Program no:1

Create table Employee with following fields.

- Empno
- Job
- Salary
- Ename
- Deptno
- Experience

Perform following queries

1. Add a column Experience to Employee table.
2. Modify column width of Job field.
3. Drop column Experience from Employee.

Insert values into Employee and perform following queries.

1. List records in Employee table order by Salary in ascending order.
2. Display only those employees whose Deptno is 29.
3. Display Deptno from Employee avoiding duplicates.
4. Display all employee whose Job title starts with M.
5. Find all employees who work in same job as Arjun.
6. Find total number of employees in Employee table.
7. Find minimum and maximum Salary of employees.

Success

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),Salary int(30),Deptno int(30));
2  describe Employee;
3
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Field    Type        Null    Key     Default Extra
Emp_no   int         YES             NULL
Emp_name            varchar(20)     YES             NULL
Job      varchar(30)        YES             NULL
Salary   int         YES             NULL
Deptno   int         YES             NULL
```

Success

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),Salary int(30),Deptno int(30));
2  alter table Employee add Experience int;
3  describe Employee;
4
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Field       Type        Null    Key     Default Extra
Emp_no      int         YES             NULL
Emp_name            varchar(20)         YES             NULL
Job         varchar(30)         YES             NULL
Salary      int         YES             NULL
Deptno      int         YES             NULL
Experience          int         YES             NULL
```

Success

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),Salary int(30),Deptno int(30));
2  alter table Employee add Experience int;
3  describe Employee;
4
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Field       Type        Null    Key     Default Extra
Emp_no      int         YES             NULL
Emp_name            varchar(20)         YES             NULL
Job         varchar(30)         YES             NULL
Salary      int         YES             NULL
Deptno      int         YES             NULL
Experience          int         YES             NULL
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),Salary int(30),Deptno int(30));
alter table Employee add Experience int;
alter table Employee modify Job varchar(60);
alter table Employee drop Experience;
describe Employee;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Field   Type     Null    Key     Default Extra
Emp_no  int      YES             NULL
Emp_name         varchar(20)     YES             NULL
Job     varchar(60)      YES             NULL
Salary  int      YES             NULL
Deptno  int      YES             NULL
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
select * from Employee;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_no  Emp_name        Job     Salary  Deptno
1       Anu     Teacher 25000   29
2       Anoop   Manager 30000   28
3       Paul    Mechanic        20000   27
4       Arjun   Teacher 25500   29
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
select * from Employee order by Salary asc;
```

Run (Ctrl-Enter)

Output Input Comments 0

Emp_no	Emp_name	Job	Salary	Deptno
3	Paul	Mechanic	20000	27
1	Anu	Teacher	25000	29
4	Arjun	Teacher	25500	29
2	Anoop	Manager	30000	28

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
select * from Employee where Deptno=29;
```

Run (Ctrl-Enter)

Output Input Comments 0

Emp_no	Emp_name	Job	Salary	Deptno
1	Anu	Teacher	25000	29
4	Arjun	Teacher	25500	29

Success

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
2  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
3  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
4  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
5  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
6  select distinct Deptno from Employee;
7
8
9
10
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Deptno
29
28
27
```

Success

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
2  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
3  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
4  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
5  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
6  select * from Employee where job like 'M%';
7
8
9
10
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_no  Emp_name        Job     Salary  Deptno
2       Anoop   Manager 30000   28
3       Paul    Mechanic        20000   27
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
select Emp_name from Employee where Job=(select Job from Employee where Emp_name='Arjun');
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_name
Anu
Arjun
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
select count(Emp_no) from Employee;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
count(Emp_no)
4
```

