Basic Data Retrieval  Sorting Data (ORDER BY)  Sort the result set in ascending or der.  Sort the results set in ascending or der.  Basic Data Retrieval  Limiting Results  Limit the number of rows returned in a query.  Joins  Inner Join  Retrieve reacrosk with matching scleECT * FROM table LIMIT number;  Joins  Left Join  Retrieve all records from the left table2. Column;  Joins  Right Join  Retrieve all records from the right table and matching records from the right table.  Retrieve all records from the right table.  Joins  Right Join  Retrieve all records from the right table.  Retrieve all records from the right table.  Joins  Right Join  Retrieve all records from the right table.  Joins  Full Outer Join  Retrieve all records when there is Joint table2. Column;  Joins  Full Outer Join  Retrieve all records when there is Joint table2. Column;  Joins  Full Outer Join  Retrieve all records when there is Joint table2. Column;  Joint a match in either table.  SELECT * FROM table1 FIGH  JOINT table2. On table1. Column table2. Column;  Joint table2. On table3. Column;  Joint table4. Column;  Joint table5. Column	Category	Core Task	Description	Common Commands
Basic Data Retrieval Sorting Data (ORDER BY) Sort the result set in ascending or SELECT * FROM table ORDE Column ASC/OESC; Basic Data Retrieval Limiting Results Limit the number of rows returned in a query.  Joins Inner Join Retrieve records with matching values in both tables.  Joins Left Join Retrieve all records from the left table 2 column; Apprecations Right Join Retrieve all records from the right table.  Joins Right Join Retrieve all records from the right table.  Retrieve all records from the right table.  Joins Right Join Retrieve all records from the right table.  Joins Right Join Retrieve all records from the right table.  Joins Right Join Retrieve all records from the right table.  Joins Right Join Retrieve all records from the right table.  Joins Retrieve all records from the right table.  Joins Retrieve all records when there is SELECT * FROM table 1 FUEL table and matching records from the left table.  Joins Retrieve all records when there is SELECT * FROM table 1 FUEL table and matching records from the left table.  Joins Retrieve all records when there is SELECT * FROM table 1 FUEL table and matching records from the right table and matching records from the left table.  Joins Full Outer Join Retrieve all records when there is SELECT * FROM table 1 FUEL table 2 Column; Aggregations Summing Values Calculate the average of a suble 1 Column at table 2 Column.  Aggregations Aggregations Averaging Values Calculate the average of a numeric column.  Aggregations Finding Minimum and Maximum In a numeric column.  Find the smallest or largest value in Apply aggregate functions (select or largest value in a numeric column.  Find the smallest or largest value in Apply aggregate functions (select or largest value in table and part in the same values in specified columns and Agale in Apply aggregate functions (seed with table GROUP BY column) in a numeric column.  Find the smallest or largest value in table and part in the same value in the specified columns and apply aggregate functions (seed with table GRO	Basic Data Retrieval	Selecting Data (Basic Queries)	selecting columns from one or	
descending order.  column ASC/DESC; Basic Data Retrieval  Limiting Results  Limit the number of rows returned in a query.  Joins  Inner Join  Retrieve and in a query.  Joins  Left Join  Retrieve all records from the left table.  SELECT * FROM table I.NNI JOIN table2 ON table1.colum table2.column;  table2.column;  Joins  Right Join  Retrieve all records from the left table.  Joins  Right Join  Retrieve all records from the left table.  Joins  Right Join  Retrieve all records from the left table.  Joins  Full Outer Join  Retrieve all records when there is SELECT * FROM table1.EGI table2.column;  Joins  Full Outer Join  Retrieve all records when there is SELECT * FROM table1 RIGH table.  Joins  Full Outer Join  Retrieve all records when there is SELECT * FROM table1 RIGH table2.column;  Joins  Full Outer Join  Retrieve all records when there is SELECT * FROM table1 RIGH table3.  Joins Full Outer Join  Retrieve all records when there is SELECT * FROM table1 RIGH table3.  Joins Full Outer Join  Retrieve all records when there is SELECT * FROM table1 RIGH table3.  Joins Full Outer Join  Retrieve all records when there is SELECT * FROM table1 RIGH table3.  Joins Full Outer Join  Retrieve all records when there is SELECT * FROM table1 RIGH table3.  Joins Table3.  Retrieve all records when there is SELECT * FROM table1 RIGH table3.  Joins Table4.  Retrieve all records when there is SELECT * FROM table1 RIGH table3.  Joins Table4.  Retrieve all records from the left table.  SELECT * SEMM table1. LEFT * Table4.  Joins Table4.  SELECT * SEMM table1. LEFT * Table5.  Joins Table4.  Retrieve all records from table4.  Joins Table5.  Joins Table5.  Joins Table6.  Joins Table7.  Joins Table7.  Jo	Basic Data Retrieval	Filtering Data (WHERE Clause)	•	SELECT * FROM table WHERE condition;
