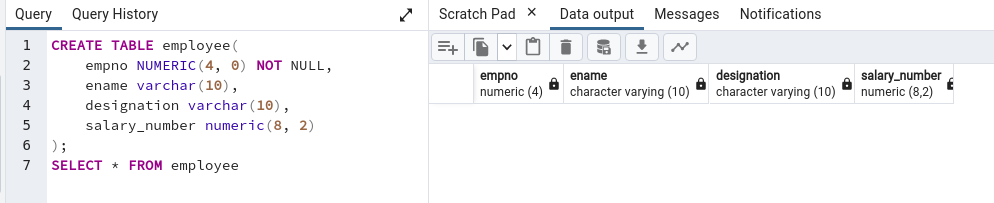
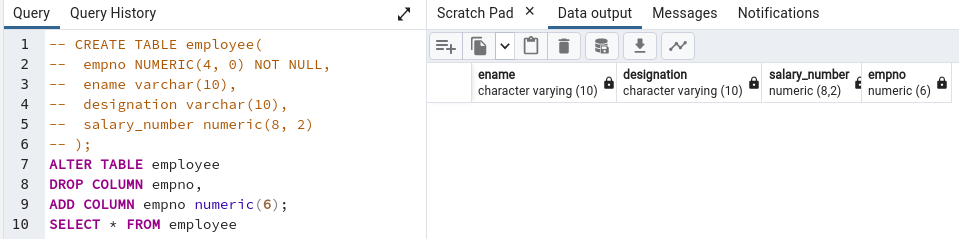
| SE-Computer Roll number : 9914 | | | |
| --- | --- | --- | --- |
| Experiment no. : 3(Part-1) Date of Implementation : 13/02/2024 | | | |
| Aim : To implement data definition language (DDL) commands | | | |
| Tool Used : PostgreSQL | | | |
| Related Course outcome : At the end of the course, Students will be able to Use  SQL : Standard language of relational database | | | |
| **Rubrics for assessment of Experiment:**   | Indicator | Poor | Average | Good | | --- | --- | --- | --- | | Timeliness   * Maintains assignment deadline (3) | Assignment not done (0) | One or More than One week late (1-2) | Maintains deadline (3) | | Completeness and neatness   * Complete all parts of assignment(3) | N/A | < 80% complete (1-2) | 100% complete (3) | | Originality   * Extent of plagiarism(2) | Copied it from someone else(0) | At least few questions have been done without copying(1) | Assignment has been solved completely without copying (2) | | Knowledge   * In depth knowledge of the assignment(2) | Unable to answer 2 questions(0) | Unable to answer 1 question (1) | Able to answer 2 questions (2) | | | | |
| **Assessment Marks :**   | Timeliness |  | | --- | --- | | Completeness and neatness |  | | Originality |  | | Knowledge |  | | Total |  | | | | |
| **Total : (Out of 10)** | | | |
| **Teacher's Sign :** | | | |
|  | ***EXPERIMENT 3*** | DDL Commands |
|  | Aim | To implement DDL – Data definition language command |
|  | Tools | PostgreSQL/MYSQL |
|  | Theory | **SQL:** It is structured query language, basically used to pass the query to retrieve and manipulate the information from database  **DDL:** The Data Definition Language (DDL) is used to create the database (i.e. tables, keys, relationships etc), maintain the structure of the database and destroy databases and database objects.  Eg. Create, Drop, Alter, Describe, Truncate CREATE statements: It is used to create the table. CREATE TABLE table\_name(columnName1 datatype(size), columnName2 datatype(size),………);   1. **DROP statements:** To destroy an existing database, table, index, or view. If a table is dropped all records held within it are lost and cannot be recovered.  DROP TABLE table\_name;  1. **ALTER statements:** To modify an existing database object.   **Adding new columns:**  Alter table table\_name Add(New\_columnName1 datatype(size),  New\_columnName2 datatype(size),………);  **Dropping a columns from a table** :  Alter table table\_name DROP column columnName:  **Modifying Existing columns:**    Alter table table\_name Modify (columnName1 Newdatatype(Newsize));   1. **Describe statements:** To describe the structure (column and data types) of an existing database, table, index, or view.  DESC table\_name;  1. **Truncate statements:** To destroy the data in an existing database, table, index, or view. If a table is truncated all records held within it are lost and cannot be recovered but the table structure is maintained.  TRUNCATE TABLE table\_name; |
|  | Procedure | 1. Write a query to create a table employee with empno, ename, designation, and salary. Emp (empno number (4), ename varchar (10), designation varchar (10), salary number (8,2)); 2. Write a Query to Alter the column empno number (4) to empno number (6). 3. Write a Query to Alter the table employee with multiple columns (empno, ename.) 4. Write a query to add a new column in to employee as qualification varchar2(6) 5. Write a query to add multiple columns in to employee dob date , doj date 6. Write a query to drop a column ‘doj’ from an existing table employee 7. Write a query to drop multiple columns ‘dob’ and ‘qualification’ from employee 8. Truncate table EMP 9. Drop table EMP |
|  | **Post Lab Questions:** | 1. What is Data Dictionary? 2. What is Schema? 3. What are different data types in SQL? |

