Part A

Projection, ORDER BY clause, Altering and dropping of tables (use constraints while creating tables) examples using SELECT command.

Aim: SQL commands:

- To sort data in a table i)
- To create a table from an existing table ii)
- iii) To insert data into a table from another table
- To delete data from a table i)
- ii) To update the contents of a table
- To modify the structure of a table (Alter table for adding/deleting columns and iii) modifying columns)
- To rename a table iv)
- To truncate a table v)
- vi) To drop a table

Prerequisite: Oracle.

Outcome: Table is created and records are inserted, viewed, and structure is modified.

Theory:

Sorting data in a table

Select * from <TableName> order by <ColumnName1>, <ColumnName2> <SortOrder>; Creating a table from a table

Create table <TableName> (<ColumnName1>, <ColumnName2>) as select <ColumnName1>, <ColumnName2> from <TableName>;

Inserting data into a table from another table

Insert into <TableName> select <ColumnName1>, <ColumnName2> from <TableName>;

Delete data from a table

Delete from <TableName>:

Updating the contents of a table

Update <TableName> set <ColumnName1>=<expression1>.<ColumnName2>=<expression2>:

Modifying the structure of tables (SQL ALTER TABLE Syntax)

alter table <TableName> add (<ColumnName1><datatype1>, <ColumnName2><datatype2>);

Adding columns

ALTER TABLE table_name

ADD column_name datatype;

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Deleting columns

ALTER TABLE table_name

DROP COLUMN column_name;

Modifying columns (Prior Oracle 10G)

ALTER TABLE table_name

MODIFY COLUMN column_name datatype;

ALTER TABLE table_name (Oracle 10G and later:)

MODIFY column_name datatype;
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Renaming tables

Rename < Table Name > to < New Table Name >;

Truncating Tables

Truncate table <TableName>;

Destroying Tables

drop table <TableName>;

Procedure:

- 1. Formulate the query for given problem.
- 2. Write the SQL query with proper input.
- 3. Execute the query.

Practice Exercise

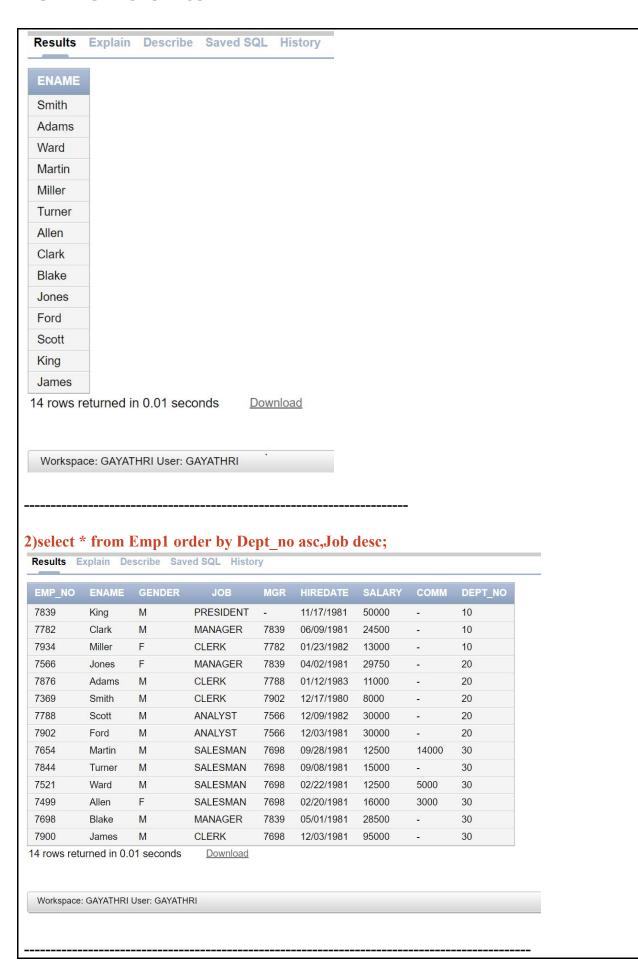
1	List the emps in the asc order of their Salaries?
2	List the details of the emps in asc order of the Dptnos and desc of Jobs?
3	Display all the unique job groups in the descending order?
4	Display all the details of all 'Mgrs'
5	Display all the details of the emps whose Comm. Is more than their Sal.
6	List the emps who are either 'CLERK' or 'ANALYST' in the Desc order.
7	List the emps Who Annual sal ranging from 22000 and 45000.
8	Create a table Emp_Income(E_ID,Name, Salary, Commission) from emp.
9	Create a table Emp_data(Name, Gender, Post, Dept_in) from emp.
10	Create a table Section(S_ID, S_name). (create by normal create table query)
11	Copy required data into Section table from dapt table.
12	Create table Relation(Ename, Manager, Dept_no). (create by normal create table query)
13	Add age at attribute to the employee table
14	Remove customer name attribute from the depositor table
15	Increase the size of column ename in table employee to 15.

