

```
• create database university;  
• use university ;
```

-- Table: Students

```
CREATE TABLE Students (  
    StudentID INT PRIMARY KEY,  
    FirstName VARCHAR(50),  
    LastName VARCHAR(50),  
    DateOfBirth DATE,  
    MajorID INT  
);
```

-- Table: Professors

```
) CREATE TABLE Professors (  
    ProfessorID INT PRIMARY KEY,  
    FirstName VARCHAR(50),  
    LastName VARCHAR(50),  
    DepartmentID INT  
);
```

-- Table: Departments

```
CREATE TABLE Departments (  
    DepartmentID INT PRIMARY KEY,  
    DepartmentName VARCHAR(100)  
);
```

-- Table: Courses

```
⊖ CREATE TABLE Courses (  
    CourseID INT PRIMARY KEY,  
    CourseName VARCHAR(100),  
    DepartmentID INT  
);
```

NOW WE HAVE TO INSERT VALUES

```
-- Insert Data into Departments
```

```
INSERT INTO Departments (DepartmentID, DepartmentName)
VALUES
(1, 'Computer Science'),
(2, 'Physics'),
(3, 'Mathematics'),
(4, 'Biology'),
(5, 'Chemistry');
```

```
-- Insert Data into Students
```

```
INSERT INTO Students (StudentID, FirstName, LastName, BirthDate, Gender)
VALUES
(1, 'Ali', 'Khan', '2000-01-15', 1),
(2, 'Sara', 'Malik', '1999-03-22', 2),
(3, 'Ahmed', 'Sheikh', '1998-07-18', 3),
(4, 'Ayesha', 'Zafar', '2001-05-05', 4),
(5, 'Bilal', 'Hussain', '2000-11-10', 5);
```

```
-- Insert Data into Professors
```

```
INSERT INTO Professors (ProfessorID, FirstName, LastName, DepartmentID)
VALUES
(1, 'Dr. Kamran', 'Farooq', 1),
(2, 'Dr. Rabia', 'Qureshi', 2),
(3, 'Dr. Salman', 'Yousuf', 3),
(4, 'Dr. Nadia', 'Ali', 4),
(5, 'Dr. Faisal', 'Raza', 5);
```

```
-- Insert Data into Courses
```

```
INSERT INTO Courses (CourseID, CourseName, Credits)
VALUES
(101, 'Introduction to Programming', 3),
(102, 'Data Structures', 3),
(201, 'Quantum Physics', 4),
(202, 'Classical Mechanics', 4),
(301, 'Calculus I', 3),
(302, 'Linear Algebra', 3),
(401, 'General Biology', 4),
(402, 'Genetics', 4),
(501, 'Organic Chemistry', 5),
(502, 'Inorganic Chemistry', 5);
```

```
-- Insert Data into Enrollments
```





```
INSERT INTO Enrollments (EnrollmentID, StudentID, ProfessorID, CourseID)
VALUES
(1, 1, 1, 101, 'A'),
(2, 1, 102, 'B'),
(3, 2, 201, 'A'),
(4, 2, 202, 'A'),
(5, 3, 301, 'B'),
(6, 3, 302, 'C'),
(7, 4, 401, 'A'),
(8, 4, 402, 'B'),
(9, 5, 501, 'A'),
(10, 5, 502, 'A');
```

SOME OF QUIRES FROM 50 WHICH WE HAVE MADE

Q.1

```
SELECT * FROM Students;
```

OUTPUT:


Result Grid				Filter Rows: <input type="text"/>	Edit: 	
	StudentID	FirstName	LastName	DateOfBirth	MajorID	
▶	1	Ali	Khan	2000-01-15	1	
	2	Sara	Malik	1999-03-22	2	
	3	Ahmed	Sheikh	1998-07-18	3	
	4	Ayesha	Zafar	2001-05-05	4	
	5	Bilal	Hussain	2000-11-10	5	
●	NULL	NULL	NULL	NULL	NULL	

SOME OF QUIRES FROM 50 WHICH WE HAVE MADE

Q.2

```
133 • SELECT Students.* FROM Enrollments
134 JOIN Students ON Enrollments.StudentID = Students.StudentID
135 WHERE Enrollments.CourseID = 101;
136
```

OUTPUT:

<					
Result Grid					
Filter Rows: <input type="text"/>					
Export:  Wrap Cell Conte					
	StudentID	FirstName	LastName	DateOfBirth	MajorID
▶	1	Ali	Khan	2000-01-15	1

SOME OF QUIRES FROM 50 WHICH WE HAVE MADE

Q.3

```
-- 25. List professors who teach in the 'Chemistry' department.
```

```
• SELECT Professors.FirstName, Professors.LastName FROM Professors  
  JOIN Departments ON Professors.DepartmentID = Departments.DepartmentID  
  WHERE Departments.DepartmentName = 'Chemistry';
```

OUTPUT:

Result Grid			Filter Rows:
	FirstName	LastName	
▶	Dr. Faisal	Raza	

CONTRIBUTION

Naveed
jokhio:
25 of query

Muzzafar
25 of query

The background is a gradient of deep purple and blue, filled with numerous out-of-focus circular light spots (bokeh) in various shades. Overlaid on this are several faint, white geometric patterns. On the left side, there is a large circular scale with tick marks and numbers ranging from 140 to 260. Other elements include concentric circles, dashed lines, and small arrows, some of which are part of larger circular motifs. The overall aesthetic is modern and technical.

THANK YOU!