Success Tweet Share 0

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(60),Salary int(30),Deptno int(30));
2  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(1,"Anu","Teacher",25000,29);
3  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(2,"Anoop","Manager",30000,28);
4  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(3,"Paul","Mechanic",20000,27);
5  insert into Employee(Emp_no,Emp_name,Job,Salary,Deptno)values(4,"Arjun","Teacher",25500,29);
6  select Salary from Employee where Salary=(select min(Salary)from Employee)union select Salary from Employee where Salary=(select max(Salary)from Employee);
7
8
9
10
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Salary
20000
30000
```

Program no:2

Create table employee with fields empno, ename, job, dept. Insert 5 records.

1. Display the content of the employee table in ascending of empno.
2. Display the contents of employee table.
3. Display the half of the bp of all employees.
4. List the name of employee whose name starts with character ‘B’.
5. List the name of employee whose second character of name are either ‘I’ or ‘U’.
6. Retrieve all information whose salary between 10,000 and 30,000.
7. Display the unique job from employee table.
8. List the name and salary of employee who earn salary between 5000 and 12,000 and are in dept 20 or 50. Table the column 26 employee name, month, salary respectively.
9. Display the name of employee whose salary is not between 5000 and 10,000.
10. Display the name and hjob of all employee whose job is ‘Clerk’, ’Manager’, ‘Analyst’.
11. Display the employee in descending order of their salary.

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
2  describe Employee;
3
4
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Field    Type        Null    Key     Default Extra
Emp_no   int         YES             NULL
Emp_name            varchar(20)     YES             NULL
Job      varchar(30)        YES             NULL
bp       int         YES             NULL
dept     varchar(30)        YES             NULL
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Arun","Clerk",50000,"KSEB");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,"Production");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,"ENT");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,"Electrical");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,"Audit");
select * from Employee;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_no  Emp_name        Job     bp      dept
1       Arun    Clerk   50000   KSEB
2       Manu    Manager 50000   Production
3       Anu     Nurse   30000   ENT
4       Sree    Electrician     20000   Electrical
5       Balu    Analyst 10000   Audit
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Arun","Clerk",50000,"KSEB");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,"Production");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,"ENT");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,"Electrical");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,"Audit");
select * from Employee order by Emp_no asc;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_no  Emp_name        Job     bp      dept
1       Arun    Clerk   50000   KSEB
2       Manu    Manager 50000   Production
3       Anu     Nurse   30000   ENT
4       Sree    Electrician     20000   Electrical
5       Balu    Analyst 10000   Audit
```

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
2  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Arun","Clerk",50000,"KSEB");
3  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,"Production");
4  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,"ENT");
5  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,"Electrical");
6  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,"Audit");
7  select bp/2 from Employee;
8
```

Run (Ctrl-Enter)

Output Input Comments 0

```
bp/2
25000.0000
25000.0000
15000.0000
10000.0000
5000.0000
```

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
2  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Arun","Clerk",50000,"KSEB");
3  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,"Production");
4  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,"ENT");
5  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,"Electrical");
6  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,"Audit");
7  select * from Employee where Emp_name like 'B%';
8
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_no  Emp_name        Job     bp      dept
5       Balu    Analyst 10000   Audit
```

Success

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
2  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Aisha","Clerk",50000,"KSEB");
3  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,"Production");
4  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,"ENT");
5  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,"Electrical");
6  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,"Audit");
7  select Emp_name from Employee where (Emp_name like '_i%' or Emp_name like '_u%');
8
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_name
Aisha
```

Success

```
1  create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
2  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Aisha","Clerk",50000,"KSEB");
3  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,"Production");
4  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,"ENT");
5  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,"Electrical");
6  insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,"Audit");
7  select * from Employee where bp between 10000 and 30000;
8
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_no  Emp_name        Job     bp      dept
3       Anu     Nurse   30000   ENT
4       Sree    Electrician     20000   Electrical
5       Balu    Analyst 10000   Audit
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Aisha","Clerk",50000,"KSEB");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,"Production");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,"ENT");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,"Electrical");
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,"Audit");
select distinct job from Employee;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
job
Clerk
Manager
Nurse
Electrician
Analyst
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Aisha","Clerk",50000,45);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,30);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,40);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,50);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,20);
select Emp_name,bp from Employee where bp not between 5000 and 12000 and dept in (20,50);
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Emp_name        bp
Sree    20000
```

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Aisha","Clerk",50000,45);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,30);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,40);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,50);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,20);
select * from Employee order by bp desc;
```

Run (Ctrl-Enter)

Output Input Comments 0

Emp_no	Emp_name	Job	bp	dept
1	Aisha	Clerk	50000	45
2	Manu	Manager	50000	30
3	Anu	Nurse	30000	40
4	Sree	Electrician	20000	50
5	Balu	Analyst	10000	20

Success

```
create table Employee(Emp_no int,Emp_name varchar(20),Job varchar(30),bp int,dept varchar(30));
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(1,"Aisha","Clerk",50000,45);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(2,"Manu","Manager",50000,30);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(3,"Anu","Nurse",30000,40);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(4,"Sree","Electrician",20000,50);
insert into Employee(Emp_no,Emp_name,Job,bp,dept)values(5,"Balu","Analyst",10000,20);
select Emp_name,job from Employee where job in('Clerk','Manager','Analyst');
```

Run (Ctrl-Enter)

