EXPERIMENT – 4

**AIM :**

Write queries to implement DML commands – Select, Insert, Update and Delete

**THEORY :**

In this experiment we will see the implementation and functioning of DML commands - Select, Insert, Update and Delete on a table.

DML stands for Data Manipulation Language. It deals with the manipulation of data present in the database. It is the component of the SQL statement that controls access to data and to the database.

List of DML commands:

* SELECT: used to retrieve data from the database.
* INSERT : used to insert data into a table.
* UPDATE: used to update existing data within a table.
* DELETE : used to delete records from a database table.

# PROCEDURE :

**CREATING TABLES:**

# SYNTAX:

CREATE TABLE DEPOSIT (ACTNO VARCHAR (5), CNAME VARCHAR (18), BNAME VARCHAR (18), AMOUNT DECIMAL (8,2), ADATE DATE);

CREATE TABLE BRANCH (BNAME VARCHAR (18), CITY VARCHAR(18));

CREATE TABLE CUSTOMERS (CNAME VARCHAR (19), CITY VARCHAR (18));

CREATE TABLE BORROW (LOANNO VARCHAR (5), CNAME VARCHAR (18), BNAME VARCHAR(18), AMOUNT DECIMAL (8,2));

**OUTPUT:**

1. **DEPOSIT:** A picture containing text, screenshot, font, number

   Description automatically generated
2. **BRANCH:**

A picture containing text, screenshot, font, line

Description automatically generated

1. **CUSTOMERS:**

A picture containing text, screenshot, font, number

Description automatically generated

1. **BORROW:**

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Description automatically generated**INSERT COMMAND:**

**QUERY(i) :** Insert values into DEPOSIT table

# SYNTAX:

INSERT INTO DEPOSIT VALUES (100, 'ANIL', 'VRCE', 1000.00, '1995-03-01');

INSERT INTO DEPOSIT VALUES (101, 'SUNIL', 'AJNI', 5000.00, '1996-01-04') INSERT INTO DEPOSIT VALUES (102, 'MEHUL', 'KAROLBAGH', 3500.00, '1995-11-17');

INSERT INTO DEPOSIT VALUES (104, 'MADHURI', 'CHANDNI', 1200.00, '1995-12-17');

INSERT INTO DEPOSIT VALUES (105, 'PRAMOD', 'M.G.ROAD', 3000.00, '1996-03-27');

INSERT INTO DEPOSIT VALUES (106, 'SANDIP', 'ANDHERI', 2000.00, '1996-03-31');

INSERT INTO DEPOSIT VALUES ('107', 'SHIVANI', 'VIRAR', 1000.00, '1995-09-05'); INSERT INTO DEPOSIT VALUES ('108', 'KRANTI', 'NEHRUPLACE', 5000.00,

'1995-07-02');

INSERT INTO DEPOSIT VALUES ('109', 'MINU', 'POWAI', 7000.00, '1995-08-10');

**QUERY(ii) :** Insert values into BRANCH table

# SYNTAX:

INSERT INTO BRANCH VALUES ('VRCE', 'NAGPUR'); INSERT INTO BRANCH VALUES ('AJNI', 'NAGPUR'); INSERT INTO BRANCH VALUES ('KAROLBAGH', 'DELHI'); INSERT INTO BRANCH VALUES ('CHANDNI', 'DELHI');

INSERT INTO BRANCH VALUES ('DHARAMPETH', 'NAGPUR'); INSERT INTO BRANCH VALUES ('M.G.ROAD', 'BANGLORE'); INSERT INTO BRANCH VALUES ('ANDHERI','BOMBAY'); INSERT INTO BRANCH VALUES ('VIRAR', 'BOMBAY');

INSERT INTO BRANCH VALUES('NEHRUPLACE', 'DELHI'); INSERT INTO BRANCH VALUES('POWAI', 'BOMBAY');

**QUERY(iii) :** Insert values into CUSTOMERS table

# SYNTAX:

INSERT INTO CUSTOMERS VALUES ('ANIL', 'CALCUTTA');