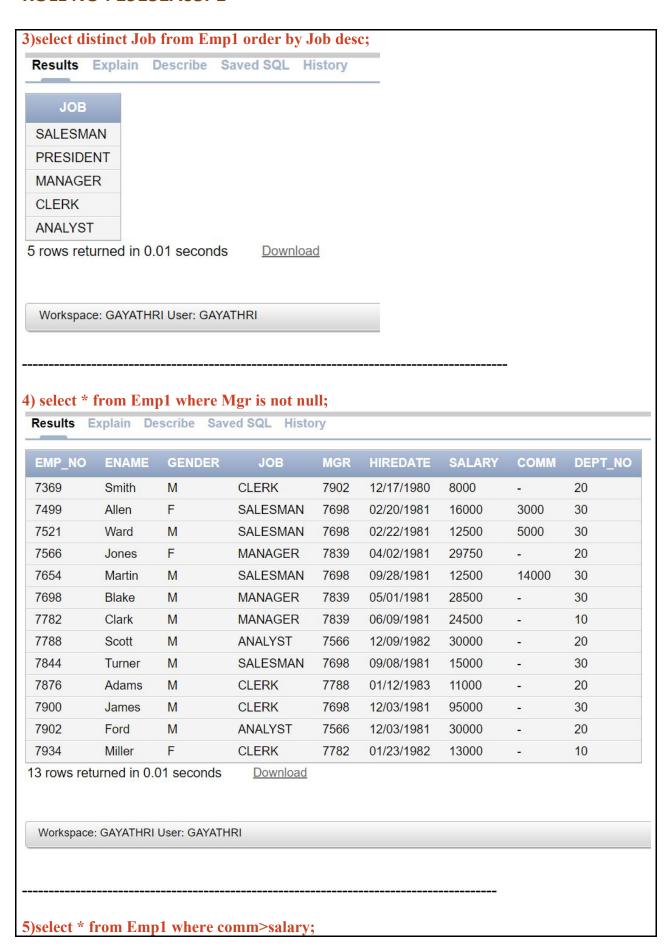
16	Add New column' Data_of_Birth' in the Emp_data table. Which is of type Date.
17	Change the name of the Section table to Office, and Relation to Association.
18	Update the commission of all clerks to 500 in EMP.
19	Change the salary of every manager to 50000 in Emp_income.
20	Increase the salary of every salesman by 500 in Emp_income.
21	Delete the information of all employees of dept_no 20 in Emp_data.
22	Delete all the data from Association and Office.
23	Delete the information of 'martin' from Emp_data table.
24	Increase the commission of all the females by 10%.
25	Completely delete all the tables created today.