Output Input Comments 0

Emp_name	job
Aisha	Clerk
Manu	Manager
Balu	Analyst

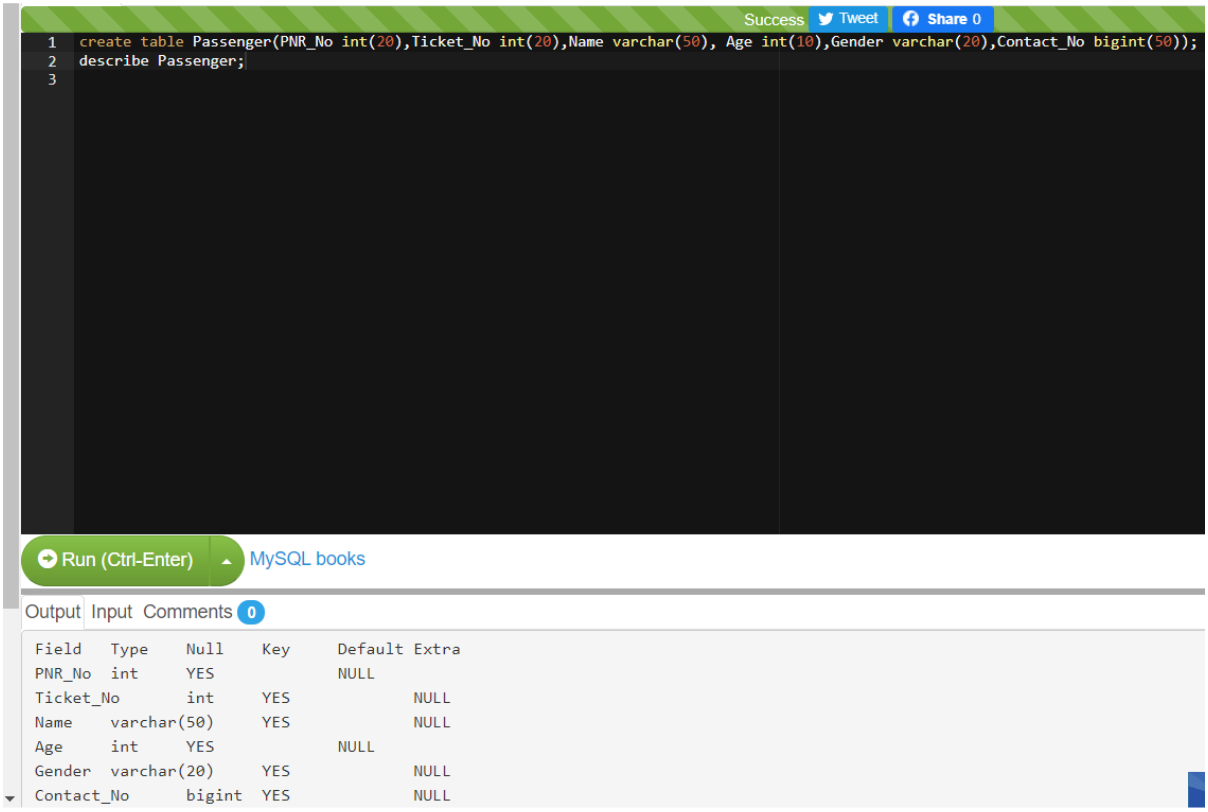
Program no:3

Create table Passenger with following fields.

- PNR No
- Ticket No
- Name
- Age
- Gender
- Contact No

Insert values into table and perform following queries.

1. Display unique PNR_no of passengers.
2. Display name of all male passengers.
3. Display name of passengers whose age between 29 and 45.
4. Display name of passengers whose name begin with r.
5. Display sorted list of passengers by name.
6. Find total no of passengers in table.
7. Find minimum and maximum age of passengers.
8. Find sum and average age of passengers.
9. Find ticket number of passengers whose name starts with r and ends with n.



Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select * from Passenger;
7
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

PNR_No	Ticket_No	Name	Age	Gender	Contact_No
1	101	Arjun	25	Male	9876543210
2	102	Ryan	29	Male	9876543211
3	103	Mary	31	Female	9876543212
3	104	Sandra	21	Female	9876542463

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select distinct PNR_No from Passenger;
7
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

PNR_No
1
2
3

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select Name from Passenger where Gender='Male';
7
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
Name
Arjun
Ryan
```

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select Name from Passenger where Age between 29 and 45;
7
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
Name
Ryan
Mary
```

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select Name from Passenger where Name like 'R%';
7
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
Name
Ryan
```

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select * from Passenger order by Name asc;
7
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

PNR_No	Ticket_No	Name	Age	Gender	Contact_No
1	101	Arjun	25	Male	9876543210
3	103	Mary	31	Female	9876543212
2	102	Ryan	29	Male	9876543211
3	104	Sandra	21	Female	9876542463

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select count(PNR_No)from Passenger;
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
count(PNR_No)
4
```

