LAB ASSIGNMENT - 1

NAME - PRIYANSHU
ROLL NUMBER - 2005044

1. Create tables for - Student(student_id, first_name, last_name, dept, Date_of_birth, gender, religion), Employee, Product, Customer, and Account. Identify relevant attributes for each table and make sure each table has at least four columns. Ensure each table has a _ID column e.g. Employee should have EMPLOYEE_ID column, Student should have STUDENT_ID column etc.

```
SQL> CREATE TABLE STUDENT44(STUDENT_ID NUMBER,FIRST_NAME VARCHAR(20),LAST_NAME VARCHAR(20),DEP VARCHAR(26),DATE_OF_BIRTH VARCHAR(20),GENDER VARCHAR(26),RELIGI
);

Table created.

SQL> CREATE TABLE ACCOUNT44(ACCOUNT_ID NUMBER,HOLDER_NAME VARCHAR(20),PH_NO NUMBER,BALANCE NUMBER);

Table created.

SQL> CREATE TABLE EMPLOYEE44(EMPLOYEE_ID NUMBER, EMPLOYEE_NAME VARCHAR(20),DEPT VARCHAR(10),PH_NO NUMBER,SALARY VARCHAR(20));

Table created.

SQL> CREATE TABLE PRODUCT(PRODUCT_ID NUMBER,PRODUCT_NAME VARCHAR(20),RETAIL_PRICE DECIMAL,MANUFACTURE_DATE VARCHAR(20));

Table created.

SQL> CREATE TABLE CUSTOMER(CUSTOMER_ID NUMBER,CUSTOMER_NAME VARCHAR(10),AGE NUMBER,GENDER VARCHAR(10));
CREATE TABLE CUSTOMER(CUSTOMER_ID NUMBER,CUSTOMER_NAME VARCHAR(10),AGE NUMBER,GENDER VARCHAR(10))
            *
ERROR at line 1:
ORA-00955: name is already used by an existing object


SQL> CREATE TABLE CUSTOMER44(CUSTOMER_ID NUMBER,CUSTOMER_NAME VARCHAR(10),AGE NUMBER,GENDER VARCHAR(10));

Table created.
```

2. Describe each table.

```
SQL> DESC STUDENT44;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 STUDENT_ID                                         NUMBER
 FIRST_NAME                                         VARCHAR2(20)
 LAST_NAME                                          VARCHAR2(20)
 DEP                                                VARCHAR2(26)
 DATE_OF_BIRTH                                      VARCHAR2(20)
 GENDER                                             VARCHAR2(26)
 RELIGION                                           VARCHAR2(26)

SQL> DESC EMPLOYEE44;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 EMPLOYEE_ID                                        NUMBER
 EMPLOYEE_NAME                                      VARCHAR2(20)
 DEPT                                               VARCHAR2(10)
 PH_NO                                              NUMBER
 SALARY                                             VARCHAR2(20)

SQL> DESC PRODUCT;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 PRODUCT_ID                                         NUMBER
 PRODUCT_NAME                                       VARCHAR2(20)
 RETAIL_PRICE                                       NUMBER(38)
 MANUFACTURE_DATE                                   VARCHAR2(20)

SQL> DESC CUSTOMER44;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 CUSTOMER_ID                                        NUMBER
 CUSTOMER_NAME                                      VARCHAR2(10)
 AGE                                                NUMBER
 GENDER                                             VARCHAR2(10)
```

```
SQL> DESC ACCOUNT44;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 ACCOUNT_ID                                         NUMBER
 HOLDER_NAME                                        VARCHAR2(20)
 PH_NO                                              NUMBER
 BALANCE                                            NUMBER
```