INSERT INTO CUSTOMERS VALUES ('SUNIL', 'DELHI');

INSERT INTO CUSTOMERS VALUES ('MEHUL', 'BARODA');

INSERT INTO CUSTOMERS VALUES ('MANDAR', 'PATNA');

INSERT INTO CUSTOMERS VALUES ('MADHURI', 'NAGPUR');

INSERT INTO CUSTOMERS VALUES ('PRAMOD', 'NAGPUR');

INSERT INTO CUSTOMERS VALUES ('SANDIP', 'SURAT');

INSERT INTO CUSTOMERS VALUES ('SHIVANI', 'BOMBAY');

INSERT INTO CUSTOMERS VALUES ('KRANTI', 'BOMBAY')

INSERT INTO CUSTOMERS VALUES ('NAREN', 'BOMBAY');

**QUERY(iv) :** Insert values into BORROW table

# SYNTAX:

INSERT INTO BORROW VALUES ('201', 'ANIL', 'VRCE', 1000); INSERT INTO BORROW VALUES ('206', 'MEHUL', 'VRCE', 5000);

INSERT INTO BORROW VALUES ('311', 'SUNIL', 'DHARAMPETH', 3000); INSERT INTO BORROW VALUES ('321', 'MADHURI', 'ANDHERI', 2000); INSERT INTO BORROW VALUES ('375', 'PRAMOD', 'VIRAR', 8000); INSERT INTO BORROW VALUES ('481', 'KRANTI', 'NEHRU PLACE', 3000);

# SELECT COMMAND:

**QUERY(i) :** List all data from table DEPOSIT.

**SYNTAX:** SELECT \* FROM DEPOSIT;

# OUTPUT:

A screenshot of a computer screen

Description automatically generated with low confidence

**QUERY (ii):** List all data from table BORROW.

**SYNTAX:** SELECT \* FROM BORROW;

# OUTPUT:

A screen shot of a black and white screen

Description automatically generated with low confidence

**QUERY (iii):** List all data from table CUSTOMERS.

**SYNTAX:** SELECT \* FROM CUSTOMERS;

# OUTPUT:

A screenshot of a black screen

Description automatically generated with low confidence

**QUERY (iv):** List all data from table BRANCH.

**SYNTAX:** SELECT \* FROM BRANCH;

# OUTPUT:

A screenshot of a black screen

Description automatically generated with low confidence

**QUERY (v):** Give account no and amount of depositors.

**SYNTAX:** SELECT ACTNO, AMOUNT FROM DEPOSIT;

# OUTPUT:

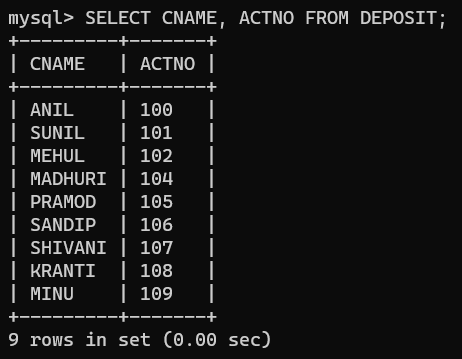
A picture containing text, screenshot, font, design