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select Age from Passenger where Age=(select min(Age)from Passenger)union select Age from Passenger where Age=(select max(Age)from Passenger);
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
Age
21
31
```

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select sum(Age)as Sum_Age,avg(Age)as Avg_Age from Passenger;
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
Sum_Age Avg_Age
106     26.5000
```

Success Tweet Share 0

```
1  create table Passenger(PNR_No int(20),Ticket_No int(20),Name varchar(50), Age int(10),Gender varchar(20),Contact_No bigint(50));
2  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(001,101,'Arjun',25,'Male',9876543210);
3  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(002,102,'Ryan',29,'Male',9876543211);
4  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,103,'Mary',31,'Female',9876543212);
5  insert into Passenger(PNR_No,Ticket_No,Name,Age,Gender,Contact_No)values(003,104,'Sandra',21,'Female',9876542463);
6  select Ticket_No from Passenger where Name like 'R%n';
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
Ticket_No
102
```

Program no: 4

Inner Join

Create table Student with attributes sid, sname, course, sem.

Create another table book with attributes bid, bname, author.

Create table issue bid, sid, issuedate.

1. Display the name of the books issued on 31-Oct-2015.
2. Find the details of the student who took the book 'JAVA'.
3. Find out the name of 4th sen student who took atleast one book.
4. Display the name of the book issued to 'Reepa'.
5. Display the name of the student who took the book written by "Peter".

```
1  create table student(sid int primary key,sname varchar(50),course varchar(50),sem int);
2  insert into student(sid,sname,course,sem)values(1,"Sree","Electrical",4);
3  insert into student(sid,sname,course,sem)values(2,"Anee","MBA",3);
4  insert into student(sid,sname,course,sem)values(3,"Anila","MCA",2);
5  insert into student(sid,sname,course,sem)values(4,"Aami","Btech",4);
6  insert into student(sid,sname,course,sem)values(5,"Reepa","MCA",1);
7  insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);
8  select * from student;
9
10
11
12
```

Run (Ctrl-Enter)

Output Input Comments 0

```
sid     sname   course  sem
1       Sree    Electrical      4
2       Anee    MBA     3
3       Anila   MCA     2
4       Aami    Btech   4
5       Reepa   MCA     1
6       Anu     Btec    2
```

Success

```
create table book(bid int primary key,bname varchar(50),author varchar(30));
insert into book(bid,bname,author)values(100,"Maths","Peter");
insert into book(bid,bname,author)values(101,"Business","John");
insert into book(bid,bname,author)values(102,"Data Structure","James");
insert into book(bid,bname,author)values(103,"C","George T S");
insert into book(bid,bname,author)values(104,"CPP","Dennis");
insert into book(bid,bname,author)values(105,"Java","David");
select * from book;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
bid     bname   author
100     Maths   Peter
101     Business        John
102     Data Structure  James
103     C       George T S
104     CPP     Dennis
105     Java    David
```

Success

```
create table issue(bid int references book(bid),sid int references student(sid),issue_date date);
insert into issue(bid,sid,issue_date)values(100,1,"20-02-11");
insert into issue(bid,sid,issue_date)values(102,3,"19-04-17");
insert into issue(bid,sid,issue_date)values(103,2,"18-05-19");
insert into issue(bid,sid,issue_date)values(105,5,"17-07-12");
insert into issue(bid,sid,issue_date)values(104,4,"14-10-10");
insert into issue(bid,sid,issue_date)values(107,6,"15-02-11");
insert into issue(bid,sid,issue_date)values(108,7,"16-03-19");
select * from issue;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
bid     sid     issue_date
100     1       2020-02-11
102     3       2019-04-17
103     2       2018-05-19
105     5       2017-07-12
104     4       2014-10-10
107     6       2015-02-11
```

Success

```
insert into student(sid,sname,course,sem)values(4,"Aami","Btech",4);
insert into student(sid,sname,course,sem)values(5,"Reepa","MCA",1);
insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);

create table book(bid int primary key,bname varchar(50),author varchar(30));
insert into book(bid,bname,author)values(100,"Maths","Peter");
insert into book(bid,bname,author)values(101,"Business","John");
insert into book(bid,bname,author)values(102,"Data Structure","James");
insert into book(bid,bname,author)values(103,"C","George T S");
insert into book(bid,bname,author)values(104,"CPP","Dennis");
insert into book(bid,bname,author)values(105,"Java","David");

create table issue(bid int references book(bid),sid int references student(sid),issue_date date);
insert into issue(bid,sid,issue_date)values(100,1,"20-02-11");
insert into issue(bid,sid,issue_date)values(102,3,"19-04-17");
insert into issue(bid,sid,issue_date)values(103,2,"18-05-19");
insert into issue(bid,sid,issue_date)values(105,5,"17-07-12");
insert into issue(bid,sid,issue_date)values(104,4,"15-10-31");
insert into issue(bid,sid,issue_date)values(107,6,"15-02-11");
insert into issue(bid,sid,issue_date)values(108,7,"16-03-19");

select book.bname,issue_date from book
inner join issue on
book.bid=issue.bid where issue.issue_date='15-10-31'
```

