**Structured Query Language**

**Cheat Sheet**

**SQL Basics**

Structured query language (SQL) is a domain specific language used for programming and querying a database.

**SQL DataTypes**

- **Exact Numerics:**
  - INTEGER
  - SMALLINT
  - BIGINT
  - NUMERIC
  - DECIMAL
- **Approximate Numerics:**
  - REAL
  - DOUBLE PRECISION
  - FLOAT
  - DECIMAL
- **Binary Strings:**
  - BINARY
  - BINARY VARYING
  - BINARY LARGE OBJECT
- **Boolean Intervals:**
  - INTERVAL DAY
  - INTERVAL YEAR

**Stored Procedure**

- **Character Strings:**
  - CHARACTER
  - CHARACTER VARYING (VARCHAR)
  - CHARACTER LARGE OBJECT
  - NATIONAL CHARACTER
  - NATIONAL CHARACTER VARYING
  - NATIONAL CHARACTER LARGE OBJECT
- **Date Times:**
  - DATE
  - TIME
  - TIME WITH TIMEZONE
  - TIMESTAMP WITH TIMEZONE
- **Collection Types:**
  - ARRAY
  - MULTISET
- **Other Types:**
  - ROW
  - XML

**Using SQL Constraint**

- **Primary Key:** Set c1 and c2 as primary key
  - Syntax: `CREATE TABLE t1 (c1 INT, c2 INT, c3 VARCHAR, PRIMARY KEY (c1, c2));`
- **Foreign Key:** Set c2 column as a foreign key
  - Syntax: `CREATE TABLE t1 (c1 INT PRIMARY KEY, c2 INT, FOREIGN KEY (c2) REFERENCES t2(c2));`

**View**

- **View:** It is a virtual table which is a result of a query. It is often used as a mechanism for security letting users access the data through views.
  - Syntax: `CREATE VIEW view1 AS SELECT c1, c2 FROM t1 WHERE condition;`

**Function**

- **Aggregate Functions:** It is a function where the values of multiple rows are combined to form a single value
  - Syntax: `SELECT c1, c2 FROM table1
    UNION
    SELECT c3, c4 FROM table2
  `