

Category	Core Task	Description	Common Commands
Basic Data Retrieval	Selecting Data (Basic Queries)	Retrieve data from a database by selecting columns from one or more tables.	SELECT column1, column2 FROM table;
Basic Data Retrieval	Filtering Data (WHERE Clause)	Filter data based on specific conditions.	SELECT * FROM table WHERE condition;
Basic Data Retrieval	Sorting Data (ORDER BY)	Sort the result set in ascending or descending order.	SELECT * FROM table ORDER BY column ASC/DESC;
Basic Data Retrieval	Limiting Results	Limit the number of rows returned in a query.	SELECT * FROM table LIMIT number;
Joins	Inner Join	Retrieve records with matching values in both tables.	SELECT * FROM table1 INNER JOIN table2 ON table1.column = table2.column;
Joins	Left Join	Retrieve all records from the left table and matching records from the right table.	SELECT * FROM table1 LEFT JOIN table2 ON table1.column = table2.column;
Joins	Right Join	Retrieve all records from the right table and matching records from the left table.	SELECT * FROM table1 RIGHT JOIN table2 ON table1.column = table2.column;
Joins	Full Outer Join	Retrieve all records when there is a match in either table.	SELECT * FROM table1 FULL OUTER JOIN table2 ON table1.column = table2.column;
Aggregations	Counting Rows	Count the number of rows in a table or group of rows.	SELECT COUNT(*) FROM table;
Aggregations	Summing Values	Calculate the sum of a numeric column.	SELECT SUM(column) FROM table;
Aggregations	Averaging Values	Calculate the average of a numeric column.	SELECT AVG(column) FROM table;
Aggregations	Finding Minimum and Maximum	Find the smallest or largest value in a numeric column.	SELECT MIN(column), MAX(column) FROM table;
Grouping and Aggregation	Grouping Data (GROUP BY)	Group rows that have the same values in specified columns and apply aggregate functions.	SELECT column, COUNT(*) FROM table GROUP BY column;
Grouping and Aggregation	Filtering Groups (HAVING)	Filter grouped rows based on aggregate functions (used with GROUP BY).	SELECT column, COUNT(*) FROM table GROUP BY column HAVING COUNT(*) > 1;
Subqueries	Subqueries (Nested Queries)	Embed a query inside another query to retrieve data based on conditions in the subquery.	SELECT * FROM table WHERE column = (SELECT column FROM table2 WHERE condition);
Data Modification	Inserting Data	Insert new records into a table.	INSERT INTO table (column1, column2) VALUES (value1, value2);
Data Modification	Updating Data	Update existing records in a table.	UPDATE table SET column1 = value1 WHERE condition;
Data Modification	Deleting Data	Delete records from a table based on conditions.	DELETE FROM table WHERE condition;
Table Management	Creating Tables	Create a new table with specified columns and data types.	CREATE TABLE table (column1 datatype, column2 datatype);
Table Management	Modifying Tables	Add, delete, or modify columns in an existing table.	ALTER TABLE table ADD column datatype;; ALTER TABLE table DROP column;
Table Management	Dropping Tables	Remove a table and all its data.	DROP TABLE table;