Run (Ctrl-Enter)

Output Input Comments 0

```
bname   issue_date
CPP     2015-10-31
```

Success

```
insert into student(sid,sname,course,sem)values(4,"Aami","Btech",4);
insert into student(sid,sname,course,sem)values(5,"Reepa","MCA",1);
insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);

create table book(bid int primary key,bname varchar(50),author varchar(30));
insert into book(bid,bname,author)values(100,"Maths","Peter");
insert into book(bid,bname,author)values(101,"Business","John");
insert into book(bid,bname,author)values(102,"Data Structure","James");
insert into book(bid,bname,author)values(103,"C","George T S");
insert into book(bid,bname,author)values(104,"CPP","Dennis");
insert into book(bid,bname,author)values(105,"Java","David");

create table issue(bid int references book(bid),sid int references student(sid),issue_date date);
insert into issue(bid,sid,issue_date)values(100,1,"20-02-11");
insert into issue(bid,sid,issue_date)values(102,3,"19-04-17");
insert into issue(bid,sid,issue_date)values(103,2,"18-05-19");
insert into issue(bid,sid,issue_date)values(105,5,"17-07-12");
insert into issue(bid,sid,issue_date)values(104,4,"15-10-31");
insert into issue(bid,sid,issue_date)values(107,6,"15-02-11");
insert into issue(bid,sid,issue_date)values(108,7,"16-03-19");

select student.* from student
inner join issue
on student.sid=issue.sid where issue.bid=(select book.bid from book
inner join issue
on book.bid=issue.bid where book.bname='Java'group by book.bid);
```

Run (Ctrl-Enter)

Output Input Comments 0

```
sid     sname   course  sem
5       Reepa   MCA     1
```

Success

```
insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);

create table book(bid int primary key,bname varchar(50),author varchar(30));
insert into book(bid,bname,author)values(100,"Maths","Peter");
insert into book(bid,bname,author)values(101,"Business","John");
insert into book(bid,bname,author)values(102,"Data Structure","James");
insert into book(bid,bname,author)values(103,"C","George T S");
insert into book(bid,bname,author)values(104,"CPP","Dennis");
insert into book(bid,bname,author)values(105,"Java","David");

create table issue(bid int references book(bid),sid int references student(sid),issue_date date);
insert into issue(bid,sid,issue_date)values(100,1,"20-02-11");
insert into issue(bid,sid,issue_date)values(102,3,"19-04-17");
insert into issue(bid,sid,issue_date)values(103,2,"18-05-19");
insert into issue(bid,sid,issue_date)values(105,5,"17-07-12");
insert into issue(bid,sid,issue_date)values(104,4,"15-10-31");
insert into issue(bid,sid,issue_date)values(107,6,"15-02-11");
insert into issue(bid,sid,issue_date)values(108,7,"16-03-19");

select student.sname as Fourth_sem_students from student
inner join issue
on student.sid =issue.sid where student.sem=4 group by student.sname;
```

Run (Ctrl-Enter)

Output Input Comments 0

```
Fourth_sem_students
Sree
Aami
```

Success

```
insert into student(sid,sname,course,sem)values(5, "Reepa ", "MCA ",1);
insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);

create table book(bid int primary key,bname varchar(50),author varchar(30));
insert into book(bid,bname,author)values(100,"Maths","Peter");
insert into book(bid,bname,author)values(101,"Business","John");
insert into book(bid,bname,author)values(102,"Data Structure","James");
insert into book(bid,bname,author)values(103,"C","George T S");
insert into book(bid,bname,author)values(104,"CPP","Dennis");
insert into book(bid,bname,author)values(105,"Java","David");

create table issue(bid int references book(bid),sid int references student(sid),issue_date date);
insert into issue(bid,sid,issue_date)values(100,1,"20-02-11");
insert into issue(bid,sid,issue_date)values(102,3,"19-04-17");
insert into issue(bid,sid,issue_date)values(103,2,"18-05-19");
insert into issue(bid,sid,issue_date)values(105,5,"17-07-12");
insert into issue(bid,sid,issue_date)values(104,4,"15-10-31");
insert into issue(bid,sid,issue_date)values(107,6,"15-02-11");
insert into issue(bid,sid,issue_date)values(108,7,"16-03-19");

select book.bname as BOOK_NAME from book
inner join issue
on book.bid =issue.bid where issue.sid=(select student.sid from student
inner join issue
on student.sid=issue.sid where student.sname="Reepa");
```

