-- pk, fk, not null, unique,

-- check (Domain Integrity) Rn 1-10 Dept HR Accts Sales

-- default (If we do not provide value to a col, it shud take def value

-- unique , it will allow one null also

-- How we can add constraints

-- 2 points

--1. while creating table

create table stu (id int primary key, name varchar(20) not null,

batch varchar(10) check(batch IN ('B001','B002','B003')),

marks int not null check (marks between 0 and 100) default 0)

-- 2. after table is created

use practicedb

create table stu (id int , name varchar(20) ,

batch varchar(10) ,

marks int )

alter table stu alter column id int not null

alter table stu add constraint pk primary key(id)

alter table stu alter column name varchar(20) not null

alter table stu add constraint pk primary key(id)

alter table stu add constraint ckbatch check(batch In ('B001','B002')),

constraint ckmarks check(marks between 0 and 100)

insert into stu(id, name, batch, marks) values

(1,'Ajay','B001',90),

(2,'Deepak','B002',50),

(3,'Sagar','B001',40)

-- Suppose we have table with 4 columns and 10 records are already inserted

-- How do we add a column

alter table stu add address varchar(20)

-- al prev records will have null by default in address column

Select \* from stu

-- How to change address in prev records

-- update

update stu set address='Delhi' where id=1

update stu set address='New Delhi' where id IN (2,3)

alter table stu add score int default 100 with values

select \* from stu

-- Remove a column

alter table stu drop column address

-- Copy records from one tableto other table

-- It will create a table also

select \* into newtable from stu

select \* from newtable

select id, name into newtable1 from stu where id>2

-- How do we renmove table

drop table newtable

-- How to delete all records of table

-- 1. delete stu

-- 2.truncate table

delete stu

truncate table stu

-- delete is DML Command , Truncate table is DDL command

-- With delete command, we can give condition by using where

-- With Truncate table, we can not give condition

-- Truncate table is used to delete all the records in a single go

-- How do we rename a column

sp\_rename 'TableName.COlumnName' ,'NewcolunName', 'column'

Foreign Key

--drop table result

create table student (rn int primary key, name varchar(20) not null)

insert into student values

(1,'Ajay'),

(2,'Jay'),

(3,'Vijay'),

(4,'Gagan'),

(5,'Sagar'),

(6,'Deepak')

select \* from student

create table Result(rn int references student(rn), marks int)

insert into Result values(1,90)

insert into Result values(3,90)

select \* from student

select \* from result

-- We have 2 tables, Student is Main / Parent table

-- Result table is dependent on Studnet table

delete student where rn=1

We have 2 options while making table

**On delete set null**, which means if you delete record from parent table, it will put NULL in corresponding record in child table

**On delete cascade**, which means if you delete record from parent table, it will delete corresponding record from child table also

create table Result(rn int references student(rn) on delete set null , marks int)

create table Result(rn int references student(rn) on delete cascade , marks int)

-- Joins

--Whenever you want to bring data from more than 1 table , we have to use Joins

-- Inner Join (gives you matching records)

-- Outer Join (gives you matching as well as non matching records)

-- 1. Left Outer Join

-- 2. Right Outer Join

-- 3. Full Outer Join

-- Cross Join (gives you product of two tables, there is no need to have common column

--)

-- Self Join (table is joined to itself)

select a.rn , a.name , b.marks

from student a join result b

on a.rn = b.rn

select a.rn , a.name , b.marks

from student a join result b

on a.rn = b.rn

select \* from student

select a.rn , a.name , b.marks

from student a left outer join result b

on a.rn = b.rn

select a.rn , a.name , b.marks

from student a right outer join result b

on a.rn = b.rn

select a.rn , a.name , b.marks

from student a full outer join result b

on a.rn = b.rn

select a.\* , b.\* from student a cross join result b

-- Sub Query

--(OuterQuery) Operator (InnerQuery)

-- OPerator cud be = , > , < <> when the inner query returns a single value

-- OPerator cud be In , > All, < ALL . >Any <Any when the inner

--query returns Multiple values

-- Give me name of student who has got max marks

select a.name from student a join result b on

a.rn=b.rn where b.marks = (select max(marks) from result)

select a.name from student a join result b on

a.rn=b.rn where b.marks > ALL (select marks from result where rn in (2,5))

select \* from result

insert into result values(2,89),(4,45),(5,59)