3. Insert at least 5 distinct rows to each table.

```
SQL> INSERT INTO STUDENT44 VALUES(0044, 'PD', 'DAYAL', 'CSE' , '16-FEB-2000', 'MALE', 'HINDU');

1 row created.

SQL>  INSERT INTO STUDENT44 VALUES(0065, 'NADAN', 'RAJ', 'CIVIL' , '26-FEB-2001', 'MALE', 'HINDU');
ERROR:
ORA-01756: quoted string not properly terminated


SQL>  INSERT INTO STUDENT44 VALUES(0065, 'NADAN', 'RAJ', 'CIVIL' , '26-FEB-2001', 'MALE', 'HINDU');

1 row created.

SQL>  INSERT INTO STUDENT44 VALUES(2121, 'SURABHI', 'PRIYA', 'CSE' , '19-JUNE-2000', 'FEMALE', 'HINDU');

1 row created.

SQL> INSERT INTO STUDENT44 VALUES(0078, 'RAJ', 'KUMAR', 'IT', '11-JUNE-2000' , 'MALE', 'HINDU');

1 row created.
```

```
SQL>
SQL>  INSERT INTO EMPLOYEE44 VALUES (1231, 'PRIYANSHU', 'CSE' , 8888881280, 89567) ;

1 row created.

SQL> INSERT INTO EMPLOYEE44 VALUES (1321, 'RAM PRATAP', 'CIVIL' ,9870543678,50567) ;

1 row created.

SQL> INSERT INTO EMPLOYEE44 VALUES (1115, 'LAL SINGH', 'CSE' ,9436543678, 34567) ;

1 row created.

SQL>  INSERT INTO EMPLOYEE44 VALUES (2138, ' RAJENDRA SINGH' , 'IT' ,8209543678, 25567) ;

1 row created.

SQL> INSERT INTO EMPLOYEE44 VALUES (2325, 'RAJ SINGH', 'CSE' ,8084543678, 20567) ;

1 row created.
```

```
SQL> INSERT INTO PRODUCT VALUES(4576, 'PEN' ,10, '05-JAN-2620');

1 row created.

SQL> INSERT INTO PRODUCT VALUES(1287, 'WATCH' , 2500, '08-JUNE-2021' ) ;

1 row created.

SQL>  INSERT INTO PRODUCT VALUES(5678, 'FAN' ,1460, '05-JAN-2022');

1 row created.

SQL>  INSERT INTO PRODUCT VALUES(8734, 'BRUSH' ,35, '17-JAN-2022');
ERROR:
ORA-01756: quoted string not properly terminated


SQL>  INSERT INTO PRODUCT VALUES(8734, 'BRUSH' ,0035, '17-JAN-2022');

1 row created.

SQL> INSERT INTO PRODUCT VALUES(2578, 'BULB' ,120, '18-JAN-2022' );

1 row created.
```

```
SQL>  INSERT INTO CUSTOMER44 VALUES (1256, 'SURYA',21, 'MALE');

1 row created.

SQL>  INSERT INTO CUSTOMER44 VALUES (5632, ANISH' ,18, 'MALE');
ERROR:
ORA-01756: quoted string not properly terminated


SQL>  INSERT INTO CUSTOMER44 VALUES (5632, 'ANISH' ,18, 'MALE');

1 row created.

SQL>  INSERT INTO CUSTOMER44 VALUES (8212, 'SNEHA',23, 'FEMALE');

1 row created.

SQL>  INSERT INTO CUSTOMER44 VALUES (3123, 'ANU',21, 'FEMALE');

1 row created.

SQL> INSERT INTO CUSTOMER44 VALUES (1231, 'ANSHU',22, 'MALE');

1 row created.
```

```
SQL>  INSERT INTO ACCOUNT44 VALUES(0000452578, 'RAM KUMAR' , 8003421256 ,456789) ;

1 row created.

SQL>  INSERT INTO ACCOUNT44 VALUES(00007424576, 'RAMESH KUMAR' , 9436421546 , 539712) ;

1 row created.

SQL>  INSERT INTO ACCOUNT44 VALUES(00004312, 'RANI KUMARI' , 8084421234 ,129865) ;

1 row created.

SQL>  INSERT INTO ACCOUNT44 VALUES(000743678, 'RISHU RAJ' , 8298427439, 853212);

1 row created.

SQL> INSERT INTO ACCOUNT44 VALUES(00543345, 'SURYA SINGH' , 9605421237 ,456789) ;

1 row created.
```

