Experiment

Aim: Queries on select, insert, update and delete

Description:

DML is an abbreviation of Data Manipulation Language. The DML Commands in StructuredQuery Language change the data present in the SQL database. We can easily access, store, modify, update and delete the existing records from the database using DML commands.

SELECT :

- It is the most important data manipulation command in SQL.
- It shows the records of the specified table and also shows particular record of a particular column by using WHERE clause.

INSERT:

- It is another most important data manipulation command in SQL, which allows user to insert data in database tables

UPDATE :

- It allows users to update (or) modify the existing data in the database tables

DELETE:

- It allows SQL users to remove single (or) multiple existing records from the database tables.
- It doesnot delete the stored data permerantly from the database.

Aim1: Write query to add new record into the table Employee.

Syntax: insert into table-name values(column1-value, column2-value, ---);

Query : insert into employee values (4285, 'Student', 'Bhanu', '13-Feb-2022', 50000);

Output: 1 row inserted.

Aim2: Write a query to add new record into the table Depart !

Syntax: insert into table-name values (column1-values, column2-values, ---);

Query: insert into Depart values (42, 'CSM');

Output: 1 row inserted.

Aim 3: Write a query to list all the records from the table employee ?

Syntax: Select * from table_name;

    - It will display all the records from the table

Query: Select * from employee;

Output:

ENO	ENAME	JOB	HIRE DATE	SALARY
4285	Bhanu	Manager	12-02-23	100000
4277	Amar	clerk	13-02-23	75000
4286	Pavan	HR	14-02-23	50000
4267	Saketh	Programmer	15-02-23	25000

Aim 4: Write a query to list all the records from the table Depart ?

Syntax: Select * from table_name;

    - It will display all the records from the table

Query: Select * from depart;

Output:

DEPTNAME	DEPT NO
CSM	42
CSE	05
IT	12

Aim 5: Write query to display employee name, employee job from the table employee ?

Syntax: select column1, column2, --- from table_name;

Query: Select ENAME, EJOB from employee;

Output:

ENAME	JOB
Bhanu	Manager
Amar	clerk
Pavan	HR
Saketh	Programmer.

Aim 6: Write a query to display all the employee names, salaries from the employee whose job is Manager ?

Syntax: select column1, column2, --- from table_name where condition

    - It will display the paritcular record from the table which satisfies the given condition.

Query: select ENAME, SALARY from employee where JOB='Manager';

Output:

ENAME	SALARY
Bhanu	100000

Aim7: Write a query to list all the database tables available in the current user?

Syntax: select * from tab;

- It will displays all the tables present in the database.

Output:

TNAME	TABTYPE	CLUSTERID
BINSRAZG4YiKQCOGZGQuWJDqW==$0	TABLE	
DEPART	TABLE	
EMPLOYEE	TABLE	
EMPLOYEE1	TABLE	
STUDENT1	TABLE	
STUDENT2	TABLE	
STUDENT	TABLE	

Aim8: Write a query to delete the records from depart table?

Syntax: delete table_name;

- It will delete the records present in the table.

Query: delete Depart;

Output: 3 rows deleted.

Aim9: Write a query to delete the records from employee whose job is clerk?

Syntax: delete table_name where condition;

- It will delete the records based on the provided condition.

Query: delete employee where job='clerk';

Output: 2 rows deleted.

Aim10: Write a query to modify the salary column in employee for e employee salary is 20000/- only?

Syntax: update table_name set column1 = value1, column2 = value2, - - -
                                        where condition;

- It will update the given column with the given value based on the condition provided

Query: update employee set salary = 30000;

Output 4 rows updated

Aim 11: Write a query to modify the salary column in the table employee to add 2000 rupees to each employee?

Syntax: Update table_name set column1 = value1, column2 = value2,---;
- It will update the given column with given value

Query: Update employee set salary = salary + 2000;
Output: 4 rows updated

Aim 12: Write a query to modify the job column by manager in the table employee whose job is clerk?

Syntax: Update table_name set column1 = value1, column2 = value2, --- where condition;

Query: Update employee set job = 'Manager' where job = 'clerk';
Output: 1 row updated.

