|  |
| --- |
| **Part A** |
| **Aim:** SQL commands:   1. Create table 2. View structure of table 3. Alter table for adding/deleting columns and modifying columns 4. Insert data into table 5. View data in the table (for all records, specfic attributes and specific records ) 6. To Update records 7. Delete records 8. To eliminate duplicate rows when using a select statement 9. Drop table |
| **Prerequisite:** Oracle. |
| **Outcome:** Table is created and records are inserted and viewed. |
| **Theory:**  **SQL CREATE TABLE Syntax**  CREATE TABLE *table\_name* ( *column\_name1 data\_type*(*size*) constraints, *column\_name2 data\_type*(*size*) constraints, *column\_name3 data\_type*(*size*) constraints, .... ); SQL INSERT INTO Syntax It is possible to write the INSERT INTO statement in two forms.  The first form does not specify the column names where the data will be inserted, only their values:  INSERT INTO *table\_name* VALUES (*value1*,*value2*,*value3*,...);  The second form specifies both the column names and the values to be inserted:  INSERT INTO *table\_name* (*column1*,*column2*,*column3*,...) VALUES (*value1*,*value2*,*value3*,...);  **SQL SELECT Syntax**  SELECT *column\_name*(s) FROM *table\_name*;  and  SELECT *\** FROM *table\_name*;  and  SELECT *column\_name*(s) FROM *table\_name* WHERE *condition*  **SQL DELETE Syntax**  DELETE FROM *table\_name*WHERE *condition*;  **SQL UPDATE Syntax**  UPDATE *table\_name* SET *column1*=*value1*,*column2*=*value2*, ... WHERE *condition*; |
| **Procedure:**   1. Formulate the query for given problem. 2. Write the SQL query with proper input. 3. Execute the query.   **Practice Exercise:**   |  |  | | --- | --- | | S.no | Query statement | | 1 | (a) Create an Account with the following attributes  acctno - Account Number – Integer  bal – Balance – Interger  (b) Add column acctHolderName attribute with type Number  (c) Change column acctHolderName type to varchar  (d) Delete column acctHolderName | | 2 | Create the Depositor table with th following attributes  custname – Customer Name – varchar  custID – Customer ID – Integer | | 3 | Create the Loan table with the following attributes  loan\_no\_loan number – Integer  br\_name – Branch name – varchar  amount –loan amount – float | | 4 | Create the Borrower with the following attributes  custname – Customer Name – varchar  loan\_no – loan number – Integer | | 5 | Create Department Table with following columns and constraints:  **Column name Type & Size**  Dept\_no numeric(2)  Dname varchar(15)  Location varchar(12) | | 6 | Create Emp table with following columns and constraints:  **Column name Type & Size**  Emp\_no numeric(4)  Ename varchar(20)  Gender char(1)  Job varchar(12)  Mgr numeric(4)  Hiredate date  Salary numeric(8)  Comm numeric(8)  Dept\_no numeric(2) | | 7 | Insert following data into Department table:   |  |  |  | | --- | --- | --- | | **Dept\_no** | **Dname** | **Location** | | 10 | ACCOUNTING | NEW YORK | | 20 | RESEARCH | DALLAS | | 30 | SALES | CHICAGO | | 40 | MARKETING | BOSTON | | | 8 | Insert following data into Emp table:   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **E\_no** | **Ename** | **Gender** | **Job** | **Mgr** | **Hiredate** | **Salary** | **Comm** | **Dept\_no** | | 7369 | Smith | M | CLERK | 7902 | 17-DEC-80 | 8000 | - | 20 | | 7499 | Allen | F | SALESMAN | 7698 | 20-FEB-81 | 16000 | 3000 | 30 | | 7521 | Ward | M | SALESMAN | 7698 | 22-FEB-81 | 12500 | 5000 | 30 | | 7566 | Jones | F | MANAGER | 7839 | 02-APR-81 | 29750 | - | 20 | | 7654 | Martin | M | SALESMAN | 7698 | 28-SEP-81 | 12500 | 14000 | 30 | | 7698 | Blake | M | MANAGER | 7839 | 01-MAY-81 | 28500 | - | 30 | | 7782 | Clark | M | MANAGER | 7839 | 09-JUN-81 | 24500 | - | 10 | | 7788 | Scott | M | ANALYST | 7566 | 09-DEC-82 | 30000 | - | 20 | | 7839 | King | M | PRESIDENT | - | 17-NOV-81 | 50000 | - | 10 | | 7844 | Turner | M | SALESMAN | 7698 | 