**Commands**

**Select Query**

Query that are used to retreive any information from database.

**Filter Condition**

Adding a filter using where clause ---select col1,col2 from tblname where col1='value1';

**Logical Conditions in Postgresql**

Using And/OR in postgresql---select col1,col2 from tblname where col1='value1' And/Or col2='Value2'

**Using Wildcards % and \_**

select col1 from tbl1 where col1 like '%value%'

**Comments in SQL**

eg --Comment,/\*\_\_\_\_\*/

**Alter table in Postgresql**

alter table tbl name add column col1 datatype;

**Update Postgresql**

Update Tblname set column name = Col1+col2+col3;

**WORKING WITH VARCHARS**

We can do select col1, left(col1,4) from tblname;select col1, right(col1,4) from tblname;select col 1, reverse(col 1) from tblname;

**Working with Dates**

select Date\_part(col1)-Date\_part(col2)as Date\_alias from tblname;

**Implicit Conversions**

Select Cast(col1,varchar(4)) from tblname order by col1;select col1::varchar(4)) from tblname order by col1;

**Working with null**

select col1 from tblname where colname IS Null;

**Structured Data and unstructured Data**

Advantages of structure Data are consistency and more info from the data improved data integrity and data security and maintenance

**Elements of a db**

Tables(relation),schemas,columns(attributes),rows(tuples),no of columns(degree),no of rows(cardinality)

**Relational Keys**

Primary keys (It is the candidate key that is selected to identify tuples uniquely within the relation),

Foreign key(It is an attribute or set of attributes within one relation that matches the candidate key of some other relation),

Super key(Combination of columns that uniquely identifies a row in a table ),

Candidate Key (Super Key that no proper subset is a superkey and has the following properties-Uniqueness and irreducibility)

**Relational database**

It is a set of tables that satisfy following data integrity --Entity integrity,Domain integrity,Referential and user-defined integrity

**Functional Dependency**

Dependencies occured when attribute or set of attributes identifies a particular value of another attribute

**Joining tables in SQl**

Joins are operations on tables performed on relational databases.

**Inner join** -will take the two tables and look over the intersection of the two tables.

**Left outer Join** -Primary table is on left and rows cannot be discarded from primary table.

**Right Outer Join** -Primary table is on right and rows cannot be discarded from primary table.

**Full Outer Join** -All the rows of the two tables.

**Data Normalization**

Normalization is the process of organizing the columns and rows of teh tables to reduce redundancy and increase data integrity.

**Prime and Non prime attributes**

Prime attributes are columns that are part of primary key and non prme attributes are those columns that are not of any candidate key.

**First Normal Form (1 NF)**

A table is in 1NF if it doesnot contains duplicate rows and every cell contains only one value.

**Second Normal Form (2 NF)**

A table is in 2 NF if it is in 1 NF and every non prime attributes of the table are dependent on the whole of every candidate key.

**Third Normal Form (3 NF)**

A table is in 3 NF if it is in 2 NF and every non prime attributes of the table is not transistevly dependent on every candidate key.