4 .Fetch all data from the respective tables.

```
Run SQL Command Line

SQL> SELECT * FROM STUDENT44;

STUDENT_ID FIRST_NAME          LAST_NAME            DEP
---------- -------------------- -------------------- -------------------------
DATE_OF_BIRTH       GENDER                   RELIGION
------------------- ------------------------ -------------------------
       44 PD                   DAYAL                CSE
16-FEB-2000         MALE                     HINDU

       65 NADAN                RAJ                  CIVIL
26-FEB-2001         MALE                     HINDU

     2121 SURABHI              PRIYA                CSE
19-JUNE-2000        FEMALE                   HINDU


STUDENT_ID FIRST_NAME          LAST_NAME            DEP
---------- -------------------- -------------------- -------------------------
DATE_OF_BIRTH       GENDER                   RELIGION
------------------- ------------------------ -------------------------
       78 RAJ                  KUMAR                IT
11-JUNE-2000        MALE                     HINDU


SQL> SELECT * FROM ACCOUNT44;

ACCOUNT_ID HOLDER_NAME              PH_NO   BALANCE
---------- -------------------- ---------- ----------
    452578 RAM KUMAR            8003421256    456789
   7424576 RAMESH KUMAR         9436421546    539712
      4312 RANI KUMARI          8084421234    129865
    743678 RISHU RAJ            8298427439    853212
    543345 SURYA SINGH          9605421237    456789
```

```
   543345 SURYA SINGH              9605421237      456789

SQL>  SELECT * FROM EMPLOYEE44;

EMPLOYEE_ID EMPLOYEE_NAME          DEPT            PH_NO SALARY
---------- -------------------- ---------- ---------- --------------------
      1231 PRIYANSHU            CSE        8888881280 89567
      1321 RAM PRATAP           CIVIL      9870543678 50567
      1115 LAL SINGH            CSE        9436543678 34567
      2138  RAJENDRA SINGH      IT         8209543678 25567
      2325 RAJ SINGH            CSE        8084543678 20567

SQL>  SELECT * FROM PRODUCT;

PRODUCT_ID PRODUCT_NAME           RETAIL_PRICE MANUFACTURE_DATE
---------- -------------------- ------------ --------------------
      4576 PEN                            10 05-JAN-2620
      1287 WATCH                        2500 08-JUNE-2021
      5678 FAN                          1460 05-JAN-2022
      8734 BRUSH                          35 17-JAN-2022
      2578 BULB                          120 18-JAN-2022

SQL>  SELECT * FROM CUSTOMER44;

CUSTOMER_ID CUSTOMER_N        AGE GENDER
---------- ---------- ---------- ----------
      1256 SURYA              21 MALE
      5632 ANISH              18 MALE
      8212 SNEHA              23 FEMALE
      3123 ANU                21 FEMALE
      1231 ANSHU              22 MALE
```
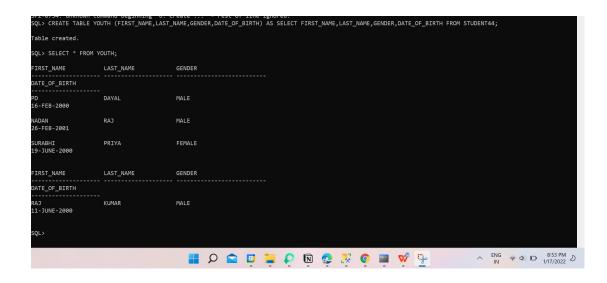
5. Fetch Employee ids and their names from the Employee table.

```
SQL>  SELECT EMPLOYEE_ID,EMPLOYEE_NAME FROM EMPLOYEE44;

EMPLOYEE_ID EMPLOYEE_NAME
---------- --------------------
      1231 PRIYANSHU
      1321 RAM PRATAP
      1115 LAL SINGH
      2138  RAJENDRA SINGH
      2325 RAJ SINGH
```

6. Create table YOUTH (f_name, l_name, sex, DOB) from the Student table.

```
SQL> CREATE TABLE YOUTH (FIRST_NAME,LAST_NAME,GENDER,DATE_OF_BIRTH) AS SELECT FIRST_NAME,LAST_NAME,GENDER,DATE_OF_BIRTH FROM STUDENT44;

Table created.

SQL> SELECT * FROM YOUTH;

FIRST_NAME           LAST_NAME            GENDER
-------------------- -------------------- -------------------------
DATE_OF_BIRTH
--------------------
PD                   DAYAL                MALE
16-FEB-2000

NADAN                RAJ                  MALE
26-FEB-2001

SURABHI              PRIYA                FEMALE
19-JUNE-2000


FIRST_NAME           LAST_NAME            GENDER
-------------------- -------------------- -------------------------
DATE_OF_BIRTH
--------------------
RAJ                  KUMAR                MALE
11-JUNE-2000


SQL>
```