Description automatically generated

**QUERY (vi):** Give cname and account no. of depositors.

**SYNTAX:** SELECT CNAME, ACTNO FROM DEPOSIT;

# OUTPUT:



**QUERY (vii):** Give names of customers.

**SYNTAX:** SELECT CNAME FROM CUSTOMERS;

# OUTPUT:

A screen shot of a computer

Description automatically generated with low confidence

**QUERY (viii):** Give names of branches.

**SYNTAX:** SELECT BNAME FROM BRANCH;

# OUTPUT:

# A screenshot of a computer program Description automatically generated with low confidence

**QUERY (ix):** Give names of borrowers.

**SYNTAX:** SELECT CNAME FROM BORROW;

# OUTPUT:

A screen shot of a black screen

Description automatically generated with low confidence

**QUERY (x):** Give names of customers living in city NAGPUR.

**SYNTAX:** SELECT CNAME FROM CUSTOMERS WHERE CITY = ‘NAGPUR’;

# OUTPUT:

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**UPDATE COMMAND:**

**QUERY(i) :** Give 10% interest to all depositors.

**SYNTAX:** UPDATE DEPOSIT SET AMOUNT = 1.1 \* AMOUNT;

# OUTPUT:

A screen shot of a black and white screen

Description automatically generated with low confidence

**QUERY (ii):** Give 10% interest to all depositors having branch VRCE.

**SYNTAX:** UPDATE DEPOSIT SET AMOUNT = 1.1 \* AMOUNT WHERE BNAME = ‘VRCE’;

# OUTPUT:

A picture containing text, font, screenshot, number

Description automatically generated

**QUERY (iii):** Give 10% interest to all depositors living in NAGPUR.

**SYNTAX:** UPDATE DEPOSIT SET AMOUNT = 1.1 \* AMOUNT WHERE CNAME IN (SELECT CNAME FROM CUSTOMER WHERE CITY = 'NAGPUR');

# OUTPUT:

A picture containing text, screenshot, font, number

Description automatically generated

**QUERY (iv):** Change the deposit of VRCE branch to 1000 and change the branch as VRCE\_AMBAZARI.

**SYNTAX:** UPDATE DEPOSIT SET AMOUNT = 1000, BNAME = 'VRCE\_AMBAZARI' WHERE BNAME = 'VRCE';

# OUTPUT:

A picture containing text, screenshot, font, number

Description automatically generated

**QUERY (v):** Change the living city of VRCE branch borrowers to NAGPUR.

**SYNTAX:** UPDATE CUSTOMERS SET CITY = 'NAGPUR' WHERE CNAME IN (SELECT CNAME FROM BORROW WHERE BNAME = 'VRCE');

# OUTPUT:

A black screen with white text

Description automatically generated with medium confidence

**QUERY (vi):** Transfer Rs 10 from account of Anil to the account of Sunil.

# SYNTAX:

UPDATE DEPOSIT SET AMOUNT = AMOUNT - 10 WHERE CNAME = 'ANIL'; UPDATE DEPOSIT SET AMOUNT = AMOUNT + 10 WHERE CNAME = 'SUNIL';

# OUTPUT:

A screenshot of a computer screen

Description automatically generated with low confidence

**QUERY (vii):** Add Rs 100 to account of all those depositors who are having highest deposit amount in their respective branches.

**SYNTAX:** UPDATE DEPOSIT D1 SET D1.AMOUNT = D1.AMOUNT + 100 WHERE (D1.BNAME, D1.AMOUNT) IN (SELECT D2.BNAME, MAX(D2.AMOUNT) FROM (SELECT \* FROM DEPOSIT) D2 GROUP BY D2.BNAME);

# OUTPUT:

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Description automatically generated with low confidence

**QUERY (viii):** Add Rs 10 to the amount of all depositors having deposit higher than the average deposit.

**SYNTAX:** UPDATE DEPOSIT D1 SET D1.AMOUNT = D1.AMOUNT + 10 WHERE D1.AMOUNT > (SELECT AVG(D2.AMOUNT) FROM (SELECT \* FROM DEPOSIT) D2);

# OUTPUT:

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Description automatically generated

**QUERY (ix):** Add Rs 100 to deposit of ANIL and assign it to SUNIL.

# SYNTAX:

UPDATE DEPOSIT SET AMOUNT = AMOUNT + 100 WHERE CNAME = 'ANIL';

UPDATE DEPOSIT D1 SET D1.AMOUNT = (SELECT D2.AMOUNT FROM (SELECT \* FROM DEPOSIT) D2 WHERE D2.CNAME = 'ANIL') WHERE D1.CNAME = 'SUNIL';

# OUTPUT:

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Description automatically generated

