use userdb

select \* from employee

-- functions

-- are used to perform some specific tasks

-- functions cud be system defined or user defined

-- system functions

-- functions which are already there

-- categories

-- string functions -- numeric functions - datetime functions

-- general functions

-- string functions

select len('Ajay')

select upper('Ajay') , lower('Ajauy')

select charindex('a','ajay')

select charindex('a','ajay', 2)

select charindex('e','ajay')

select concat('ajay' ,' ' , 'sood')

select len(' ajay ')

select len(trim(' ajay '))

select trim(' ajay ')

select Getdate()

select month(getdate())

select year(getdate()), day(getdate())

select datename(month,getdate()), datename(day,getdate())

select dateadd(day,10,getdate())

select dateadd(year,10,getdate())

select datediff(month, '12/12/2022', getdate())

select datediff(year, '12/12/2010', getdate())

select \* from employee

select id, upper(name) from employee

select name , len(name) as "No. of characters" from employee

select getdate()

select convert(varchar, getdate())

select convert(varchar, getdate(),1)

select convert(varchar, getdate(),2)

-- modify records

-- update

select \* From employee

update employee set salary = salary + 2000

update employee set salary = salary + 1000

where name like 'A%'

-- delete records

delete employee where id =3

-- add one column in table

alter table employee add dob datetime

update Employee set dob= '12/12/2000' where id in(1,3,5)

update Employee set dob= '10/09/2002' where id in(4,6)

update Employee set dob= '11/07/2003' where id =7

-- display yrecords where dob is not given

select \* from employee where dob is not null

select \* from employee where dob is null

-- modiyfy name coulmn width

alter table employee alter column name varchar(30)

select \* from employee

-- copy records from thos table to newemp table

select \* into newemp from employee

-- copy only structure of one table to newemp table

select \* into newemp1 from employee where 1=2

select \* from newemp1

-- how do we rename a table

sp\_rename 'newemp' , 'temp1'

-- rename a columns

sp\_rename 'newemp1.id', 'employeeid' , 'column'

-- remove column id from temp1

alter table temp1 drop column id

-- functions

-- system functions

-- depeneding upon how many inputs we give and how many

-- values we get, scalar , group

-- scalar functions are the functions whcih takes single value &

-- gives single result

-- len , lower , upper

-- group functions / aggregate functions which takes multiple values

-- and gives single result

-- max min sum average count

select COUNT(\*) from employee

select sum(salary) , min (salary) , max(salary) , avg(salary)

from employee

select sum(salary) As "Total Salary" , min (salary) As "Min Salary" ,

max(salary) as "Max Salary" , avg(salary) As "Average Salary"

from employee

select \* from employee

--- constraints

-- are restrictions that we put on the column values

-- what values should be allowed in the columns

--1. primary key

--2. unique

--3. not null

--4. check

--5. default

--6. foreign key

create table emp (

id int primary key,

name varchar(20) not null,

address varchar(50) not null unique,

salary int check(salary between 20000 and 40000),

dept varchar(20) check (dept in ('HR','Sales','IT')),

doj datetime not null check (doj >= getdate()),

isCertified bit default 1)

insert into emp values(1,'Ajay', 'Delhi', 22000, 'Sales','12/12/2022',1)

insert into emp values(2,'Vijay', 'A 90 ,N Delhi', 22000, 'Sales','12/12/2022',1)

insert into emp values(3,'Jay', 'AD 90 Delhi', 22000, 'Sales','12/12/2022',1)

insert into emp values(4,'Deepak', 'ZZ/9, Delhi', 22000, 'Sales','12/12/2022',1)

insert into emp values(5,'Rishi', 'AP-09, Delhi', 22000, 'Sales','12/12/2022',1)

insert into emp values(6,'Pranit', 'A908, Delhi', 22000, 'Sales','12/12/2022',1)

create table batch (id int primary key,

batchname varchar(20), course varchar(20))

insert into batch values(101, 'B001', 'C#'),

(102, 'B002', 'Java'),

(103, 'B003', 'VB'),

(104, 'B004', 'Database')

create table student(rn int primary key, name varchar(20),

bid int references batch(id))

insert into student values(1,'Ajay', 101)

insert into student values(2,'Deepak', null)

insert into student values(3,'Deepak', 103)

select \* from batch

select \* from student

-- Joins are used to bring data from more than 1 table

-- 1 Inner Join ( We need a common column) > Gives you matching records

-- 2 Outer Join ( We need a common column) > Gives you matching as well as non matching records

-- 1 Left outer join

-- 2 Right outer join

-- 3 Full outer join

-- 3 Cross Join ( We do not need a common column) It gives you product of two tables

-- 4 Self Join ( A table joins to itself)

-- Give me student name & their batch details

-- inner join

select name , batchname from student join batch

on bid=id

select student.name , batch.batchname from student join batch

on student.bid=batch.id

select a.name , b.batchname from student a join batch b

on a.bid=b.id

-- Give me all the batches & students enrolled

select a.name , b.batchname from student a right outer join batch b

on a.bid=b.id

-- Give me all the studnets & batch

select a.name , b.batchname from student a left outer join batch b

on a.bid=b.id

select a.name , b.batchname from student a full outer join batch b

on a.bid=b.id

-- All the students shoud be enrolled in all batches

select \* from student cross join batch

-- Self join

select \* from emp

alter table emp add managerid int

update emp set managerid=3 where id in (1,4,5)

update emp set managerid=6 where id in (2,3)

update emp set managerid=1 where id in (6)

-- Display employee name & their manager name

select a.name as "Employee Name" , b.name as "Manager Name" from emp a join emp b

on a.managerid = b.id