Inner Join   Retrieve records with matching   SELECT *FROM table1 INNI   JOIN table2 On table1.colum   table2.column;   able2.column;   able	Basic Data Retrieval	Sorting Data (ORDER BY)	· · ·	
Values in both tables.   JOIN table2 ON table1.colum table2.column;	Basic Data Retrieval	Limiting Results		SELECT * FROM table LIMIT number;
table and matching records from the right table.  Right Join Retrieve all records from the right table and matching records from the right table and matching records from the right table and matching records from the left table.  Retrieve all records when there is from the left table.  Full Outer Join Retrieve all records when there is a match in either table.  OUTER JOIN table 2 ON table 1. Column; table 2 ON table 1. Column; table 2 ON table 2. Column;  Grouping Aggregations Counting Rows Count the number of rows in a table or group of rows.  Aggregations Summing Values Calculate the sum of a numeric column.  Aggregations Averaging Values Calculate the sum of a numeric column.  Aggregations Finding Minimum and Maximum Find the smallest or largest value ELECT AVG(column) FROM table; from a numeric column.  Aggregations Finding Minimum and Maximum Find the smallest or largest value ELECT MINI(column), in a numeric column.  Grouping and Aggregation Grouping Data (GROUP BY) Group rows that have the same values in specified columns and apply aggregate functions.  Grouping and Aggregation Filtering Groups (HAVING) Filter grouped rows based on aggregate functions.  Grouping and Aggregation Filtering Groups (HAVING) Filter grouped rows based on aggregate functions.  Subqueries Subqueries (Nested Queries) Embed a query inside another query to retrieve data based on conditions in the subquery.  Subqueries Update existing records in to a table.  Data Modification Updating Data Update existing records in to a table.  Data Modification Deleting Data Update existing records in a table.  Deleter records from a table Deleter Filter FROM table WHER condition;  Table Management Creating Tables Create a new table with specified column and datatype, column; and datatypes.  Add, delete, or modify columns in ALTER TABLE table (column columns) and datatypes.	Joins	Inner Join	•	SELECT * FROM table1 INNER JOIN table2 ON table1.column = table2.column;
right table and matching records from the left table.  Full Outer Join  Full Outer Join  Retrieve all records when there is SELECT *RONM table1 FULL OUTER JOIN table2 ON table1.column = table2.column;  a match in either table.  **Counting Rows**  Count the number of rows in a table or group of rows.  Aggregations  Summing Values  Calculate the sum of a numeric column.  Aggregations  Averaging Values  Calculate the average of a numeric column.  Finding Minimum and Maximum  Find the smalles to largest value select TMIX(column) FROM table;  Grouping and Aggregation  Grouping and Aggregation  Grouping Data (GROUP BY)  Group rows that have the same values in specified columns and apply aggregate functions.  Grouping and Aggregation  Filtering Groups (HAVING)  Filter grouped rows based on aggregate functions.  Grouping and Aggregation  Filtering Groups (HAVING)  Filter grouped rows based on aggregate functions (used with GROUP BY).  Subqueries  Subqueries (Nested Queries)  Embed a query inside another query to retrieve data based on conditions in the subquery.  SELECT column, COUNT(*) it table GROUP BY Column;  Table Management  Deleting Data  Insert new records into a table.  INSERT INTO table (Column table):  Table Management  Creating Tables  Create a new table with specified CREATE TABLE table (Column datatype); ALTER TABLE table ADO Column;  Add, delete, or modify columns in ALTER TABLE table ADO Column;	Joins	Left Join	table and matching records from	table2 ON table1.column =
Aggregations Counting Rows Count the number of rows in a table 1.column = table2.column = table3.column = tabl	Joins	Right Join	right table and matching records	
