**********Experiment no:-01**********

Author:Saurabh Khandagale
Roll No:46
Date :08-August-2020

EXPERIMENT:-01

AIM:-

TO STUDE THE RELATIONAL MODE AND DEMONSTRATE BASIC SQL COMMANDS IN ORACLE 11G.

Problem Statement:

Establish the Tiny Stories database and execute different SQL queries against it. The logical database schemata, the organization of relations and their contents are as below:-

EMP (EMP_CODE, EMPNAME, 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 crete the TinayStore database.

==========

```
CREATE TABLE REGION(
  2       REGION_CODE NUMBER(1) ,
  3       REGION_DESC VARCHAR(10) NOT NULL,
  4        CONSTRAINT REGION_PK_RC PRIMARY KEY(REGION_CODE),
  5       CONSTRAINT REGION_CK_RD CHECK( REGION_DESC
IN('East','West','North','South'))
  6  );

Table created.



CREATE TABLE STORE (
  2  STORE_CODE NUMBER(20),
  3  STORE_NAME VARCHAR(25) NOT NULL,
  4  YID_SALES NUMBER(9,2) DEFAULT 0 NOT NULL,
  5   REGION_CODE NUMBER(10) NOT NULL,
  6  EMP_CODE NUMBER(2),
  7  CONSTRAINT PK_STORE PRIMARY KEY (STORE_CODE)   ,
  8  CONSTRAINT FK_OF_STORE_REGION FOREIGN KEY(REGION_CODE) REFERENCES
REGION(REGION_CODE)
  9  );

Table created.
```

```
 CREATE TABLE EMP(
  2    EMP_CODE NUMBER(2),
  3     EMP_FNAME VARCHAR(15) NOT NULL,
  4   EMP_LNAME VARCHAR(15) NOT NULL,
  5  EMP_DOB DATE NOT NULL,
  6  STORE_CODE NUMBER(1) NOT NULL,
  7  SALARY NUMBER(5) NOT NULL,
  8  CONSTRAINT  FK_ON_STORE_CODE FOREIGN KEY(STORE_CODE) REFERENCES
STORE(STORE_CODE),
  9  CONSTRAINT CK_OF_EMP  CHECK(SALARY >=1000),
 10  CONSTRAINT  PK_EMP PRIMARY KEY(EMP_CODE)
 11  );

Table created.
```

```
      ================================Query04=================================
                  Write SQL Code To Print the date and Time of System .
      ========================================================================
```

```
SELECT SYSTIMESTAMP "Date-Time"
  2   FROM DUAL;

      Date-Time
      ---------------------------------------
      08-AUG-20 02.50.55.971000 AM +05:30
```

```
============================Query05=============================================
Assume that database is fully populated write SQL Code that will list all
employee Who do not earn more than 35000.
================================================================================
```

```
SELECT * FROM EMP WHERE SALARY <= 35000;

  EMP_CODE EMP_FNAME       EMP_LNAME       EMP_DOB   STORE_CODE     SALARY
---------- --------------- --------------- --------- ---------- ----------
        14 Mohana          Seth            01-JUN-71         22      27000
        15 Sheswat         Puri            23-NOV-59         11      25000
        16 Simon           Parera          03-SEP-60         12      25000
        19 Aprajita        Rakshak         10-SEP-68         21      30000
        20 Radhika         Ganesan         10-SEP-66         11      31000
        21 Pampa           Roy             11-DEC-74         12      28000
        23 Sriniwa         Reddy           25-AUG-64         31      26000
        24 Vallabh         Roy             11-DEC-74         41      32000
        25 Bahar           Mirpuri         09-FEB-69         22      29000
```

```
=====================================Query06============================
Write Sql code to list the first and last name of employees who were born
before 01-jan-1972
And who are posted in western region.
========================================================================

SELECT EMP_FNAME,EMP_LNAME
  2  FROM EMP E
  3  INNER JOIN STORE S ON
  4  E.EMP_CODE=S.EMP_CODE
  5  INNER JOIN REGION R ON
  6  S.REGION_CODE=R.REGION_CODE
  7  WHERE REGION_DESC='West' AND E.EMP_DOB<='01-Jan-1972';

EMP_FNAME       EMP_LNAME
--------------- ---------------
Kashish         Shukla
Chanchal        Bhati


==================================Query07=====================================

Write SQl code that  wil for each store print the name of manager alongwith
the store details
================================================================================

SELECT EMP_FNAME,EMP_LNAME,STORE_NAME,YID_SALES,REGION_DESC
  2      FROM EMP E , STORE S , REGION R
  3      WHERE E.STORE_CODE=S.STORE_CODE AND S.REGION_CODE=R.REGION_CODE
  4      AND S.EMP_CODE=E.EMP_CODE
  5      AND S.REGION_CODE = R.REGION_CODE;

EMP_FNAME       EMP_LNAME       STORE_NAME                 YID_SALES
REGION_DES
--------------- --------------- ------------------------- ---------- ---------
-
Kashish         Shukla          Sucess Junction           1000555.76 West
Saurabh         Khandagale      Curiosity Circle              568000 South
Gazal           Singh           Opportunity Square           986785.4 East
Vikarant        Gokhal          Central Delunge           2930098.35 East
Arpit           Khare           Attribute Alley            944568.66 North
Chanchal        Bhati           Database Corner           1420000.34 West

6 rows selected.
```

