**Constrainsts**

There are several types of constraints in SQL, each with its own purpose and characteristics. Here's a list of the most common ones: Constraints is a Condition

1. **PRIMARY KEY:**

**CREATE TABLE** orders (

id **INT PRIMARY KEY,**

Customer\_id **INT NOT NULL,**

Order\_date **DATE NOT NULL,**

Total\_amount **DECIMAL(10, 2)** **CHECK** (total\_amount > 0),

Shipping\_address **VARCHAR(255) UNIQUE,**

**FOREIGN KEY** (Customer\_id) **REFERENCES** customers (Customer\_id)

);

1. **UNIQUE:**
2. **NOT NULL:**
3. **CHECK:**
4. **FOREIGN KEY:**
5. **DEFAULT:**
6. **UNIQUE**
7. **EXCLUDE:**

**How many way use Constraints :**

|  |  |
| --- | --- |
| **CREATE** **TABLE** student  (  Roll **CHAR(4) PRIMARY KEY,**  Name **VARCHAR(50) NOT NULL,**  Email **VARCHAR(60) UNIQUE,**  Address **VARCHAR(255),**  Age INT **CHECK**(Age>10),  Order\_date **DATE** **DEFAULT** **CURRENT**\_**DATE,**  Phone **CHAR(**11**)** **CHECK** (Phone **LIKE** ‘017%’)  ); | **CREATE** **TABLE** student  (  Roll **CHAR(4),**  Name **VARCHAR(50) NOT NULL,**  Email **VARCHAR(60),**  Address **VARCHAR(255),**  Age **INT,**  **PRIMARY** **KEY**(Roll),  **UNIQUE**(Email),  **CHECK**(Age>10)  ); |

|  |  |
| --- | --- |
| **CREATE** **TABLE** student  (  Roll **CHAR(4),**  Name **VARCHAR(50) NOT NULL,**  Email **VARCHAR(60),**  Address **VARCHAR**(**255**),  Age **INT**,  **Constraint** **PRIMARY** **KEY**(Roll),  **Constraint** **UNIQUE**(Email),  **Constraint** **CHECK**(Age>10)  ); | **CREATE** **TABLE** student  (  Roll **CHAR(4),**  Name **VARCHAR(50) NOT NULL,**  Email **VARCHAR(60),**  Address **VARCHAR(255),**  Age **INT,**  **Constraint** pk\_rule **PRIMARY** **KEY**(Roll),  **Constraint** unique\_rule **UNIQUE**(Email),  **Constraint** checked\_rule **CHECK**(Age>10)  ); |

**Composite Key make:**

|  |
| --- |
| **CREATE**  **TABLE** course  (  CouseName **VARCHAR(10),**  University **VARCHAR(10),**  Credit **INT,**  **PRIMARY KEY**(CouseName,University)  ); |

Foreign Key and Primary key সরাসরি Declare করা ->

|  |  |
| --- | --- |
| **CREATE** **TABLE** Libary  (  BookName **VARCHAR(50) PRIMARY KEY ,**  WhoHired\_Roll **CHAR(4),**  **FOREIGN** **KEY**(WhoHired\_Roll) **REFERENCES** Student(Roll)  );  -- এখানে Library Table এর whoHired\_Roll হচ্ছে Foreign Key and Student Table এর Roll হচ্ছে Primary Key | **CREATE**  **TABLE** Libary  (  BookName **VARCHAR(50) PRIMARY KEY ,**  WhoHired\_Roll **CHAR(4),**  **Constraint** buy\_book\_rule **FOREIGN KEY**(WhoHired\_Roll) **REFERENCES** Studen(Roll)  ); |