Run (Ctrl-Enter)

Output Input Comments 0

```
BOOK_NAME
Java
```

Success

```
6  insert into student(sid,sname,course,sem)values(5, "Keepa" , "MCA" ,1);
7  insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);
8
9  create table book(bid int primary key,bname varchar(50),author varchar(30));
10 insert into book(bid,bname,author)values(100,"Maths","Peter");
11 insert into book(bid,bname,author)values(101,"Business","John");
12 insert into book(bid,bname,author)values(102,"Data Structure","James");
13 insert into book(bid,bname,author)values(103,"C","George T S");
14 insert into book(bid,bname,author)values(104,"CPP","Dennis");
15 insert into book(bid,bname,author)values(105,"Java","David");
16
17 create table issue(bid int references book(bid),sid int references student(sid),issue_date date);
18 insert into issue(bid,sid,issue_date)values(100,1,"20-02-11");
19 insert into issue(bid,sid,issue_date)values(102,3,"19-04-17");
20 insert into issue(bid,sid,issue_date)values(103,2,"18-05-19");
21 insert into issue(bid,sid,issue_date)values(105,5,"17-07-12");
22 insert into issue(bid,sid,issue_date)values(104,4,"15-10-31");
23 insert into issue(bid,sid,issue_date)values(107,6,"15-02-11");
24 insert into issue(bid,sid,issue_date)values(108,7,"16-03-19");
25
26 select student.sname from student
27 inner join issue
28 on student.sid =issue.sid where issue.bid=(select book.bid from book
29 inner join issue
30 on book.bid=issue.bid where book.author="Peter" group by book.bid);
31
32
```

Run (Ctrl-Enter)

Output Input Comments 0

```
sname
Sree
```

Program no: 5

Outer Join

Create table instructor with following fields.

- Id
- Name
- Department Name
- Salary

Create table teachers with following fields.

- Id
- Course id

Perform following outer join functions.

1. Left outer join
2. Right outer join
3. Full outer join

Success

```
1  create table instructor(id int primary key,name varchar(50),dept_name varchar(50),salary int(30));
2  insert into instructor(id,name,dept_name,salary)values(101,"Anu","IT",25000);
3  insert into instructor(id,name,dept_name,salary)values(102,"Manu","Computer",45000);
4  insert into instructor(id,name,dept_name,salary)values(103,"Anju","Management",40000);
5  insert into instructor(id,name,dept_name,salary)values(104,"Sree","Computer",45000);
6  insert into instructor(id,name,dept_name,salary)values(105,"Aami","Commerce",50000);
7  select * from instructor;
8
9
10
11
12
13
14
15
16
```

Run (Ctrl-Enter)

Output Input Comments 0

```
id      name    dept_name       salary
101     Anu     IT      25000
102     Manu    Computer        45000
103     Anju    Management      40000
104     Sree    Computer        45000
105     Aami    Commerce        50000
```

Success

```
1  create table teacher(tid int,course_id int references instructor(id));
2  insert into teacher(tid,course_id)values(10,101);
3  insert into teacher(tid,course_id)values(11,101);
4  insert into teacher(tid,course_id)values(11,103);
5  insert into teacher(tid,course_id)values(12,102);
6  insert into teacher(tid,course_id)values(13,103);
7  select * from teacher;
8
9
10
11
12
13
14
15
16
```

Run (Ctrl-Enter)

Output Input Comments 0

```
tid     course_id
10      101
11      101
11      103
12      102
13      103
```

Success

```
1  create table teacher(tid int,course_id int references instructor(id));
2  insert into teacher(tid,course_id)values(10,101);
3  insert into teacher(tid,course_id)values(11,101);
4  insert into teacher(tid,course_id)values(11,103);
5  insert into teacher(tid,course_id)values(12,102);
6  insert into teacher(tid,course_id)values(13,103);
7  select * from teacher;
8
9
10
11
12
13
14
15
16
```

Run (Ctrl-Enter)

Output Input Comments 0

```
tid     course_id
10      101
11      101
11      103
12      102
13      103
```