Aggregations Summing Values Calculate the sum of a numeric column. Aggregations Averaging Values Calculate the average of a numeric column. Aggregations Averaging Values Calculate the average of a numeric column. Aggregations Finding Minimum and Maximum Find the smallest or largest value in a numeric column. Aggregation Aggregation Aggregation Grouping and Aggregation Grouping Data (GROUP BY) Group rows that have the same values in specified columns and apply aggregate functions. Grouping and Aggregation Filtering Groups (HAVING) Filter grouped rows based on aggregate functions (used with GROUP BY)  Subqueries Subqueries (Nested Queries) Embed a query inside another query to retrieve data based on conditions in the subquery.  Data Modification Inserting Data Insert new records into a table. Insert new records in a table value yalue2); Data Modification Deleting Data Delete records from a table Delete records from	Joins	Full Outer Join		
Aggregations Summing Values Calculate the sum of a numeric column. Aggregations Averaging Values Calculate the average of a numeric column. Aggregations Finding Minimum and Maximum Find the smallest or largest value FELECT MVG(column) FROM table; FELECT SMIN(column) FIND table; FELECT SMIN(column) FIND table (ROUP BY) FELECT SMIN(column) FIND table (ROUP BY) FELECT SMIN(column) FIND table (ROUP BY) FELECT SMIN(column) FELECT SMIN(column) FIND table FELECT SMIN(column) FELECT SMIN(column) FELECT SMIN(column) FELECT SMIN(column) FELECT SMIN(col	Aggregations	Counting Rows		SELECT COUNT(*) FROM table;
Aggregations Finding Minimum and Maximum Find the smallest or largest value in a numeric column.  Grouping and Aggregation Grouping Data (GROUP BY) Group rows that have the same values in specified columns and apply aggregate functions.  Grouping and Aggregation Filtering Groups (HAVING) Filter grouped rows based on aggregate functions (used with GROUP BY).  Subqueries Subqueries (Nested Queries) Finding Groups (HAVING) Filter grouped rows based on aggregate functions (used with GROUP BY).  Subqueries Subqueries (Nested Queries) Finding Groups (HAVING) Filter grouped rows based on aggregate functions (used with GROUP BY).  Subqueries Subqueries (Nested Queries) Finding Minimum and Maximum Find the smallest or largest value to a lable GROUP BY column, COUNT(*) to table GROUP BY column HA COUNT(*) > 1;  Subqueries  Subqueries (Nested Queries) Find the smallest or largest value table GROUP BY column, COUNT(*) table GROUP BY column HA COUNT(*) > 1;  Subqueries  Insert new records into a table. Insert new records in a table only only only only only only only only	Aggregations	Summing Values	Calculate the sum of a numeric	SELECT SUM(column) FROM table;
in a numeric column.  Grouping and Aggregation  Grouping Data (GROUP BY)  Group rows that have the same values in specified columns and apply aggregate functions.  Grouping and Aggregation  Filtering Groups (HAVING)  Filter grouped rows based on aggregate functions (used with GROUP BY).  Subqueries  Subqueries (Nested Queries)  Embed a query inside another query to retrieve data based on conditions in the subquery.  Data Modification  Inserting Data  Insert new records into a table.  Insert new records into a table.  Update existing records in a table.  Data Modification  Deleting Data  Deleter records from a table  Deleter FROM table SET column Fable and table.  Deleter records from a table on condition;  Table Management  Creating Tables  Create a new table with specified columns in ALTER TABLE table (column columns) and existing table.  Modifying Tables  Add, delete, or modify columns in ALTER TABLE table ADD column;	Aggregations	Averaging Values	<del>-</del>	SELECT AVG(column) FROM table;
values in specified columns and apply aggregate functions.  Filtering Groups (HAVING)  Filter grouped rows based on aggregate functions (used with GROUP BY column HAGROUP BY).  Subqueries  Subqueries (Nested Queries)  Embed a query inside another query to retrieve data based on conditions in the subquery.  Table Management  Filtering Groups (HAVING)  Filter grouped rows based on aggregate functions (used with table GROUP BY column HAGROUP BY).  Filter grouped rows based on aggregate functions (used with table GROUP BY column HAGROUP BY).  Subqueries  Subqueries (Nested Queries)  Embed a query inside another query to retrieve data based on column = (SELECT * FROM table WHER Column = (SELECT column Fable 2 WHERE condition);  Insert new records into a table.  Insert new records into a table.  Update existing records in a purposite value1, value2);  UpDate table SET column1 table.  Deleter records from a table pased on conditions.  Deleter records from a table pased on conditions.  Creating Tables  Create a new table with specified column datatype, column2 datatype.  Table Management  Modifying Tables  Add, delete, or modify columns in ALTER TABLE table ADD column;  ALTER TABLE table ADD column;	Aggregations	Finding Minimum and Maximum	<del>-</del>	
