Database Management

Create and Use Database
SQL CODE:
CREATE DATABASE database_name;
USE database_name;

Show Databases
SQL CODE:
SHOW DATABASES;

Drop Database
SQL CODE:
DROP DATABASE database_name;

Table Operations

Create Table
SQL CODE:
CREATE TABLE table_name (
    column1 datatype,
    column2 datatype,
    column3 datatype,
    ....
);

Show Tables
SQL CODE:
SHOW TABLES;

Describe Table
SQL CODE:
DESCRIBE table_name;

Drop Table
SQL CODE:
DROP TABLE table_name;

Alter Table
SQL CODE:
ALTER TABLE table_name ADD column_name datatype;
ALTER TABLE table_name DROP COLUMN column_name;
ALTER TABLE table_name MODIFY COLUMN column_name datatype;

Data Manipulation

Insert Data
SQL CODE:
INSERT INTO table_name (column1, column2, column3, ...)
VALUES (value1, value2, value3, ...);

Select Data
SQL CODE:
SELECT * FROM table_name;
SELECT column1, column2 FROM table_name;

Update Data
SQL CODE:
UPDATE table_name
SET column1 = value1, column2 = value2, ...
WHERE condition;

Delete Data
SQL CODE:
DELETE FROM table_name WHERE condition;

Data Querying

WHERE Clause
SQL CODE:
SELECT * FROM table_name WHERE condition;

AND, OR, NOT
SQL CODE:
SELECT * FROM table_name WHERE condition1 AND condition2;
SELECT * FROM table_name WHERE condition1 OR condition2;
SELECT * FROM table_name WHERE NOT condition;

ORDER BY
SQL CODE:
SELECT * FROM table_name ORDER BY column1 ASC|DESC;

LIMIT
SQL CODE:
SELECT * FROM table_name LIMIT number;

LIKE
SQL CODE:
SELECT * FROM table_name WHERE column LIKE pattern;

IN
SQL CODE:
SELECT * FROM table_name WHERE column IN (value1, value2, ...);

BETWEEN
SQL CODE:
SELECT * FROM table_name WHERE column BETWEEN value1 AND value2;

Aliases
SQL CODE:
SELECT column AS alias_name FROM table_name;

RMS

Joins

INNER JOIN
SQL CODE:
SELECT columns
FROM table1
INNER JOIN table2
ON table1.column = table2.column;

LEFT JOIN
SQL CODE:
SELECT columns
FROM table1
LEFT JOIN table2
ON table1.column = table2.column;

RIGHT JOIN
SQL CODE:
SELECT columns
FROM table1
RIGHT JOIN table2
ON table1.column = table2.column;

FULL JOIN (Not directly supported in MySQL, simulated with UNION)
SQL CODE:
SELECT columns
FROM table1
LEFT JOIN table2
ON table1.column = table2.column
UNION
SELECT columns
FROM table1
RIGHT JOIN table2
ON table1.column = table2.column;

Aggregate Functions

COUNT
SQL CODE:
SELECT COUNT(column) FROM table_name;

SUM
SQL CODE:
SELECT SUM(column) FROM table_name;

AVG
SQL CODE:
SELECT AVG(column) FROM table_name;

MAX
SQL CODE:
SELECT MAX(column) FROM table_name;

MIN
SQL CODE:
SELECT MIN(column) FROM table_name;

GROUP BY
SQL CODE:
SELECT column, aggregate_function(column)
FROM table_name
GROUP BY column;

HAVING
SQL CODE:
SELECT column, aggregate_function(column)
FROM table_name
GROUP BY column
HAVING condition;

Subqueries

Subquery in SELECT
SQL CODE:
SELECT column, (SELECT ...) AS alias
FROM table_name;

Subquery in WHERE
SQL CODE:
SELECT column
FROM table_name
WHERE column operator (SELECT ... FROM ...);

Indexes

Create Index
SQL CODE:
CREATE INDEX index_name ON table_name (column1, column2, ...);

Drop Index
SQL CODE:
DROP INDEX index_name ON table_name;

Extras

Views

Create View
SQL CODE:
CREATE VIEW view_name AS
SELECT column1, column2, ...
FROM table_name
WHERE condition;

Drop View
SQL CODE:
DROP VIEW view_name;

Transactions

Start Transaction
SQL CODE:
START TRANSACTION;

Commit
SQL CODE:
COMMIT;

Rollback
SQL CODE:
ROLLBACK;

User Management

Create User
SQL CODE:
CREATE USER 'username'@'host' IDENTIFIED BY 'password';

Grant Privileges
SQL CODE:
GRANT privilege ON database.table TO 'username'@'host';

Revoke Privileges
SQL CODE:
REVOKE privilege ON database.table FROM 'username'@'host';

Show Grants
SQL CODE:
SHOW GRANTS FOR 'username'@'host';

Drop User
SQL CODE:
DROP USER 'username'@'host';