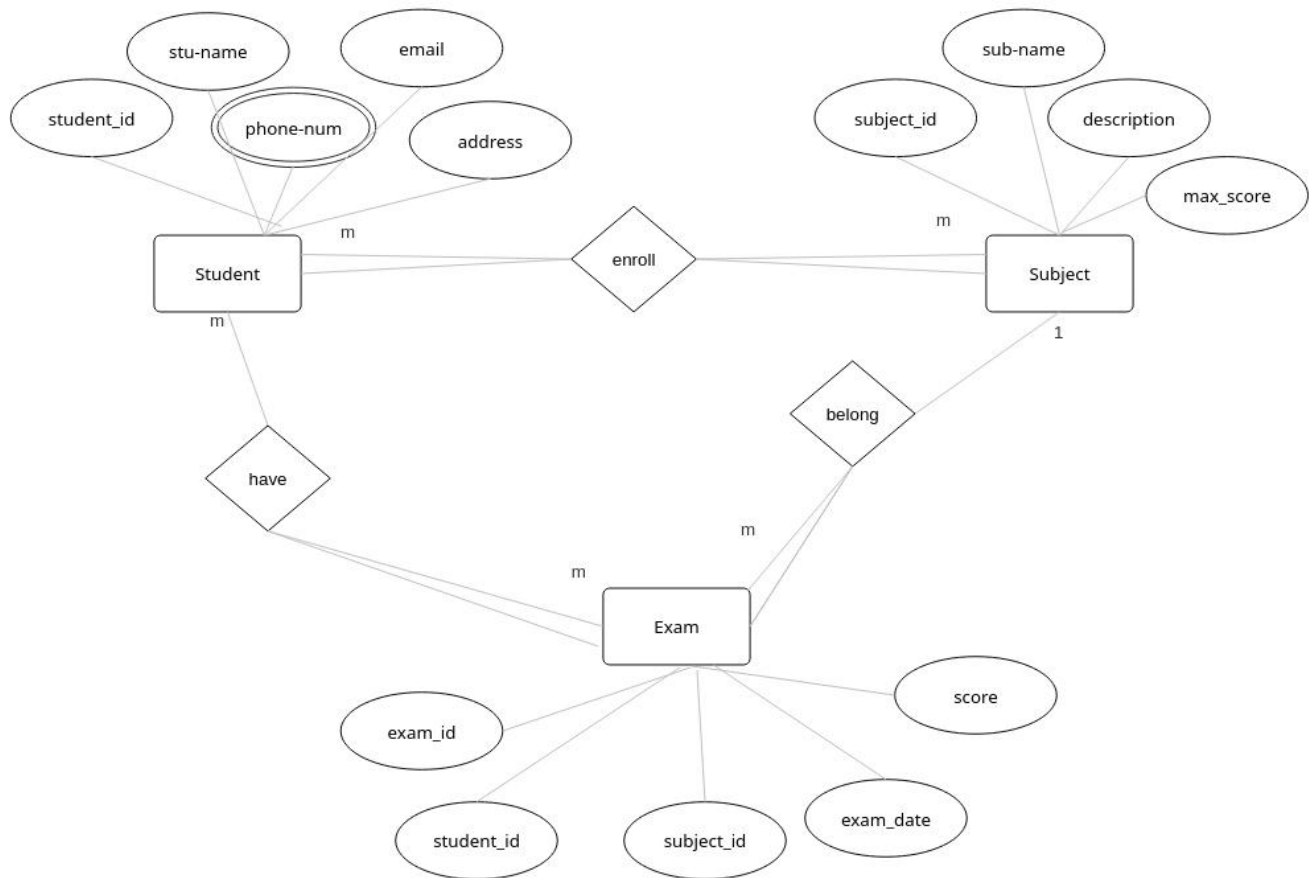


Abdelrahman mohamed ali abdelmaksoud
lab1(mysql)

The erd is :-



the mapping is :-

Student (StudentID , Name NOT NULL, Email , Address);

