**Practical No 5: Apply Constraints on Relation.**

1. **What is Constraints?**

A constraint is a rule that is used for optimization purposes.

1. **The following constraints are commonly used in SQL:**
2. **Foreign key constraint**

* The foreign key constraint is used to prevent actions that would destroy links between tables.
* A foreign key is a field (or collection of fields) in one table, which refers to the primary key in another table.
* The table with the foreign key is called the child table, and the table with the primary key is called the referenced or parent table.

**Syntax:**

Create parent table with prime attribute.

Create child table with following syntax.

Create table table\_name (attribute\_name datat\_type foreign key references parent\_table(prime\_attribute),… );

1. **Unique key constraint**

* The unique constraint ensures that all values in a column are different.
* Both the unique and primary key constraints provide a guarantee for uniqueness for a column or set of columns.
* A primary key constraint automatically has a unique constraint.
* However, you can have many unique constraints per table, but only one primary key constraint per table.

1. **Query and Output:**
2. **Foreign key constraint:**

Create table author(ID number(2)primary key, name character(20), number\_of\_books number(20));

Insert into author values (17, 'Anu', 2);

Insert into author values (20, 'Adu', 5);

select \* from author;

Create table book(B\_ID number(2), ID number(2) references author(ID), B\_name character(20));

Insert into book values (24, 17, 'Love');

Insert into book values (55, 20, 'Ramayana');

select \* from book;

1. **Unique key constraint:**

create table info (Enroll\_No number(10)primary key, Roll\_No number(2), Name character(10));

alter table info add unique(Roll\_No);

desc info;