Experiment

Aim: Queries related to operators.

Description:

In the Structured Query language, there are many operators. Some of them are

Arithemetic Operators:

+	addition
-	subtraction
*	Multiplication
/	division

Relational operators

<	lessthan
<=	less than or equal to
>	greater than
>=	greater than or equal to
=	equal to
!=	not equal to

Special Operators

1) IN - It returns true if the column-name is one of the values in column values list.

2) BETWEEN - It returns true if the column-name is existed in the range of column1 and columnvalue2

3) LIKE (or) WILD CARD operator:
   - It can be comisting of following two special characters
   1) Percentage (%) - substituted by the any expression (more than 1 character).
   2) Underscore (_) - substituted by the single character

4) NULL - The standard SQL allows the use of IS NULL is to check for a NULL attribute (column) values.

5) EXISTS - It returns true a subquery returns at least one row otherwise it is false.

Aim 1 : Write a query to list all the records from table employee whose salary is greater than 15000?

Syntax : Select * from employee column_name operator value;

- Here the relational operator (> is used to get the records)

Query : Select * from employee salary > 15000;

Output :

EMPNO	ENAME	JOB	HIREDATE	SALARY
2	Srinu	Manager	2-feb-02	20000

Aim 2 : Write a query to list employee names whose job is clerk and his salary 10000 from table employee?

Syntax : Select * from table-name operators;

- In this query we make use of relational operator (=) to get the required record from the table.

Query : Select * from employee where job = 'clerk' and salary = 10000;

Output :

EMPNO	ENAME	JOB	HIREDATE	SALARY
4	ramu	clerk	4-Apr-04	10000

Aim 3: Write a query to list all the records from the table employee whose job is either clerk or manager?

Syntax : select * from table-name where condition;

Query : select * from employee where job = 'clerk' or job = 'Manager';

Output :

EMPNO	ENAME	JOB	HIREDATE	SALARY
1	vasu	manager	1-jan-01	15000
2	sriny	manager	2-feb-02	20000
3	raju	clerk	3-mar-03	12000
4	ramu	clerk	4-Apr-04	10000

Aim 4: Write a query to list all the records from the table employee where empno is 1,2,4?

Description: Here we use the special operator (IN)

- This operator returns true if the column_name is one of the values in column values list.

Query: Select * from employee where empno in(1,2,4);

Output:

EMPNO	ENAME	JOB	HIREDATE	SALARY
1	vasu	manager	1-jan-01	15000
2	Srinu	manager	2-feb-02	20000
4	ramu	clerk	3-mar-03	10000

Aim5: Write a query to find employee name from the table employee whose Salary is between 10000 to 20000?

Description: Here we use the special operator (between)

  - This operator returns true the column_name is existed in the range of columnvalue1 and columnvalue2

Query: Select * from employee where salary between 10000 and 20000;

Output:

EMPNO	ENAME	JOB	HIREDATE	SALARY
1	vasu	manager	1-jan-01	15000
2	srinu	manager	2-feb-02	20000
3	raju	clerk	3-Mar-03	12000
4	ramu	clerk	4-Apr-04	10000

Aim6: Write a query to find employee name from employee which have 'NI' or 'SH' in them?

Description: Here we use the special operator (LIKE)

Query: select * from employee where ENAME Like 'NI' or Like 'SH';

Output: no rows selected

Aim7: Write a query to list all records from table whose third character must be 'I'?

Description: Here we use the special operator (LIKE)

  - It consists of following two special characters.
    1) Percentage (%) - Substituted by the any expression (more than 1 character
    2) Underscore(_) - Substituted by the single character.

Query: Select * from employee where ENAME LIKE '__I%';

Output : | EMPNO | ENAME | JOB | HIREDATE | SALARY |
|---|---|---|---|---|
| 2 | Srinu | manager | 2-feb-02 | 20000 |

Aim 8: Write a query to list employee name and their job title from the table employee who are not get a salary ?

Description: Here we use the special operator (NULL)

 - The standard SQL allows the use of ISNULL is to check for a NULL attribute (column) values

Query: select   ENAME from employee where salary ISNULL;

Output: no rows selected.