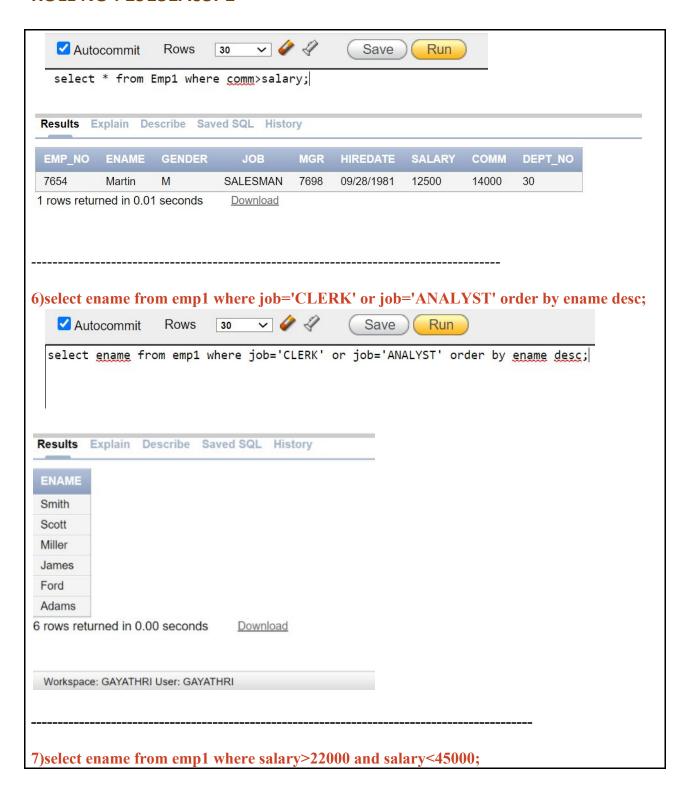
Instructions:

- 1. Write and execute the query in Oracle SQL server.
- 2. Paste the snapshot of the output in input & output section.