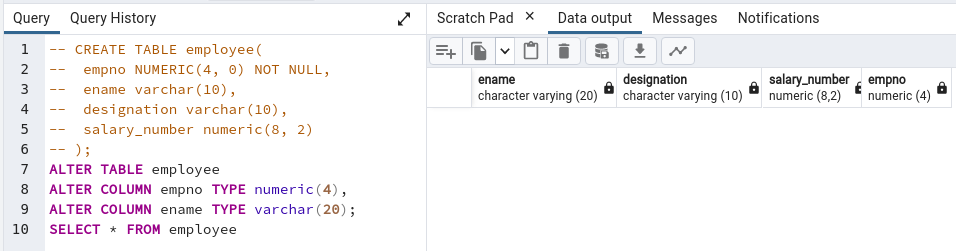
1. Write a query to create a table employee with empno, ename, designation, and salary. Emp (empno number (4), ename varchar (10), designation varchar (10), salary number (8,2));



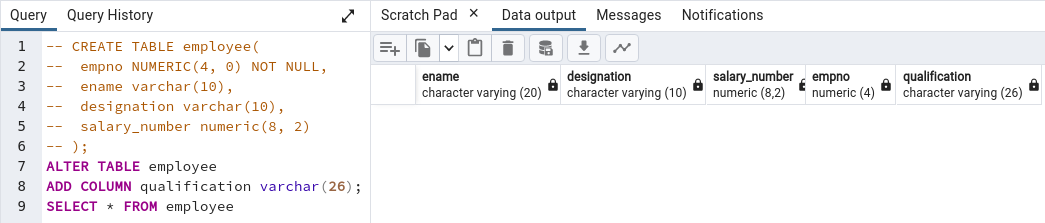
1. Write a Query to Alter the column empno number (4) to empno number (6).



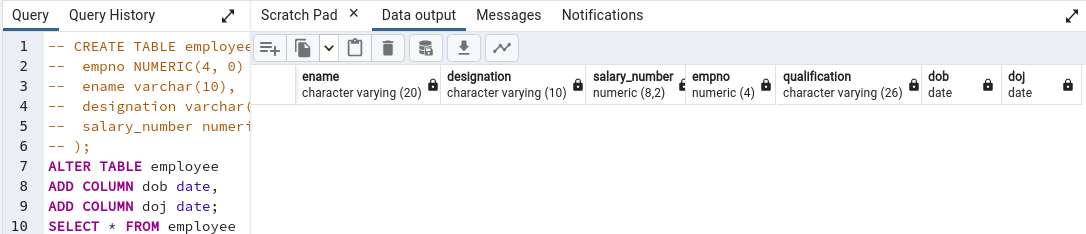
1. Write a Query to Alter the table employee with multiple columns (empno, ename.)