aggregate functions (used with GROUP BY).  Subqueries  Subqueries (Nested Queries)  Embed a query inside another query to retrieve data based on conditions in the subquery.  Insert new records into a table.  Insert new records into a table.  Insert name records into a table.  Update existing records in a update yalue1 walue1 where condition;  Data Modification  Updating Data  Update existing records in a table.  Update existing records in a update yalue1 where condition;  Data Modification  Deleting Data  Delete records from a table  based on conditions.  Create a new table with specified condition;  Table Management  Creating Tables  Create a new table with specified column datatype, column2 datatype  Add, delete, or modify columns in ALTER TABLE table ADD column existing table.  DROP column;	Grouping and Aggregation	Grouping Data (GROUP BY)	values in specified columns and	SELECT column, COUNT(*) FROM table GROUP BY column;
query to retrieve data based on column = (SELECT column F table2 WHERE condition);  Data Modification  Inserting Data  Insert new records into a table.  Insert Into table (column column2) VALUES (value1, value2);  Data Modification  Updating Data  Update existing records in a UPDATE table SET column1 table.  Delete records from a table  Delete records from a table  Delete FROM table WHERE condition;  Table Management  Creating Tables  Create a new table with specified columns and data types.  Add, delete, or modify columns in an existing table.  Add, delete, or modify columns in datatype;, ALTER TABLE table ADD column an existing table.	Grouping and Aggregation	Filtering Groups (HAVING)	aggregate functions (used with	SELECT column, COUNT(*) FROM table GROUP BY column HAVING COUNT(*) > 1;
Column2) VALUES (value1, value2);  Data Modification  Updating Data  Update existing records in a UPDATE table SET column1 table.  Deleting Data  Deleting Data  Delete records from a table based on conditions.  Table Management  Creating Tables  Create a new table with specified column datatypes.  Table Management  Modifying Tables  Add, delete, or modify columns in ALTER TABLE table ADD column an existing table.  DROP column;	Subqueries	Subqueries (Nested Queries)	query to retrieve data based on	SELECT * FROM table WHERE column = (SELECT column FROM table2 WHERE condition);
Data Modification  Updating Data  Update existing records in a table.  Data Modification  Deleting Data  Deleting Data  Delete records from a table based on conditions.  Creating Tables  Create a new table with specified columns and data types.  Table Management  Modifying Tables  Add, delete, or modify columns in ALTER TABLE table ADD column and existing table.  Modifying Tables based on conditions.  Create a new table with specified column and data types.  Add, delete, or modify columns in datatype, ALTER TABLE table ADD column existing table.  DROP column;	Data Modification	Inserting Data	Insert new records into a table.	
based on conditions. condition;  Table Management Creating Tables Create a new table with specified columns and data types. Create a new table with specified datatype, column2 datatype  Table Management Modifying Tables Add, delete, or modify columns in ALTER TABLE table ADD column existing table. datatype;, ALTER TABLE table DROP column;	Data Modification	Updating Data	· -	UPDATE table SET column1 =
Table Management Modifying Tables Add, delete, or modify columns in ALTER TABLE table ADD column an existing table. datatype;, ALTER TABLE table DROP column;	Data Modification	Deleting Data	Delete records from a table	DELETE FROM table WHERE
an existing table. datatype;, ALTER TABLE tab	Table Management	Creating Tables		CREATE TABLE table (column1 datatype, column2 datatype);
	Table Management	Modifying Tables	· · · · · · · · · · · · · · · · · · ·	datatype;, ALTER TABLE table
	Table Management	Dropping Tables	Remove a table and all its data.	•