Success

```
create table instructor(id int primary key,name varchar(50),dept_name varchar(50),salary int(30));
insert into instructor(id,name,dept_name,salary)values(101,"Anu","IT",25000);
insert into instructor(id,name,dept_name,salary)values(102,"Manu","Computer",45000);
insert into instructor(id,name,dept_name,salary)values(103,"Anju","Management",40000);
insert into instructor(id,name,dept_name,salary)values(104,"Sree","Computer",45000);
insert into instructor(id,name,dept_name,salary)values(105,"Aami","Commerce",50000);

create table teacher(tid int,course_id int references instructor(id));
insert into teacher(tid,course_id)values(10,101);
insert into teacher(tid,course_id)values(11,101);
insert into teacher(tid,course_id)values(11,103);
insert into teacher(tid,course_id)values(12,102);
insert into teacher(tid,course_id)values(13,103);

select id,tid,name,salary
from instructor
right outer join teacher
on instructor.id=teacher.course_id;
```

Run (Ctrl-Enter)

Output Input Comments 0

id	tid	name	salary
101	10	Anu	25000
101	11	Anu	25000
103	11	Anju	40000
102	12	Manu	45000
103	13	Anju	40000

Success

```
create table instructor(id int primary key,name varchar(50),dept_name varchar(50),salary int(30));
insert into instructor(id,name,dept_name,salary)values(101,"Anu","IT",25000);
insert into instructor(id,name,dept_name,salary)values(102,"Manu","Computer",45000);
insert into instructor(id,name,dept_name,salary)values(103,"Anju","Management",40000);
insert into instructor(id,name,dept_name,salary)values(104,"Sree","Computer",45000);
insert into instructor(id,name,dept_name,salary)values(105,"Aami","Commerce",50000);

create table teacher(tid int,course_id int references instructor(id));
insert into teacher(tid,course_id)values(10,101);
insert into teacher(tid,course_id)values(11,101);
insert into teacher(tid,course_id)values(11,103);
insert into teacher(tid,course_id)values(12,102);
insert into teacher(tid,course_id)values(13,103);

select * from instructor
join teacher
on instructor.id=teacher.course_id;
```

Run (Ctrl-Enter)

Output Input Comments 0

id	name	dept_name	salary	tid	course_id
101	Anu	IT	25000	10	101
101	Anu	IT	25000	11	101
103	Anju	Management	40000	11	103
102	Manu	Computer	45000	12	102
103	Anju	Management	40000	13	103

Program no: 6

Set Operations

Create table Sailors with following attributes sid, sname, rating, age.

Create table Boat with attributes bid, bname and bcolor.

Create another table Reserves with the attributes sid, bid, date.

1. Find the names of sailors who have reserved a red or a green boat.
2. Find the names of sailors who have reserved both red and green boat.
3. Find the sid of all sailors who reserved a red boat but not a green boat.
4. Find all sid of sailors who have a rating of 10 or have reserved boat 104.

Success

```
1  create table sailors(SID int primary key,sname varchar(50),rating float,age int);
2  insert into sailors values(20,"horatio",9,55);
3  insert into sailors values(21,"denis",10,40);
4  insert into sailors values(22,"harley",5.5,50);
5  insert into sailors values(23,"dain",10,36);
6  insert into sailors values(24,"jaisom",8,58);
7  select  * from sailors;
8
9
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

SID	sname	rating	age
20	horatio	9	55
21	denis	10	40
22	harley	5.5	50
23	dain	10	36
24	jaisom	8	58

Success

```
create table sailors(SID int primary key,sname varchar(50),rating float,age int);
insert into sailors values(20,"horatio",9,55);
insert into sailors values(21,"denis",10,40);
insert into sailors values(22,"harley",5.5,50);
insert into sailors values(23,"dain",10,36);
insert into sailors values(24,"jaisom",8,58);



create table boats(BID int primary key,bname varchar(50),bcolor varchar(20));
insert into boats values(101,"island",'blue');
insert into boats values(102,"speed",'red');
insert into boats values(22,"wind",'green');
insert into boats values(23,"marine",'white');
select * from boats;

```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

BID	bname	bcolor
101	island	blue
102	speed	red
22	wind	green
23	marine	white

Success Share 0

```
create table sailors(SID int primary key,sname varchar(50),rating float,age int);
insert into sailors values(20,"horatio",9,55);
insert into sailors values(21,"denis",10,40);
insert into sailors values(22,"harley",5.5,50);
insert into sailors values(23,"dain",10,36);
insert into sailors values(24,"jaisom",8,58);



create table boats(BID int primary key,bname varchar(50),bcolor varchar(20));
insert into boats values(101,"island",'blue');
insert into boats values(102,"speed",'red');
insert into boats values(103,"wind",'green');
insert into boats values(104,"marine",'white');

create table reserves(SID int,BID int,day varchar(20),primary key(SID,BID,day),foreign key (SID) references sailors(SID),foreign key(BID) references boats(BID));
insert into reserves values(22,101,"monday");
insert into reserves values(24,104,"wednesday");
insert into reserves values(22,10,"friday");
insert into reserves values(23,103,"monday");
select * from reserves;


```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

SID	BID	day
22	10	friday
22	101	monday
23	103	monday
24	104	wednesday