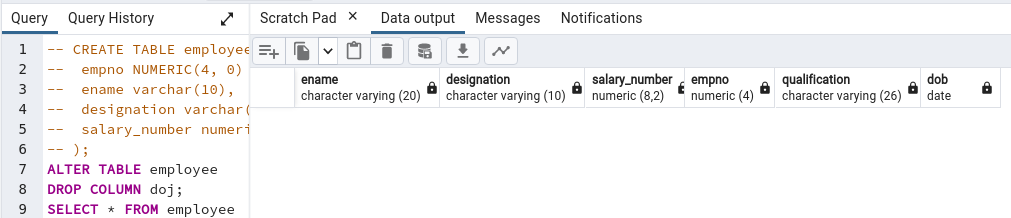
1. Write a query to add a new column in to employee as qualification varchar2(6)



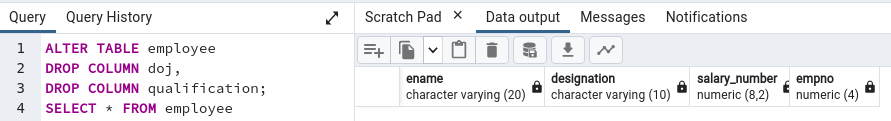
1. Write a query to add multiple columns in to employee dob date , doj date



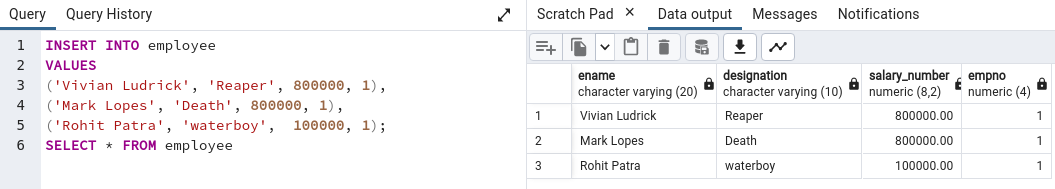
1. Write a query to drop a column ‘doj’ from an existing table employee

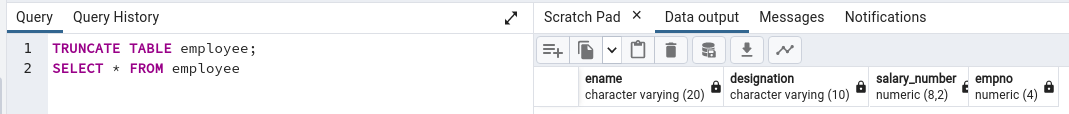


1. Write a query to drop multiple columns ‘dob’ and ‘qualification’ from employee

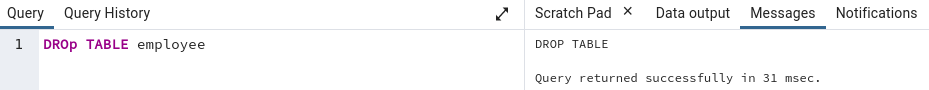


1. Truncate table EMP





1. Drop table EMP



1. What is Data Dictionary?

⇒ A data dictionary in a database management system (DBMS) is a collection of metadata that provides information about the data elements used in a database. It contains names, definitions, and attributes of the data elements, such as data types, descriptions, and constraints. The data dictionary is essential for understanding and using the database, as it helps in avoiding data inconsistencies, defining conventions, and providing consistency in the collection and use of data across the database. It also assists in enforcing the use of data standards and makes the data easier to analyze

1. What is Schema?

⇒ In a database management system (DBMS), a schema is a logical representation of the entire database. It defines how the data is organized, the relationships among the data, and the constraints that are to be applied to the data. A database schema is like a blueprint of the database, describing how the data may relate to other tables or entities. It does not contain the actual data, but rather provides a structure for the data.

6. What are different data types in SQL?

⇒ SQL data types can be broadly divided into the following categories.

1. Numeric data types such as: INT, TINYINT, BIGINT, FLOAT, REAL, NUMERIC, etc.
2. Date and Time data types such as: DATE, TIME, DATETIME, etc.
3. Character and String data types such as: CHAR, VARCHAR, TEXT, etc.
4. Unicode character string data types such as: NCHAR, NVARCHAR, NTEXT, etc.
5. Binary data types such as: BINARY, VARBINARY, etc.
6. Miscellaneous data types - CLOB, BLOB, XML, CURSOR, TABLE, etc.