7. Delete all data from the customer table.

```
SQL> TRUNCATE TABLE CUSTOMER44;

Table truncated.

SQL>
```

8. Delete the Account table.

```
SQL> DROP TABLE ACCOUNT44;

Table dropped.

SQL>
```

9 Fetch the f_name and DOB from YOUTH table.

```
SQL> SELECT * FROM YOUTH;
```

```
SQL> SELECT FIRST_NAME,DATE_OF_BIRTH FROM YOUTH;

FIRST_NAME          DATE_OF_BIRTH
------------------- -------------------
PD                  16-FEB-2000
NADAN               26-FEB-2001
SURABHI             19-JUNE-2000
RAJ                 11-JUNE-2000

SQL>
```

10. Insert a new record into the Youth table. And keep NULL value in the l_name column.

```
Run SQL Command Line                                                              -   □   ×

SQL>  CREATE TABLE YOUTH2(FIRST_NAME VARCHAR(10),LAST_NAME VARCHAR(10),GENDER VARCHAR(10) ,DATE_OF_BIRTH VARCHAR(30) ) ;

Table created.

SQL>  INSERT INTO YOUTH2(FIRST_NAME ,DATE_OF_BIRTH,GENDER) VALUES( 'PRIYANSHU' , '16-FEB-2600', 'MALE');

1 row created.

SQL> INSERT INTO YOUTH2(FIRST_NAME ,DATE_OF_BIRTH,GENDER) VALUES( 'RAVI', '08-JAN-2600', 'MALE');

1 row created.

SQL>  INSERT INTO YOUTH2(FIRST_NAME,DATE_OF_BIRTH,GENDER) VALUES('NILIMA', '23-JULY-2060' , 'FEMALE');

1 row created.

SQL>  INSERT INTO YOUTH2(FIRST_NAME,DATE_OF_BIRTH,GENDER) VALUES( 'SUHANA', '12-JUNE-2060', 'FEMALE');

1 row created.

SQL>  INSERT INTO YOUTH2(FIRST_NAME,DATE_OF_BIRTH,GENDER) VALUES('SAMAI' ,'10-DEC-2021', 'MALE');

1 row created.

SQL>  SELECT * FROM YOUTH2;

FIRST_NAME LAST_NAME  GENDER     DATE_OF_BIRTH
---------- ---------- ---------- ------------------------------
PRIYANSHU             MALE       16-FEB-2600
RAVI                  MALE       08-JAN-2600
NILIMA                FEMALE     23-JULY-2060
SUHANA                FEMALE     12-JUNE-2060
SAMAI                 MALE       10-DEC-2021

SQL>
```

11. Insert a new record into the Employee table. And keep NULL value in the employee_id column.

```
Run SQL Command Line                                                                                                    —  □  ×
SQL> CREATE TABLE EMPLOYEE044 (EMPLOYEE_ID NUMBER,EMPLOYEE_NAME VARCHAR(20),DEPT VARCHAR(10),PH_NO NUMBER,SALARY VARCHAR(10));

Table created.

SQL> NSERT INTO EMPLOYEE044 (EMPLOYEE_NAME ,DEPT,PH_NO,SALARY) VALUES ('RAJU', 'CSE' , 8003421245 ,5678) ;
SP2-0734: unknown command beginning "NSERT INTO..." - rest of line ignored.
SQL>  INSERT INTO EMPLOYEE044 (EMPLOYEE_NAME ,DEPT,PH_NO,SALARY) VALUES ('RAJU', 'CSE' , 8003421245 ,5678) ;

1 row created.

SQL>  INSERT INTO EMPLOYEE044(EMPLOYEE_NAME ,DEPT,PH_NO,SALARY) VALUES ('SAM', 'CIVIL' ,9430421245 , 3467) ;

1 row created.

SQL>  INSERT INTO EMPLOYEE044(EMPLOYEE_NAME ,DEPT,PH_NO,SALARY) VALUES ('RAMESH', 'CSSE' ,8209421245 ,4321);

1 row created.

SQL>  INSERT INTO EMPLOYEE044 (EMPLOYEE_NAME ,DEPT,PH_NO,SALARY) VALUES ('RAM', 'IT' ,8298421245 ,6754) ;

1 row created.

SQL>  INSERT INTO EMPLOYEE044(EMPLOYEE_NAME ,DEPT,PH_NO,SALARY) VALUES ('PRIYA', 'CSE' , 8084421245 , 3478) ;

1 row created.

SQL> SELECT * FROM EMPLOYEE044;

EMPLOYEE_ID EMPLOYEE_NAME        DEPT          PH_NO SALARY
----------- -------------------- ---------- ---------- ----------
            RAJU                 CSE        8003421245 5678
            SAM                  CIVIL      9430421245 3467
            RAMESH               CSSE       8209421245 4321
            RAM                  IT         8298421245 6754
            PRIYA                CSE        8084421245 3478

SQL>
```

