



School: SCHOOL OF ENGINEERING & TECHNOLOGY Campus: PARLAKHEMUNDI
Academic Year: 2025-26 Subject Name: RELATIONAL & DISTRIBUTED DATABASES Subject Code: CUCS 1005
Semester: 4th Program: B.TECH Branch: CSE Specialization:
Date:

Applied and Action Learning (Learning by Doing and Discovery)

Name of the Experiment : Creating ER Diagrams

Coding Phase: Pseudo Code / Flow Chart / Algorithm

1. Execute the SQL programs and create database and tables:

- UniversityDB
- Students
- Teachers
- Courses
- Enrollment

2. From the top menu, click

Database → Reverse Engineer

3. Click Next

4. Choose the active connection

5. Select the schema UniversityDB

6. Click Next → Next → Execute

7. Click Finish

Testing Phase : Compilation of Code (error detection)

The screenshot shows the SQL Developer interface with a SQL script in a file named 'SQL File 6'. The script contains three CREATE TABLE statements:

```
10
11 CREATE TABLE Teachers (
12     teacher_id INT PRIMARY KEY,
13     teacher_name VARCHAR(100) NOT NULL,
14     department VARCHAR(50)
15 );
16 CREATE TABLE Courses (
17     course_id INT PRIMARY KEY,
18     course_name VARCHAR(100) NOT NULL,
19     credits INT,
20     teacher_id INT,
21     FOREIGN KEY (teacher_id) REFERENCES Teachers(teacher_id)
22 );
23 CREATE TABLE Enrollment (
24     student_id INT,
25     course_id INT,
26     PRIMARY KEY (student_id, course_id),
27     FOREIGN KEY (student_id) REFERENCES Students(student_id),
28     FOREIGN KEY (course_id) REFERENCES Courses(course_id)
29 );
```

The 'Output' window at the bottom shows an 'Action Output' table with the following data:

#	Time	Action	Message
1	06:06:46	CREATE TABLE Courses (course_id INT PRIMARY KEY, course_name VARCHAR(100) NOT NULL, cre...	Error

Implementation Phase: Final Output (no error)

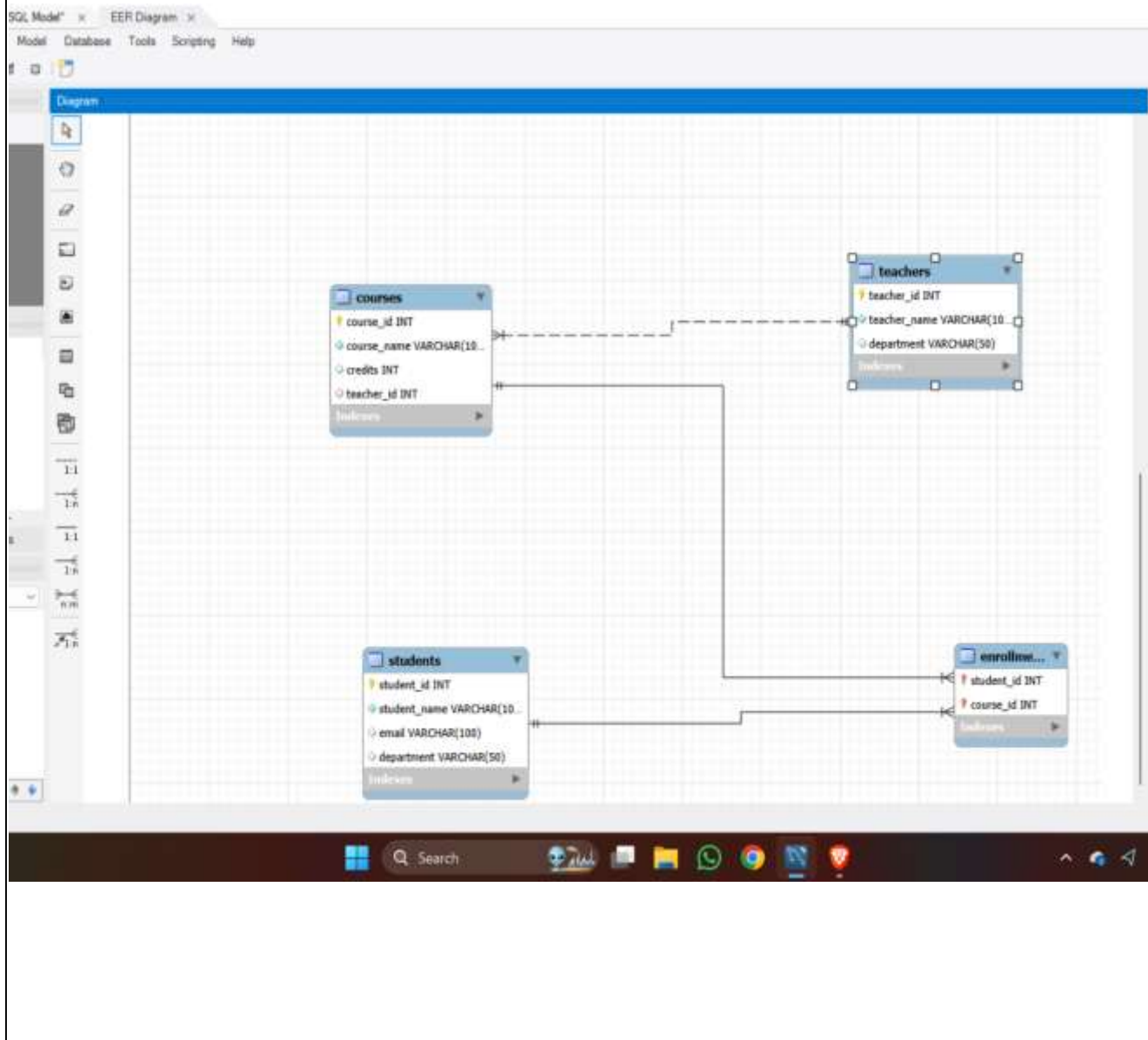
```
CREATE DATABASE UniversityDB;  
USE UniversityDB;
```

```
CREATE TABLE Students (  
    student_id INT PRIMARY KEY,  
    student_name VARCHAR(100) NOT NULL,  
    email VARCHAR(100) UNIQUE,  
    department VARCHAR(50)  
);
```

```
CREATE TABLE Teachers (  
    teacher_id INT PRIMARY KEY,  
    teacher_name VARCHAR(100) NOT NULL,  
    department VARCHAR(50)  
);
```

```
CREATE TABLE Courses (  
    course_id INT PRIMARY KEY,  
    course_name VARCHAR(100) NOT NULL,  
    credits INT,  
    teacher_id INT,  
    FOREIGN KEY (teacher_id) REFERENCES Teachers(teacher_id)  
);
```

```
CREATE TABLE Enrollment (  
    student_id INT,  
    course_id INT,  
    PRIMARY KEY (student_id, course_id),  
    FOREIGN KEY (student_id) REFERENCES Students(student_id),  
    FOREIGN KEY (course_id) REFERENCES Courses(course_id)  
);
```


ER DIAGRAM:**ASSESSMENT**

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	50		

Signature of the Student:

Name :

Regn. No. :

Signature of the Faculty:

Page No.....