**1. Introduction**

* **Purpose of the Report**: Overview of SQL Server and its significance in database management.
* **Scope**: Brief description of the SQL concepts covered.

**2. SQL Concepts**

**2.1 SQL SELECT**

* **Description**: Retrieving data from a database.
* **Syntax and Example**:

SELECT column1, column2 FROM table\_name;

**2.2 SQL WHERE**

* **Description**: Filtering records based on specified conditions.
* **Syntax and Example**

SELECT column1, column2 FROM table\_name WHERE condition;

**2.3 SQL ORDER BY**

* **Description**: Sorting result sets.
* **Syntax and Example**:

SELECT column1, column2 FROM table\_name ORDER BY column1 ASC|DESC;

**2.4 SQL AND, SQL OR, SQL NOT**

* **Description**: Logical operators for filtering records.
* **Syntax and Example**

SELECT column1 FROM table\_name WHERE condition1 AND condition2;

SELECT column1 FROM table\_name WHERE condition1 OR condition2;

SELECT column1 FROM table\_name WHERE NOT condition;

**2.5 SQL INSERT INTO**

* **Description**: Adding new records to a table.
* **Syntax and Example**

INSERT INTO table\_name (column1, column2) VALUES (value1, value2);

**2.6 SQL NULL VALUES**

* **Description**: Handling NULL values in SQL.
* **Syntax and Example**:

SELECT column1 FROM table\_name WHERE column1 IS NULL;

**2.7 SQL UPDATE**

* **Description**: Modifying existing records.
* **Syntax and Example**

UPDATE table\_name SET column1 = value1 WHERE condition;

**2.8 SQL DELETE**

* **Description**: Deleting records from a table.
* **Syntax and Example**:

DELETE FROM table\_name WHERE condition;

**2.9 SQL JOINS**

* **Description**: Combining rows from two or more tables.
* **Types and Examples**:
  + **INNER JOIN**

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

* + **LEFT JOIN**

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

* + **RIGHT JOIN**

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

* + **FULL JOIN**

SELECT columns FROM table1 FULL JOIN table2 ON table1.column = table2.column;

**2.10 SQL CREATE DB**

* **Description: Creating a new database.**
* **Syntax and Example**

CREATE DATABASE database\_name;

**2.11 SQL DROP DB**

* **Description**: Deleting a database.
* **Syntax and Example**

DROP DATABASE database\_name;

**2.12 SQL CREATE TABLE**

* **Description**: Creating a new table.
* **Syntax and Example**

CREATE TABLE table\_name (column1 datatype, column2 datatype);

**2.13 SQL DROP TABLE**

* **Description**: Deleting a table.
* **Syntax and Example**

DROP TABLE table\_name;

**2.14 SQL CONSTRAINTS**

* **Description**: Rules to enforce data integrity.
* **Types and Examples**:
  + **PRIMARY KEY**

CREATE TABLE table\_name (column1 datatype PRIMARY KEY);

* + **FOREIGN KEY**

CREATE TABLE table\_name (column1 datatype, FOREIGN KEY (column1) REFERENCES other\_table(column1));

* + **UNIQUE**

CREATE TABLE table\_name (column1 datatype UNIQUE);

* + **NOT NULL**

CREATE TABLE table\_name (column1 datatype NOT NULL);

**2.15 SQL CURSORS**

* **Description**: Pointer to traverse rows in a result set.
* **Syntax and Example**:

DECLARE cursor\_name CURSOR FOR SELECT column1 FROM table\_name;

**2.16 SQL STORED PROCEDURES**

* **Description**: Precompiled SQL statements for repetitive tasks.
* **Syntax and Example**:

CREATE PROCEDURE procedure\_name AS

BEGIN

SQL statements;

END;