Oracle Lab 3: SQL Operators
CSE 312 Database Systems

Pre-Condition: SQL*Plus Login
Populate your tables created in the previous class:

1. Insert row of information in the *student* table:
    Insert all
    into student(studid, studname) values('1999-1-20-004','Charles Babbage')
    into student(studid, studname) values('1999-1-20-005','Alan Turing')
    into student(studid, studname, email) values('1999-1-20-006','Todd Mars','todd@diu.edu.bd)
    SELECT * FROM DUAL;

2. Insert the following row in to the *department* table:
    Insert all
    into department(deptid, deptname) values('001','Computer Science')
    into department(deptid, deptname) values('002','Computer Science and Engg')
    into department(deptid, deptname) values('003','Business Administration')
    into department(deptid, deptname) values('004','Communication and Infor Tech')
    into department(deptid, deptname) values('005','English')
    SELECT * FROM DUAL;

3. Insert the following row in to the *course* table:

    Insert all
    into course values('cse201','001','Database Systems', 3.0)
    into course values('eng101','005','English Conversation', 3.0)
    into course values('cse202','001','Structured Programming', 3.0)
    into course values('cit201','004','Mobile Communication', 3.0)
    into course values('bus101','003','Business Communication', 3.0)
    into course values('cse211','002','Algorithm', 4.0)
    into course values('mgt311','003','Production Management', 3.5)
    into course values('cse411','002','Artificial Intelligence', 3.0)
    SELECT * FROM DUAL;

4. Insert the following row in to the *instructor* table:

    Insert all
    into instructor values('AAA','005','Mr Rozario','Professor','aaa@diu.edu.bd')
    into instructor values('ABB','004','Mr Jaya Vigayan','Asstt Professor','abb@diu.edu.bd')
    into instructor values('ABA','003','Mr Dinu Selvam','Professor','aba@diu.edu.bd')
    into instructor values('BBC','003','Mr Jaya Prakash','Asstt Professor','bbc@diu.edu.bd')
    into instructor values('BBD','002','Ms Sugumaran','Asstt Professor','bbd@diu.edu.bd')
    into instructor values('ADA','001','Ms Minnal','Professor','ada@diu.edu.bd')
    into instructor values('AAD','005','Mr Franko','Asstt Professor','aad@diu.edu.bd')
    SELECT * FROM DUAL;

5. Display all the list of the courses at different departments:

    Select * from course ;

6. Display the list of courses for the *Computer Science and Engineering* department:

    Select * from course where deptid= '002';

"where " clause contains the condition that must be satisfied by all the rows

7. Display the list of the courses for both the *Computer Science* and *Computer Science and Engineering* department:

    *Select * from course where deptid **in** ('001', '002');*

The **in** clause is used with the where condition to satisfy the selection operation for both the provided values within the clause. It means all the values given inside **in** clause must be present in the table otherwise there will not be any result sets. Try the followings:

    Select * from course where deptid in ('005','006');

Write the result:

8. Display all the list of the instructor whose name begins with **J** :

    *Select * from instructor where name **like** '%J%'*

The **like** clause is used with the where condition to help pattern matching. % is used for zero or more characters and _ (underscore) for any single character.

Try the followings:

    Select * from instructor where name like 'M%';
    Write the result:

    Select * from instructor where name like '%n';
    Write the result:

9. Display the list of instructors whose instructor id is from AA and BB:

    Select * from instructor where instid between 'AA%' and 'BB%';

The **between** clause checks whether the value is in the given low or high range. This supports date type data also. The mix data types are not allowed with the *between* clause.

    Try this:

Select * form course where credits between '3.0' and 4.0;

<u>Write the result:</u>

Try the followings:

Select * from course where credits between 3.5 and 4.0;

<u>Write the result:</u>

Some nested queries:

10. Find the list of the courses offered by the department name *Computer Science*:

    Select course.courseid, course.title, course.credits
    From course, department
    Where course.deptid = department.deptid
    And department.deptname = 'Computer Science';

    <u>Write the result:</u>

Try yourself

11. Find the course title and credits for the course having code *cse211*:
    <u>Write the SQL:</u>

12. Find the information detail of the student holding the ID# 1999-1-20-005:
    <u>Write the SQL:</u>

13. Find the full list of the instructors:
    <u>Write the SQL:</u>

14. Find the list of the course title and credits offered by the department id '002':
    <u>Write the SQL:</u>

15. Find the course detail information for the course code *cit201*:
    <u>Write the SQL:</u>