**University Examination System -Database Documentation**

Database name: university\_examination\_system

Creating tables:

Table : Department

CREATE TABLE Department(

department\_id INT not null primary key,

name varchar(250),

hod\_id int

);

Creating a Department Table and the columns are department\_id data type Int (Primary key), name data type varchar, hod\_id data type Int.



Table : Faculty

CREATE TABLE Faculty(

faculty\_id INT not null primary key,

name varchar (250),

department\_id INT,

foreign key (department\_id) references Department(department\_id) on delete cascade

);

Creating a Faculty Table and the columns are faculty\_id data type Int (Primary key), name data type varchar, department\_id data type Int(Foreign key).

Table : Student

CREATE TABLE Student(

student\_id INT not null primary key,

name varchar(250),

enrollment\_number int,

department\_id INT,

foreign key (department\_id) references Department(department\_id) on delete cascade

);

Creating a Student Table and the columns are student\_id data type Int (Primary key), name data type varchar, enrolment\_number data type Int department\_id data type Int(Foreign key).



Table : Course

CREATE TABLE Course(

course\_id INT not null primary key,

name varchar(250),

course\_code varchar(50),

department\_id INT,

faculty\_id INT,

foreign key (department\_id) references Department(department\_id) on delete cascade,

foreign key (faculty\_id) references Faculty(faculty\_id) on delete cascade

);

Creating a Course Table and the columns are course\_id data type Int (Primary key), name data type varchar, course\_code data type varchar department\_id data type Int(Foreign key), faculty\_id data type Int(Foreign key). As we can see here that two foreign keys are created which is called Junction table(Mant to many relationship) .

Table : Exam

CREATE TABLE Exam(

exam\_id INT not null primary key,

name varchar(250),

exam\_date date,

duration time,

total\_marks INT,

course\_id INT,

foreign key (course\_id) references Course(course\_id) on delete cascade

);



Creating a Exam Table and the columns are exam\_id data type Int (Primary key), name data type varchar, exam\_date data type date, duration data type time, total\_marks data type Int, course\_id data type Int (Foreign key).



Table : Student\_exam\_result

CREATE TABLE Student\_exam\_result(

result\_id INT not null primary key,

student\_id INT,

exam\_id INT,

marks\_obtained INT,

grade varchar(250),

foreign key (student\_id) references Student(student\_id) on delete cascade,

foreign key (exam\_id) references Exam(exam\_id) on delete cascade

);

Creating a Student\_exam\_result Table and the columns are result\_id data type Int (Primary key), student\_id data type Int(Foreign key), exam\_id data type Int(Foreign key), marks\_obtained data type Int, grade data type varchar. As we can see here that two foreign keys are created which is called Junction table(Mant to many relationship) .



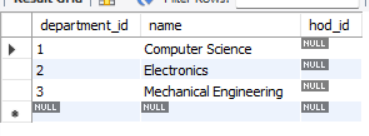
Inserting data into tables:

INSERT INTO Department (department\_id, name, hod\_id) VALUES

(1, 'Computer Science', NULL),

(2, 'Electronics', NULL),

(3, 'Mechanical Engineering', NULL);



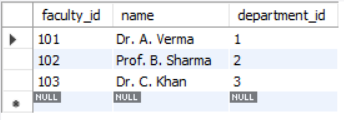


INSERT INTO Faculty (faculty\_id, name, department\_id) VALUES

(101, 'Dr. A. Verma', 1),

(102, 'Prof. B. Sharma', 2),

(103, 'Dr. C. Khan', 3);



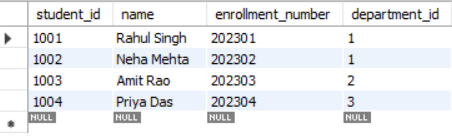
INSERT INTO Student (student\_id, name, enrollment\_number, department\_id) VALUES

(1001, 'Rahul Singh', 202301, 1),

(1002, 'Neha Mehta', 202302, 1),

(1003, 'Amit Rao', 202303, 2),

(1004, 'Priya Das', 202304, 3);



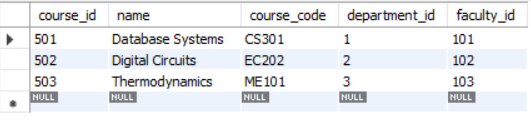


INSERT INTO Course (course\_id, name, course\_code, department\_id, faculty\_id) VALUES

(501, 'Database Systems', 'CS301', 1, 101),

(502, 'Digital Circuits', 'EC202', 2, 102),

(503, 'Thermodynamics', 'ME101', 3, 103);



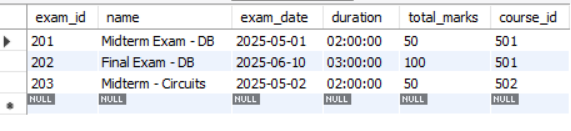


INSERT INTO Exam (exam\_id, name, exam\_date, duration, total\_marks, course\_id) VALUES

(201, 'Midterm Exam - DB', '2025-05-01', '02:00:00', 50, 501),

(202, 'Final Exam - DB', '2025-06-10', '03:00:00', 100, 501),

(203, 'Midterm - Circuits', '2025-05-02', '02:00:00', 50, 502);



INSERT INTO Student\_exam\_result (result\_id, student\_id, exam\_id, marks\_obtained, grade) VALUES

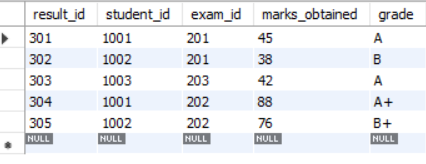
(301, 1001, 201, 45, 'A'),

(302, 1002, 201, 38, 'B'),

(303, 1003, 203, 42, 'A'),

(304, 1001, 202, 88, 'A+'),

(305, 1002, 202, 76, 'B+');





**ER Diagram:**