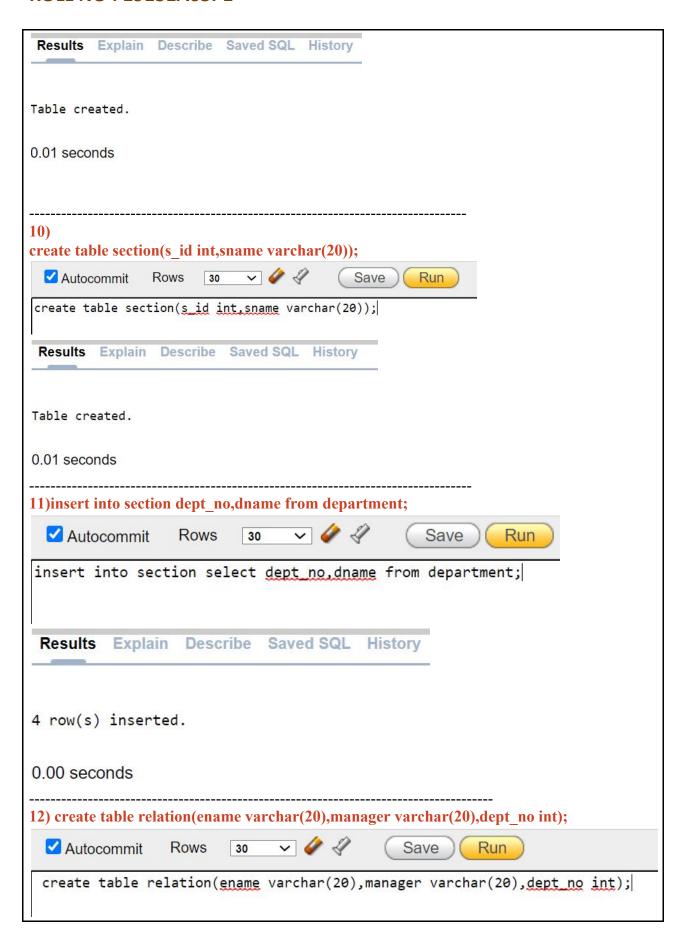


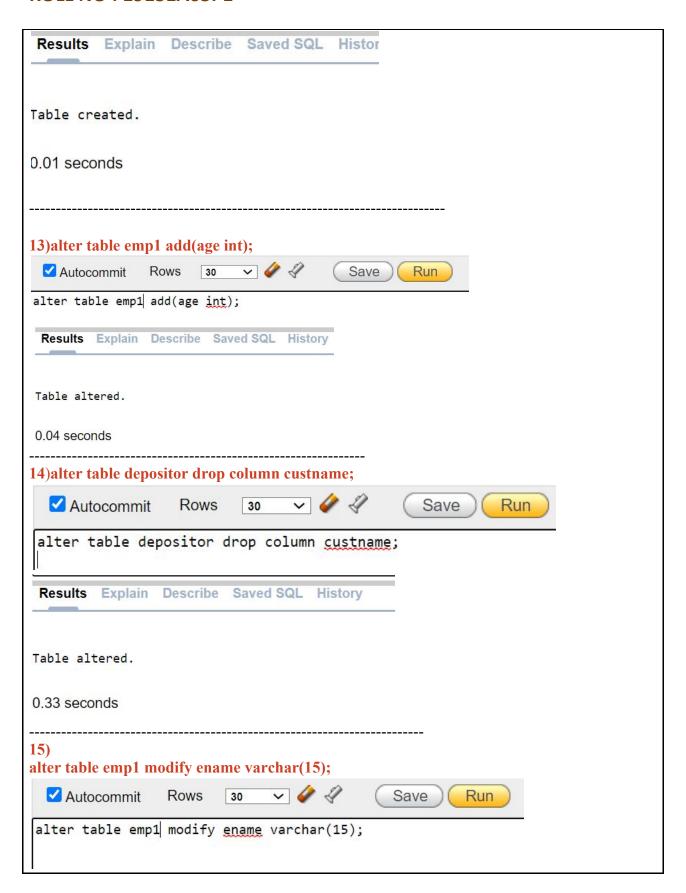


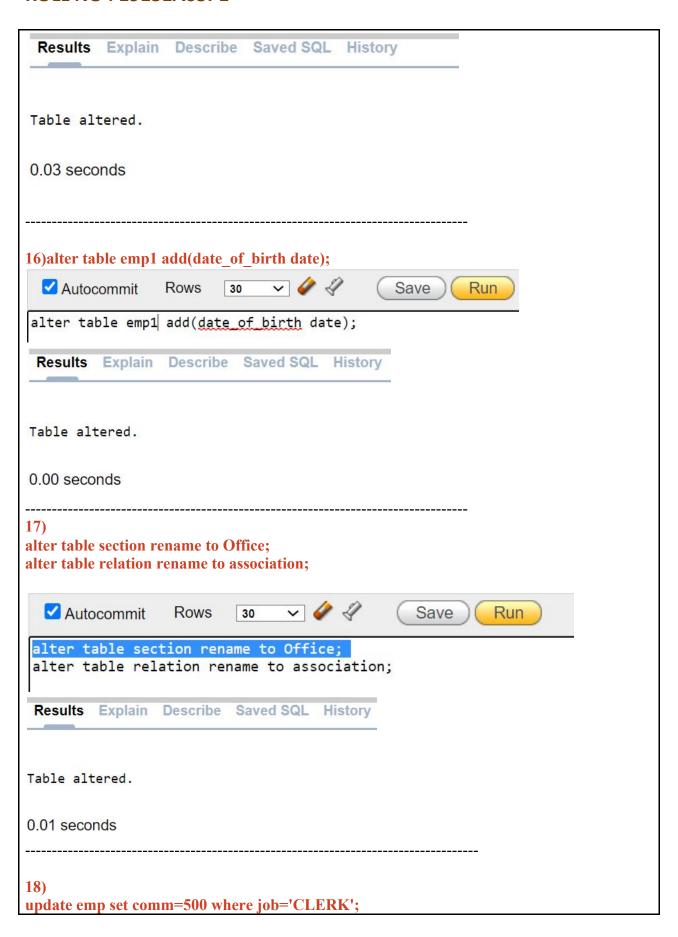


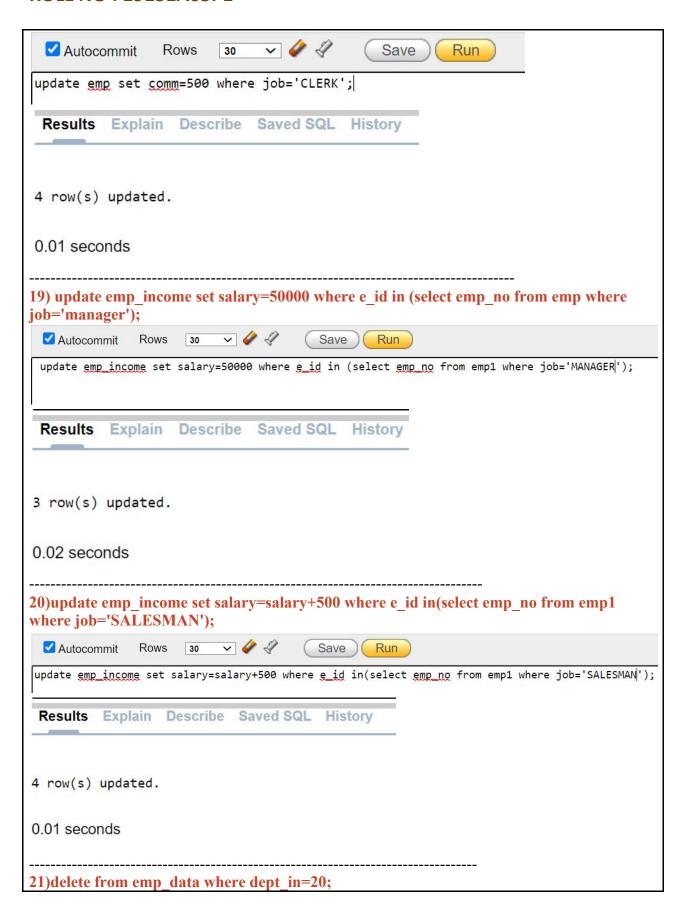


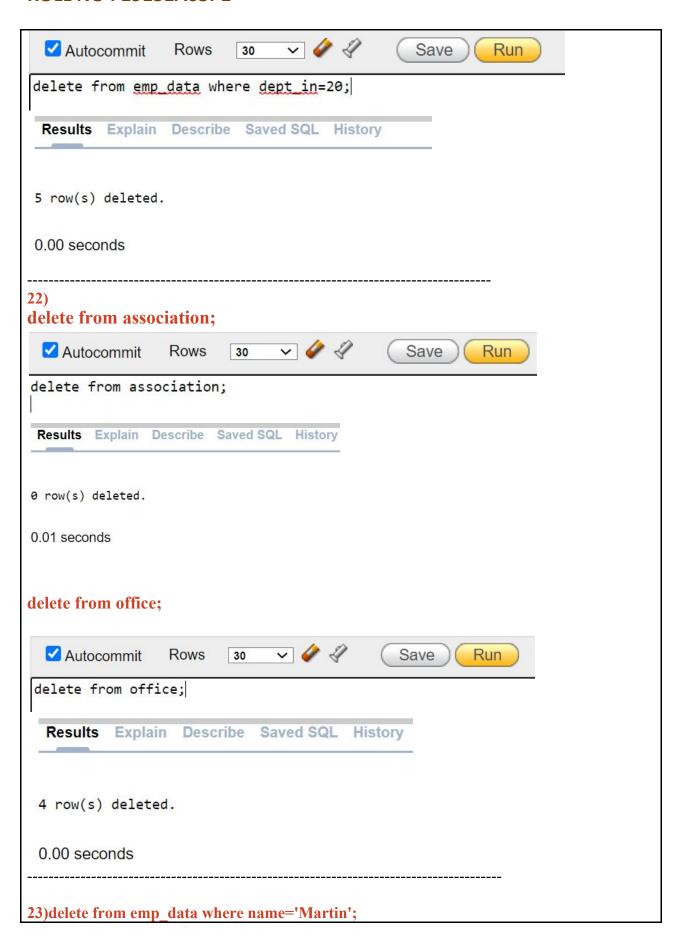


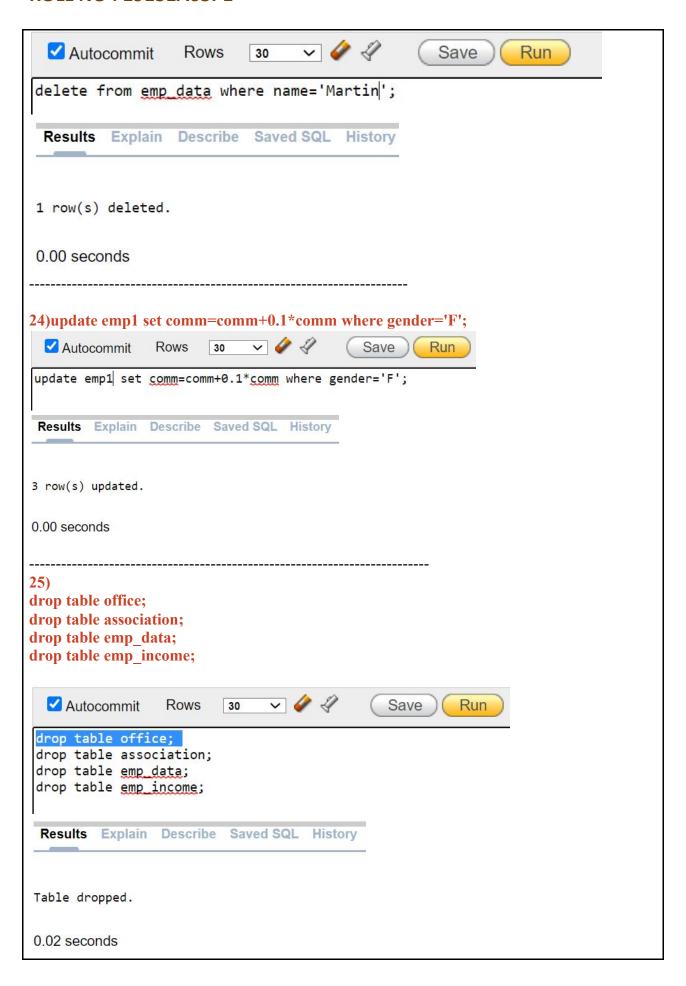












Observation & Learning:

Learned and executed following SQL commands on database

sorted data in a table

created a table from an existing table

inserted data into a table from another table

deleted data from a table

updated the contents of a table

modified the structure of a table (Alter table for adding/deleting columns and modifying columns)

renamed a table

truncated a table

dropped a table

Conclusion:

Learned and practiced DML commands and recorded the outputs perfectly.

Questions:

- 1. What happen if where clause is not given in query?