08-SEP-81 | 15000 | - | 30 | | 7876 | Adams | M | CLERK | 7788 | 12-JAN-83 | 11000 | - | 20 | | 7900 | James | M | CLERK | 7698 | 03-DEC-81 | 95000 | - | 30 | | 7902 | Ford | M | ANALYST | 7566 | 03-DEC-81 | 30000 | - | 20 | | 7934 | Miller | F | CLERK | 7782 | 23-JAN-82 | 13000 | - | 10 | | | 9 | Display all the information of the EMP table? | | 10 | Display all the information of the Department table? | | 11 | Display name of all the departments? | | 12 | Display all department name along with location? | | 13 | Display name and salary of all female employees. | | 14 | Display name of all male employees in department no 20. | | 15 | Display name of all employee whose salary is more than 10000. | | 16 | Display information of all clerks. | | 17 | Display Employee no. and name of all male who is getting salary less than 20000. | | 18 | Display information of all employees working in Dept. no. 20. | | 19 | Display unique Jobs from EMP table? | | 20 | Display the struc ture of all tables. | |
| **Instructions:**   1. Write and execute the query in Oracle/SQL server. 2. Paste the snapshot of the output in input & output section. |
| **Part B** |
| **Code:**  Perform the operation and paste the running code here. |
| **Code and Output:**  **1.**  a.  b.  c.  d. |
| **Code and Output:**  **2.** |
| **Code and Output:**  **3.** |
| **Code and Output:**  **4.** |
| **Code and Output:**  **5.** |
| **Code and Output:**  **6.** |
| **Code and Output:**  **7.** |
| **Code and Output:**  **8.** |
| **Code and Output:**  **9.** |
| **Code and Output:**  **10.** |
| **Code and Output:**  **11.** |
| **Code and Output:**  **12.** |
| **Code and Output:**  **13.** |
| **Code and Output:**  **14.** |
| **Code and Output:**  **15.** |
| **Code and Output:**  **16.** |
| **Code and Output:**  **17.** |
| **Code and Output:**  **18.** |
| **Code and Output:**  **19.** |
| **Code and Output:**  **20.** |
| **Observation & Learning:**  From this experiment I observed and learned how the following SQL COMMANDS works  SQL commands:   1. Create table 2. View structure of table 3. Alter table for adding/deleting columns and modifying columns 4. Insert data into table 5. View data in the table (for all records, specific attributes and specific records ) 6. To Update records 7. Delete records 8. To eliminate duplicate rows when using a select statement 9. Drop table |
| **Conclusion:**  In this experiment I executed all the following SQL COMMANDS to do all the operations like creating, deleting ,updating, altering, inserting. |
| **Questions:**   1. What is DDL (Data Definition Language)? 2. DDL is short name of **Data Definition Language**, which deals with database   schemas and descriptions, of how the data should reside in the database.  DDL stands for Data Definition Language. It is used to define database structure or  pattern.It is used to create schema, tables, indexes, constraints, etc. in the database.   1. How the strings are inserted into the table?   A) (In the *insert into table\_name values (); command*)Strings are inserted into the table using single  quotes “ ‘ ‘ “ which are also called air quotes.   1. What happen if one attribute is not there in insertion list? 2. We will get an error that “Missing Expression” . 3. What happen if domain type of data inserted is different from that of column? 4. We will get an error “Column not allowed here”. 5. What happen if where clause is not given in query? 6. If you want to choose a specific data or retrieve a specific data we use the keyword WHERE , without which we cannot get the data from a desired location ,so we get an error if WHERE clause is not used in subquery. 7. What are the various comparison operator used in condition part? 8. The operators used in the condition part are   1)EQUAL TO =  2)GREATER THAN OR EQUAL TO >=  3)LESS THAN OR EQUAL TO <=  4)GREATER THAN >  5)LESSER THAN <  6)NOT EQUAL <> . |