CONL705 Database Systems

Week 1: 1.2.1: Activity – Getting Started with ORACLE SQL

Getting Started with ORACLE SQL

If you are not logged in, log on to SQL Developer

- o If you are not connected, use the connection you are created OR use the following details
    - Username:- your Student ID
    - Password :- CNL705u30507

Practice the following SQL

1. Create Table AUTHOR

    a. Using the following SQL create the table Author

        CREATE TABLE AUTHOR

        (AUTHOR_NUM DECIMAL(2,0) PRIMARY KEY,

        AUTHOR_LAST CHAR(12),

        AUTHOR_FIRST CHAR(10));

    b. Check the Result/system message

2. Insert Some records into Author Table

    INSERT INTO AUTHOR VALUES (1,'Morrison','Toni');

    INSERT INTO AUTHOR VALUES (2,'Solotaroff','Paul');

    INSERT INTO AUTHOR VALUES (3,'Vintage','Vernor');

    INSERT INTO AUTHOR VALUES (4,'Francis','Dick');

    INSERT INTO AUTHOR VALUES (5,'Straub','Peter');

3. Practice some data retrieval queries

    a. Retrieve/Read/List everything (all information) from Author Table

        SELECT * FROM AUTHOR;

    b. List author number and last name

        SELECT AUTHOR_NUM, AUTHOR_LAST FROM AUTHOR;

4. Create Table DEPT (department)

   a. Using the following SQL create the table DEPT

   > CREATE TABLE DEPT
   >
   > (DEPTNO NUMBER(2) PRIMARY KEY,
   >
   > DNAME VARCHAR2(14)
   >
   > LOC VARCHAR2(13));

   b. Check the Result/system message. What is the error message?

   c. Try debugging and correcting the error, re-run the correct SQL.

5. After successfully creating the table DEPT, insert some records into the table.

   INSERT INTO DEPT VALUES (10, 'ACCOUNTING', 'NEW YORK');

   INSERT INTO DEPT VALUES (20, 'RESEARCH',   'DALLAS');

   INSERT INTO DEPT VALUES (30, 'SALES',   'CHICAGO');

   INSERT INTO DEPT VALUES (40, 'OPERATIONS', 'BOSTON');

6. CREATE Table EMP (Employee)

   a. Using the following SQL create the table EMP

   > CREATE TABLE EMP
   >
   > (EMPNO NUMBER(4) PRIMARY KEY,
   >
   > ENAME VARCHAR2(10),
   >
   > JOB VARCHAR2(9),
   >
   > MGR NUMBER(4),
   >
   > HIREDATE DATE,
   >
   > SAL NUMBER(7, 2),
   >
   > COMM NUMBER(7, 2),
   >
   > DEPTNO NUMBER(2) REFERENCES DEPT(DEPTNO));

   b. Compare the SQL with the previous CREATE table statements, are there any significant differences?

   c. Insert Some records into EMP Table

   INSERT INTO EMP VALUES
   >   (7369, 'SMITH', 'CLERK',   7902,
   >   TO_DATE('17-DEC-1980', 'DD-MON-YYYY'), 800, NULL, 20);

   INSERT INTO EMP VALUES
   >   (7499, 'ALLEN', 'SALESMAN', 7698,
   >   TO_DATE('20-FEB-1981', 'DD-MON-YYYY'), 1600, 300, 30);

INSERT INTO EMP VALUES

    (7521, 'WARD', 'SALESMAN', 7698,

    TO_DATE('22-FEB-1981', 'DD-MON-YYYY'),

1250, 500, 30);

INSERT INTO EMP VALUES

    (7566, 'JONES', 'MANAGER', 7839,

    TO_DATE('2-APR-1981', 'DD-MON-YYYY'), 2975, NULL, 20);

INSERT INTO EMP VALUES

    (7654, 'MARTIN', 'SALESMAN', 7698,

    TO_DATE('28-SEP-1981', 'DD-MON-YYYY'), 1250, 1400, 30);

INSERT INTO EMP VALUES

    (7782, 'CLARK', 'MANAGER', 7839,

    TO_DATE('9-JUN-1981', 'DD-MON-YYYY'), 2450, NULL, 10);

INSERT INTO EMP VALUES

    (7839, 'KING', 'PRESIDENT', NULL,

    TO_DATE('17-NOV-1981', 'DD-MON-YYYY'), 5000, NULL, 10);

7. Practice some data retrieval queries

    a. List the name and job of all employees.

       SELECT ename, job FROM emp;

    b. List the name, job and hiredate for employees in department 30, in order of joining the company.

       SELECT ename, job, hiredate FROM emp

       WHERE deptno = 30 ORDER BY hiredate;

    c. List the department number and name of all departments.

       SELECT deptno, dname FROM dept;

    d. List the name, job, department name and location of all employees.

       SELECT ename, dname, loc

       FROM emp, dept

       WHERE emp.deptno = dept.deptno;

    e. Compare the 7.d (SQL and results) with the 7.a and 7.c, what did you learn?