- 2. What are the various comparison operator used in condition part?
- 3. Give the difference between delete, truncate, and destroy command.
- 4. What happen if domain type of data inserted is different from that of column?
- 5. What are the various comparison operator used in condition part?
- 6. What is the meaning of NULL in DBMS?

ANSWERS:

1. Unnecessary tuples will also get selected.

And our work will not be efficient.

- 2. = (equal to)
 - <> (not equal to)
 - > (greater than)
 - < (less than)
 - >= (greater than or equal to)
 - <= (less than or equal to)
- 3. Difference between Truncate, delete and destroy is

TRUNCATE SQL query removes all rows from a table, without logging the individual row deletions. TRUNCATE is faster than the DELETE query.

DELETE query deletes all records from a database table. To execute a DELETE query, delete permissions are required on the target table. If you need to use a WHERE clause in a DELETE, select permissions are required as well.

DROP table query removes one or more table definitions and all data, indexes, triggers, constraints, and permission specifications for those tables. DROP command requires to ALTER permission on the schema to which the table belongs, CONTROL permission on the table, or membership in the db_ddladmin fixed database role.

- 4. Data cant be inserted as the datatype of column does not match with given input data and error message will be displayed.
- 5. = (equal to)
 - <> (not equal to)
 - > (greater than)
 - < (less than)
 - >= (greater than or equal to)
 - <= (less than or equal to)
- 6. Null means having no value; in other words null is zero.