**Class Test 07**

1. Create the tables given below with all given specifications and insert the given data in the created tables. Use sequences to create primary key values. Create one index for each table manually. Both tables must have a synonymous name.

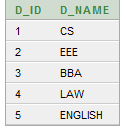
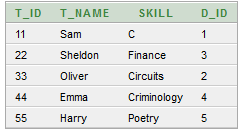
 

Table: Department Table: Teacher

1. There are 3 roles in this database i.e. Director, Head and Teacher. The role Director has access to all tables and has the credentials to all system and object privileges. Sam (Password: dean) is the Director. The role Head can only update and see all data. Sheldon(Password: amy) is the Head. The role Teacher can only see all data. Oliver(Password: twist), Emma (Password: henry) and Harry (Password: ginny) are all teachers.
2. Create a complex view that displays the employee name and the name of the department they work in.

***Hints:***

1. *From System’s user account create all the users and roles*
2. *From Director’s user account perform all DDL and DML operations for the tables Department and Teacher*

***Answer:***

1. CREATE TABLE Department (

D\_ID INT PRIMARY KEY,

D\_NAME VARCHAR(50)

);

INSERT INTO Department (D\_ID, D\_NAME) VALUES (1, 'CS');

INSERT INTO Department (D\_ID, D\_NAME) VALUES (2, 'EEE');

INSERT INTO Department (D\_ID, D\_NAME) VALUES (3, 'BBA');

INSERT INTO Department (D\_ID, D\_NAME) VALUES (4, 'LAW');

INSERT INTO Department (D\_ID, D\_NAME) VALUES (5, 'ENGLISH');

CREATE TABLE Teacher (

T\_ID INT PRIMARY KEY,

T\_NAME VARCHAR(50),

SKILL VARCHAR(50),

D\_ID INT,

FOREIGN KEY (D\_ID) REFERENCES Department(D\_ID)

);

INSERT INTO Teacher (T\_ID, T\_NAME, SKILL, D\_ID) VALUES (11, 'Sam', 'C', 1);

INSERT INTO Teacher (T\_ID, T\_NAME, SKILL, D\_ID) VALUES (22, 'Sheldon', 'Finance', 3);

INSERT INTO Teacher (T\_ID, T\_NAME, SKILL, D\_ID) VALUES (33, 'Oliver', 'Circuits', 2);

INSERT INTO Teacher (T\_ID, T\_NAME, SKILL, D\_ID) VALUES (44, 'Emma', 'Criminology', 4);

INSERT INTO Teacher (T\_ID, T\_NAME, SKILL, D\_ID) VALUES (55, 'Harry', 'Poetry', 5);

2. CREATE ROLE Director;

CREATE ROLE Head;

CREATE ROLE Teacher;

GRANT ALL PRIVILEGES TO Director;

GRANT UPDATE, SELECT ON Department TO Head;

GRANT UPDATE, SELECT ON Teacher TO Head;

GRANT SELECT ON Department TO Teacher;

GRANT SELECT ON Teacher TO Teacher;

CREATE USER Sam IDENTIFIED BY dean;

GRANT Director TO Sam;

CREATE USER Sheldon IDENTIFIED BY amy;

GRANT Head TO Sheldon;

CREATE USER Oliver IDENTIFIED BY twist;

CREATE USER Emma IDENTIFIED BY henry;

CREATE USER Harry IDENTIFIED BY ginny;

GRANT Teacher TO Oliver, Emma, Harry;

3. CREATE VIEW EmployeeDepartmentView AS

SELECT T.T\_NAME AS EmployeeName, D.D\_NAME AS DepartmentName

FROM Teacher T

JOIN Department D ON T.D\_ID = D.D\_ID;