**QUERY (x):** Assign to the deposit of ANIL the maximum deposit from VRCE branch.

**SYNTAX:** UPDATE DEPOSIT D1 SET D1.AMOUNT = (SELECT MAX(D2.AMOUNT) FROM (SELECT \* FROM DEPOSIT) D2 WHERE D2.BNAME = ‘VRCE\_AMBAZARI) WHERE D1.CNAME = 'ANIL';

# OUTPUT:

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Description automatically generated with low confidence

**DELETE COMMAND:**

**QUERY(i) :** Delete branches having average deposit more than 5000.

**SYNTAX:** DELETE FROM BRANCH WHERE BNAME IN (SELECT BNAME FROM DEPOSIT WHERE AMOUNT < 5000);\

# OUTPUT:

A black screen with white text

Description automatically generated with low confidence

**QUERY (ii):** Delete customers from Bombay city.

**SYNTAX:** DELETE FROM CUSTOMERS WHERE CITY = 'BOMBAY';

# OUTPUT:

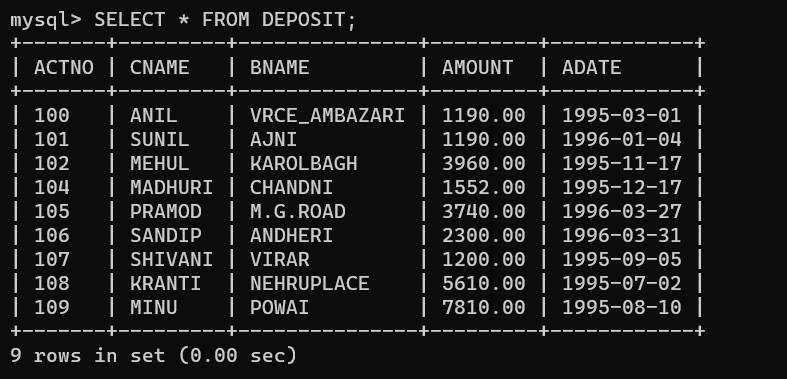
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Description automatically generated

**QUERY (iii):**Delete depositors having deposit less than 500.

**SYNTAX:** DELETE FROM DEPOSIT WHERE AMOUNT < 500;

# OUTPUT:



**QUERY (iv):** DELETE BORROWERS HAVING LOAN MORE THAN 10000.

**SYNTAX:** DELETE FROM BORROW WHERE AMOUNT > 10000;

# OUTPUT:

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Description automatically generated

**QUERY (v):** Delete borrowers having loan more than 1000 and branch KAROLBAGH.

**SYNTAX:** DELETE FROM BORROW WHERE AMOUNT > 1000 AND BNAME = 'KAROLBAGH';

# OUTPUT:

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Description automatically generated

**QUERY (vi):** Delete the names of those depositors of VRCE BRANCH who live in city BOMBAY.

**SYNTAX:** DELETE FROM DEPOSIT WHERE BNAME = 'VRCE\_AMBAZARI' AND CNAME IN (SELECT CNAME FROM CUSTOMERS WHERE CITY = 'BOMBAY');

# OUTPUT:

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Description automatically generated with low confidence

**QUERY (vii):** Delete borrowers having branch CHANDNI.

**SYNTAX:** DELETE FROM BORROW WHERE BNAME = 'CHANDNI'**;**

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Description automatically generated

**QUERY (viii):** Delete borrowers of branches having loan less than 1000.

**SYNTAX:** DELETE FROM BORROW WHERE CNAME IN (SELECT CNAME FROM BORROW WHERE AMOUNT < 1000);

# A picture containing text, screenshot, font Description automatically generatedOUTPUT:

**QUERY (ix):** Delete deposit of SUNIL.

**SYNTAX:** DELETE FROM DEPOSIT WHERE CNAME = 'SUNIL';

# OUTPUT:

A screenshot of a computer screen

Description automatically generated with low confidence

**QUERY (x):** Delete branches having deposit from NAGPUR.

**SYNTAX:** DELETE FROM BRANCH WHERE CITY = 'NAGPUR';

# OUTPUT:

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Description automatically generated with low confidence