==========Query08==========

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

```
SELECT S.STORE_CODE,S.STORE_NAME,R.REGION_DESC
  2   FROM STORE
  3  S INNER JOIN REGION R
  4  ON S.REGION_CODE=R.REGION_CODE;

STORE_CODE STORE_NAME                REGION_DES
---------- ------------------------- ----------
        21 Sucess Junction           West
        22 Database Corner           West
        11 Opportunity Square        East
        31 Attribute Alley           North
        12 Central Delunge           East
        41 Curiosity Circle          South

6 rows selected.
```

****

Viva Voice

==========

**********Question-1**********

What is SQL?

Ans:-

SQL is a standard language for accessing and manipulating databases. Database user use SQL language for retriev data ,inserting, deleting And various manipulations based on requirements.

**********Question-2**********

Enlist functions of DBA

Ans:-

1. Data policies, procedures, standards

2. Planning- development of organization's IT strategy, enterprise model, cost/benefit model, design of database environment, and administration plan.

3. Data conflict (ownership) resolution

4. Data analysis- Define and model data requirements, business rules, operational requirements, and maintain corporate data dictionary

5. Internal marketing of DA concepts

6. Managing the data repository

**********Question-3**********

Differentiate between a relation and table.

Ans:

A table holds data, in fields (columns) and entries (rows). In relational DBMSes, table-to-table relations play a major role in how data (and tables by extension) are connected to each other.
For example, you have two tables named "Transactions" and "Clients". The "Clients" table contains the clients' names, client ID number, and their contact information. The "Transactions" table contains a list of transactions, ordered by transaction ID and transaction date. The relation here is the client ID number, which MUST be unique in the "Client" table (because you can't have two people sharing the same ID), but not unique in the "Transactions" table (a client can make multiple transactions).

Through this table-to-table relationship, if some employee decides to help a client look up their transaction history, the employee can search by the client ID, or if the client knows the transaction ID (which can be printed on a receipt, invoice, or some other documentation), the information about both the transaction and/or the client will be referenced.

**********Question-3**********

Differentiate between 3GLS and 4GLS

Technically, the difference between a Baan 4Gl and a Baan 3GL script is that a 4GL script is treated by a special precompiler first. This precompiler translates it into a Baan 3GL script, which then is compiled into the final baan object. The sections of the 4GL script are mapped to functions in the 3GL script. During runtime, that script gets linked to a standard DLL which does the basic user interface handling and calls the methods of the created object.
****

Inference:-
==========

1. Recursive definition of table requires altrations in a constraint.
2. Fetching data from different tables requires join operations.