ORACLE - SQL: Lab 2

1. ***Use Notepad or equivalent to create and save your SQL statements***
2. ***save your SQL statements in a file on the H: drive***
3. ***Connect to Oracle***
4. ***Type COMMIT at the end of your session to save your data in the database***

1. Choose appropriate data types and create the tables **Flight** and **FromLondon** with the following attributes:

   Flight2 (flightId, departure, destination, dateOfFlight, timeOfFlight)

   FromLondon (flighNo, destination)

2. Execute the following statement to insert data into the table

   Insert into flight2 values ('SA123', 'London', 'Bonn',
   to_date('12-01-15', 'dd-mm-yy'), to_date('06:45', 'hh24:mi'));

3. Using similar statements insert the following data into the table flight

   CA123, Beijing, New York, 21-01-15, 06:30
   BA555, London, Accra, 23-01-15, 14:45
   JA345, Tokyo, Moscow, 21-01-15, 16:30

4. List all the flights.
   SELECT * FROM Flight2;

5. List the flights that depart on 21st January 2015.

6. It was decided to change the destination of Flight CA123 from New York to Mexico. (The new route is from Beijing to Mexico)

   Update the **Flight2** table to reflect this change.

7. It was decided to add another attribute to the **FromLondon** table to represent the date of flight. Produce an SQL statement to add the attribute **ddate** so that the new schema is as follows:
   FromLondon (flighNo, destination, ddate)

8. Refer to the lecture notes and use the *'Inserting data to a table through a select statement'* to store into the **FromLondon** table the **filghtId**, the destination and the **dateOfFlight** of all the flights that depart from London.

9. Check the contents of the **FromLondon** table.

Constraints on foreign keys

1. List and define the three main integrity constraints of the relational model.

2. Create the following tables:

```
CREATE TABLE Course
( courseId          CHAR(5) ,
  title             VARCHAR2(30) NOT NULL,
  CONSTRAINT pk_course PRIMARY KEY(courseId)
);

CREATE TABLE Student
 ( sId              CHAR(6)  PRIMARY KEY,
   sName            VARCHAR2(30) NOT NULL,
   cId              CHAR(5),
   CONSTRAINT fk_cid  FOREIGN KEY(cId)
        REFERENCES Course(courseId)
 ) ;
```

3. Insert the following data into the database tables:

Into the Course table:

('M26','Database Systems');
('310CT','Agents');

Into the Student table:

('S1', 'Smith', 'M26');
('S2', 'Wang', '310CT');

4. Check the contents of the **Course** and **Student** tables.

5. Delete from the **Course** table the record whose primary key is equal to 'M26'.

6. Check the **Course** table and explain the result of the operation above in 5.