Subject (SubjectID I, SubjectName , Description TEXT, MaxScore);

Exam (exam_id,exam_date, score, sub_id);

StudentSubject (stud_id, sub_id);

StudentExam (exam_id, stud_id);

PhoneNumber (phone_id , stud_id, phone_number);

the sql scheme ddl :-

```
CREATE TABLE Student ( StudentID INT PRIMARY KEY
AUTO_INCREMENT, Name VARCHAR(255) NOT NULL, Email
VARCHAR(255) NOT NULL UNIQUE, Address VARCHAR(255));
```

```
CREATE TABLE PhoneNumber ( phone_id INT AUTO_INCREMENT
PRIMARY KEY, stud_id INT, phone_number VARCHAR(20), FOREIGN
KEY (stud_id) REFERENCES Student(StudentID) );
```

```
CREATE TABLE Subject ( sub_id INT AUTO_INCREMENT PRIMARY
KEY, sub_name VARCHAR(100) NOT NULL, description TEXT,
max_score INT NOT NULL );
```

```
CREATE TABLE StudentSubject ( stud_id INT, sub_id INT, PRIMARY
KEY (stud_id, sub_id), FOREIGN KEY (stud_id) REFERENCES
Student(StudentID), FOREIGN KEY (sub_id) REFERENCES
Subject(sub_id) );
```

```
CREATE TABLE Exam ( exam_id INT AUTO_INCREMENT PRIMARY
KEY, sub_id INT, exam_date DATE, score INT, FOREIGN KEY (sub_id)
REFERENCES Subject(sub_id) );
```

```
CREATE TABLE StudentExam ( exam_id INT, stud_id INT, PRIMARY
KEY (exam_id, stud_id), FOREIGN KEY (exam_id) REFERENCES
```

Exam(exam_id), FOREIGN KEY (stud_id) REFERENCES
Student(StudentID));

insert your classmates data(5 rows for each table):-

```
INSERT INTO Student (Name, Email, Address)
VALUES ('Alice Smith', 'alice.smith@example.com', '123 Main St, Cityville,
CA 12345'),
      ('Bob Jones', 'bob.jones@example.com', '456 Elm St, Anytown, USA
54321'),
      ('Charlie Brown', 'charlie.brown@example.com', '789 Maple Ave,
Smalltown, NY 98765'),
      ('Diana Davis', 'diana.davis@example.com', '1011 Oak St, Suburbia, IL
01234'),
      ('Ethan Williams', 'ethan.williams@example.com', '1314 Pine Blvd,
Metropoville, TX 78901');
```

```
INSERT INTO PhoneNumber (stud_id, phone_number)
VALUES (1, '555-123-4567'),
      (1, '555-789-0123'),
      (2, '555-234-5678'),
      (3, '555-345-6789'),
      (4, '555-456-7890'),
      (5, '555-567-8901');
```

```
INSERT INTO Subject (sub_name, description, max_score)
VALUES ('C Programming', 'Introduction to C language concepts', 100),
      ('C++ Programming', 'Object-oriented programming with C++', 100),
      ('HTML', 'Hypertext Markup Language for web development', 100),
      ('JavaScript', 'Client-side scripting language for web applications', 100),
      ('Database Management Systems', 'Fundamentals of database design and
manipulation', 100);
```

```
INSERT INTO StudentSubject (stud_id, sub_id)
```

```
VALUES (1, 1),  
       (1, 2),  
       (2, 1),  
       (2, 3),  
       (3, 4),  
       (3, 5),  
       (4, 3),  
       (4, 4),  
       (5, 1),  
       (5, 2);
```

```
INSERT INTO Exam (sub_id, exam_date, score)  
VALUES (1, '2024-07-25', 85),  
       (2, '2024-07-26', 90),  
       (3, '2024-07-23', 78),  
       (4, '2024-07-22', 82),  
       (5, '2024-07-24', 95);
```