==========

EXPERIMENT NO. 01

==========

Author : Diksha Gupta.
Roll no.: 01 [27A]
Date : 05-SEPTEMBER-2022.

==========

AIM : To establish a multi-relation database and execute SQL queries involving insertions, deletions and updating on it.

PROBLEM STATEMENT:

Establish sales database for a supply chain and execute different SQL queries against it. The logical database schemata, organization of relations and their contents are as below

EMP (EMP_CODE, EMP_LNAME, EMP_FNAME, EMP_DOB, STORE_CODE)

STORE (STORE_CODE, STORE_NAME, YTD_SALES, REGION_CODE, EMP_CODE)

REGION (REGION_CODE, REGION_DESC)

****

QUERY-01 Write SQL code that will create the **TINYSTORES** database.

****

```
CREATE TABLE REGION (
      REGION_CODE NUMBER(1) ,
      REGION_DESC  VARCHAR(10) NOT NULL,
      CONSTRAINT REGION_PK_REGION_CODE  PRIMARY KEY(REGION_CODE) ,
      CONSTRAINT REGION_CK_REGION_DESC
              CHECK(REGION_DESC IN('EAST' , 'WEST' ,'NORTH' , 'SOUTH'))
    );
```

Table Created

```
CREATE TABLE STORE (
      STORE_CODE NUMBER(2)  ,
      STORE_NAME VARCHAR(25) NOT NULL ,
      YTD_SALES NUMBER(9,2) DEFAULT 0 NOT NULL ,
      REGION_CODE NUMBER(1) NOT NULL ,
      EMP_CODE NUMBER(2) DEFAULT 21 ,
      CONSTRAINT STORE_PK_STORE_CODE PRIMARY KEY(STORE_CODE) ,
      CONSTRAINT STORE_FK_REGION_REGION_CODE FOREIGN KEY (REGION_CODE)
           REFERENCES REGION(REGION_CODE)
    );
```

Table Created

```
CREATE TABLE EMP (
      EMP_CODE NUMBER(2) ,
      EMP_FNAME VARCHAR(15) NOT NULL ,
      EMP_LNAME VARCHAR(15) NOT NULL ,
      EMP_DOB DATE NOT NULL ,
      STORE_CODE NUMBER(2) NOT NULL ,
      SALARY NUMBER(5) NOT NULL,
      CONSTRAINT EMP_PK_EMP_CODE PRIMARY KEY(EMP_CODE),
      CONSTRAINT EMP_FK_STORE_STORE_CODE FOREIGN KEY (STORE_CODE)
             REFERENCES STORE (STORE_CODE),
      CONSTRAINT EMP_CK_SALARY CHECK( SALARY >= 10000)
      );
```

Table Created

****

QUERY-04 Write SQL code to print the date and time of the system. (You must ensure the system clock is correct

****

```
SELECT SYSTIMESTAMP
    FROM DUAL;

SYSTIMESTAMP
-----------------------------------
05-SEP-22 06.42.10.670000 PM +05:30
```

****

QUERY-05 Assuming that the database is fully populated, write the SQL code that will list all employees who do not earn more than 35000.

****

```
SELECT EMP_FNAME , EMP_LNAME
   FROM EMP
     WHERE SALARY <=35000;

EMP_FNAME       EMP_LNAME
--------------- ---------------
MOHANA           SETH
SHASWAT          PURI
SIMON            PARERA
APRAJITA         RAKSHAK
RADHIKA          GANESAN
PAMPA            ROY
SRINIWAS         REDDY
VALLABH          ROY
BAHAR            MIRPURI

9 rows selected.
```

```
********************************************************************************
   QUERY-06 Write SQL code to list the first names and last names of the employees
            who were born before 01-JAN-1972 and who are posted in the western
            region.
********************************************************************************
```

```
SELECT EMP_FNAME , EMP_LNAME
   FROM EMP , REGION , STORE
       WHERE EMP.EMP_DOB < '01-JAN-1972'
           AND REGION.REGION_DESC = 'WEST'
              AND STORE.STORE_CODE = EMP.STORE_CODE
                   AND STORE.REGION_CODE  = REGION.REGION_CODE  ;
```

```
EMP_FNAME       EMP_LNAME
--------------- ---------------
KASHISH          SHUKLA
APRAJITA         RAKSHAK
MOHANA           SETH
BAHAR            MIRPURI
```

```
********************************************************************************
  QUERY-07 Write SQL code that will for each store print the name of manager
           Along with the store details.
********************************************************************************
```

```
SELECT EMP.EMP_FNAME , EMP.EMP_LNAME , STORE.*
    FROM EMP ,  STORE
       WHERE  EMP.EMP_CODE = STORE.EMP_CODE ;
```

```
EMP_FNAM EMP_LNAM STORE_CODE STORE_NAME          YTD_SALES REGION_CODE   EMP_CODE
-------- -------- ---------- ------------------ ---------- ----------- ----------
KASHISH  SHUKLA           21 SUCCESS JOINT      1000555.76           2         11
DIKSHA   GUPTA            41 CURIOSITY CLUSTER      568000           4         12
GAZAL    SINGH            11 CITIZEN AVENUE       986785.4           1         13
VIKRANT  GOKHALE          12 CENTRAL DELUGE     2930098.35           1         17
DEEPIKA  GUPTA            31 LIFESTYLE CORNER    944568.66           3         18
CHANCHAL BHATI            22 HEXA FOUNTAIN      1420000.34           2         22

6 rows selected.
```

****

QUERY-08 Write SQL code to print store code, store name, region name for each store.

****

```
SELECT STORE.STORE_CODE , STORE.STORE_NAME , REGION.REGION_DESC
   FROM STORE , REGION
      WHERE STORE.REGION_CODE = REGION.REGION_CODE ;
```

```
STORE_CODE STORE_NAME                REGION_DES
---------- ------------------------- ----------
        21 SUCCESS JOINT             WEST
        22 HEXA FOUNTAIN             WEST
        11 CITIZEN AVENUE            EAST
        31 LIFESTYLE CORNER          NORTH
        12 CENTRAL DELUGE            EAST
        41 CURIOSITY CLUSTER         SOUTH

6 rows selected.
```

==========

INFERENCES OF THE EXPERIMENT

==========

Hence , we have successfully establish a multi-relation database and execute SQL queries involving insertions, deletions and updating on it.