Assignment # 3

1. Run Oracle DBMS
2. Go to SQL work station
3. Click on SQL command. A window will be opened which has two sections. In the upper section you can type query and execute it. The lower section is to display the result of the query.
4. Copy the following SQL queries and paste them in the upper section of this window.

```
CREATE TABLE Student  (
        stuId           CHAR(6),
        lastName                CHAR(20)  NOT NULL,
        firstName               CHAR(20)  NOT NULL,
        major           CHAR(10),
        credits         SMALLINT DEFAULT 0,
        CONSTRAINT Student_stuId_pk PRIMARY KEY (stuId),
        CONSTRAINT Student_credits_cc CHECK (credits>=0 AND credits < 150));

CREATE TABLE Faculty   (
        facId           CHAR(6),
        name            CHAR(20)  NOT NULL,
        department      CHAR(20) NOT NULL,
        rank            CHAR(10),
        CONSTRAINT Faculty_facId_pk PRIMARY KEY (facId));

CREATE TABLE Class     (
        classNumber             CHAR(8),
        facId                   CHAR(6)  NOT NULL,
        schedule                CHAR(8),
        room            CHAR(6),
        CONSTRAINT Class_classNumber_pk PRIMARY KEY (classNumber),
        CONSTRAINT Class_facId_fk FOREIGN KEY (facId) REFERENCES Faculty (facId)) ;

CREATE TABLE Enroll    (
        stuId                   CHAR(6),
        classNumber             CHAR(8),
        grade           CHAR(2),
        CONSTRAINT Enroll_classNumber_stuId_pk PRIMARY KEY (classNumber, stuId),
        CONSTRAINT Enroll_classNumber_fk FOREIGN KEY (classNumber) REFERENCES Class
(classNumber),
        CONSTRAINT Enroll_stuId_fk FOREIGN KEY (stuId) REFERENCES Student(stuId));
```

5. Save these queries in a file as you may need them later.
6. Select each query one at a time and click on RUN button to execute it to create that table. Each query ends by a semicolon.

7. Now you must have these four tables. You can go to Object Browser to verify that these tables are created.
8. Go back to the window for SQL command and write queries like:

   insert into student values ('S1001','Smith','Tom','History', 90);

   to insert a row into a table of your choice. Repeat this process for every table until all these four tables are loaded.

Student				
stuId	**lastName**	**firstName**	**major**	**credits**
S1001	Smith	Tom	History	90
S1002	Chin	Ann	Math	36
S1005	Lee	Perry	History	3
S1010	Burns	Edward	Art	63
S1013	McCarthy	Owen	Math	0
S1015	Jones	Mary	Math	42
S1020	Rivera	Jane	CSC	15

Figure 1.1(a) The `Student` Table

Faculty			
facId	**name**	**department**	**rank**
F101	Adams	Art	Professor
F105	Tanaka	CSC	Instructor
F110	Byrne	Math	Assistant
F115	Smith	History	Associate
F221	Smith	CSC	Professor

Figure 1.1(b) The `Faculty` Table

Class			
classNumber	**facId**	**schedule**	**room**
ART103A	F101	MWF9	H221

Class			
classNumber	**facId**	**schedule**	**room**
CSC201A	F105	TuThF10	M110
CSC203A	F105	MThF12	M110
HST205A	F115	MWF11	H221
MTH101B	F110	MTuTh9	H225
MTH103C	F110	MWF11	H225

Figure 1.1(c) The `Class` Table

Enroll		
stuId	**classNumber**	**grade**
S1001	ART103A	A
S1001	HST205A	C
S1002	ART103A	D
S1002	CSC201A	F
S1002	MTH103C	B
S1010	ART103A	
S1010	MTH103C	
S1020	CSC201A	B
S1020	MTH101B	A

Figure 1.1(d) The `Enroll` Table

9. Write the query: select * from *tablename*; and run it for all four tables to verify the content of your tables.
10. Write the following queries and run them:
    a. Write a query to retrieve the names of all math major students.
       select * from student where major = 'Math';
    b. Write a query to retrieve the name s of all faculty with rank professor.
       select name from faculty where rank = 'Professor';
    c. Write a query to retrieve the name of all students enrolled in ART103A.
    d. Write a query to retrieve all student who are enrolled but have no grade yet.
    e. Write a few query of your own and run them to have fun.

What to submit:

Screen shot of all the queries that you use to create tables, print out of your tables, any query that you write to retrieve information and their results

Include everything in a file and upload it on canvas