12. Change the name of the employee table to workers.

```
SQL> ALTER TABLE EMPLOYEE44 RENAME TO WORKERS;

Table altered.

SQL>
```

13. Increase the size of the dept field in the student table by 10.

```
SQL> DESC STUDENT44;
 Name                                         Null?    Type
 ---------------------------------------- -------- ----------------------------
 STUDENT_ID                                            NUMBER
 FIRST_NAME                                            VARCHAR2(20)
 LAST_NAME                                             VARCHAR2(20)
 DEP                                                   VARCHAR2(26)
 DATE_OF_BIRTH                                         VARCHAR2(20)
 GENDER                                                VARCHAR2(26)
 RELIGION                                              VARCHAR2(26)

SQL> ALTER TABLE STUDENT44 MODIFY(DEP VARCHAR(20));

Table altered.

SQL> DESC STUDENT44;
 Name                                         Null?    Type
 ---------------------------------------- -------- ----------------------------
 STUDENT_ID                                            NUMBER
 FIRST_NAME                                            VARCHAR2(20)
 LAST_NAME                                             VARCHAR2(20)
 DEP                                                   VARCHAR2(20)
 DATE_OF_BIRTH                                         VARCHAR2(20)
 GENDER                                                VARCHAR2(26)
 RELIGION                                              VARCHAR2(26)

SQL>
```

14. Add a column ph_no in the student table.

```
SQL> DESC STUDENT44;
 Name                                          Null?    Type
 --------------------------------------------- -------- ----------------------------
 STUDENT_ID                                             NUMBER
 FIRST_NAME                                             VARCHAR2(20)
 LAST_NAME                                              VARCHAR2(20)
 DEP                                                    VARCHAR2(20)
 DATE_OF_BIRTH                                          VARCHAR2(20)
 GENDER                                                 VARCHAR2(26)
 RELIGION                                               VARCHAR2(26)

SQL> ALTER TABLE STUDENT44 ADD(PH_NO NUMBER(20));

Table altered.

SQL> DESC STUDENT44;
 Name                                          Null?    Type
 --------------------------------------------- -------- ----------------------------
 STUDENT_ID                                             NUMBER
 FIRST_NAME                                             VARCHAR2(20)
 LAST_NAME                                              VARCHAR2(20)
 DEP                                                    VARCHAR2(20)
 DATE_OF_BIRTH                                          VARCHAR2(20)
 GENDER                                                 VARCHAR2(26)
 RELIGION                                               VARCHAR2(26)
 PH_NO                                                  NUMBER(20)

SQL>
```

15. Drop the religion attribute from the student table.

```
SQL> ALTER TABLE STUDENT44 DROP COLUMN RELIGION;

Table altered.

SQL>
```

16. Rename the student_id field to roll_no in the student table.

```
SQL> ALTER TABLE STUDENT44 RENAME COLUMN STUDENT_ID TO ROLL_NO;

Table altered.

SQL> DESC STUDENT44;
 Name                                          Null?    Type
 --------------------------------------------- -------- ----------------------------
 ROLL_NO                                               NUMBER
 FIRST_NAME                                             VARCHAR2(20)
 LAST_NAME                                              VARCHAR2(20)
 DEP                                                    VARCHAR2(20)
 DATE_OF_BIRTH                                          VARCHAR2(20)
 GENDER                                                 VARCHAR2(26)
 PH_NO                                                  NUMBER(20)
```

17. Change the datatype and size of the product id column in the product table.

```
SQL> DESC PRODUCT;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 PRODUCT_ID                                         NUMBER
 PRODUCT_NAME                                       VARCHAR2(20)
 RETAIL_PRICE                                       NUMBER(38)
 MANUFACTURE_DATE                                   VARCHAR2(20)

SQL> ALTER TABLE PRODUCT ADD(PRODUCT_TYPE VARCHAR(20));

Table altered.

SQL> DESC STUDENT44;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 ROLL_NO                                            NUMBER
 FIRST_NAME                                         VARCHAR2(20)
 LAST_NAME                                          VARCHAR2(20)
 DEP                                                VARCHAR2(20)
 DATE_OF_BIRTH                                      VARCHAR2(20)
 GENDER                                             VARCHAR2(26)
 PH_NO                                              NUMBER(20)
```