```
create table sailors(sid int primary key,sname varchar(50),rating float,age int);
insert into sailors values(20,"horatio",9,55);
insert into sailors values(21,"denis",10,40);
insert into sailors values(22,"harley",5.5,50);
insert into sailors values(23,"dain",10,36);
insert into sailors values(24,"jaisom",8,58);



create table boats(bid int primary key,bname varchar(50),bcolor varchar(20));
insert into boats values(101,"island",'blue');
insert into boats values(102,"speed",'red');
insert into boats values(103,"wind","green");
insert into boats values(104,"marine",'white');

create table reserves(sid int,bid int,day varchar(20),primary key(sid,bid,day),foreign key (sid) references sailors(sid),foreign key(bid) references boats(bid));
insert into reserves values(22,101,"monday");
insert into reserves values(24,104,"wednesday");
insert into reserves values(22,102,"friday");
insert into reserves values(23,103,"monday");
insert into reserves values(22,103,"monday");
insert into reserves values(22,104,"thurday");

select S.sname from sailors S ,reserves R,boats B where S.sid=R.sid and R.bid= B.bid and (B.bcolor='red' or B.bcolor='green')
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sname
harley
dain
harley
```

```
create table sailors(sid int primary key,sname varchar(50),rating float,age int);
insert into sailors values(20,"horatio",9,55);
insert into sailors values(21,"denis",10,40);
insert into sailors values(22,"harley",5.5,50);
insert into sailors values(23,"dain",10,36);
insert into sailors values(24,"jaisom",8,58);



create table boats(bid int primary key,bname varchar(50),bcolor varchar(20));
insert into boats values(101,"island",'blue');
insert into boats values(102,"speed",'red');
insert into boats values(103,"wind","green");
insert into boats values(104,"marine",'white');

create table reserves(sid int,bid int,day varchar(20),primary key(sid,bid,day),foreign key (sid) references sailors(sid),foreign key(bid) references boats(bid));
insert into reserves values(22,101,"monday");
insert into reserves values(24,104,"wednesday");
insert into reserves values(22,102,"friday");
insert into reserves values(23,103,"monday");
insert into reserves values(22,103,"monday");
insert into reserves values(22,104,"thurday");

select sid,sname from sailors  where sid in(select sid from reserves where bid in(select bid  from boats where bcolor in('red','green')))
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sid     sname
22      harley
23      dain
```

```
13  insert into reserles values(34,106,'1998-10-4');
14  insert into boat values(105,'Interlake','red');
15  insert into boat values(102,'Interlake','red');
16  insert into boat values(103,'Clipper','green');
17  insert into boat values(104,'Titanic','blue');
18  SELECT S.sname
19  FROM sailors S, boat B1,reserles R1,
20  boat B2, reserles R2
21  WHERE S.sid=R1.sid AND R1.bid=B1.bid
22  AND S.sid=R2.sid AND R2.bid=B2.bid
23  AND B1.bcolor='red' AND B2.bcolor='green'
24
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sname
Hardely
```

Success Tweet Share 0

```
1  create table sailors(sid int primary key,sname varchar(50),rating float,age int);
2  insert into sailors values(20,"horatio",9,55);
3  insert into sailors values(21,"denis",10,40);
4  insert into sailors values(22,"harley",5.5,50);
5  insert into sailors values(23,"dain",10,36);
6  insert into sailors values(24,"jaisom",8,58);
7
8
9
10 create table boats(bid int primary key,bname varchar(50),bcolor varchar(20));
11 insert into boats values(101,"island",'blue');
12 insert into boats values(102,"speed",'red');
13 insert into boats values(103,"wind",'green');
14 insert into boats values(104,"marine",'white');
15
16 create table reserves(sid int,bid int,day varchar(20),primary key(sid,bid,day),foreign key (sid) references sailors(sid),foreign key(bid) references boats(bid));
17 insert into reserves values(22,101,"monday");
18 insert into reserves values(24,104,"wednesday");
19 insert into reserves values(22,102,"friday");
20 insert into reserves values(23,103,"monday");
21 insert into reserves values(22,103,"monday");
22 insert into reserves values(22,104,"thurday");
23
24 select S.sid from sailors S where S.rating=10
25 union
26 select R.sid from reserves R where R.bid=104;
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sid
21
23
24
22
```

Program no: 7

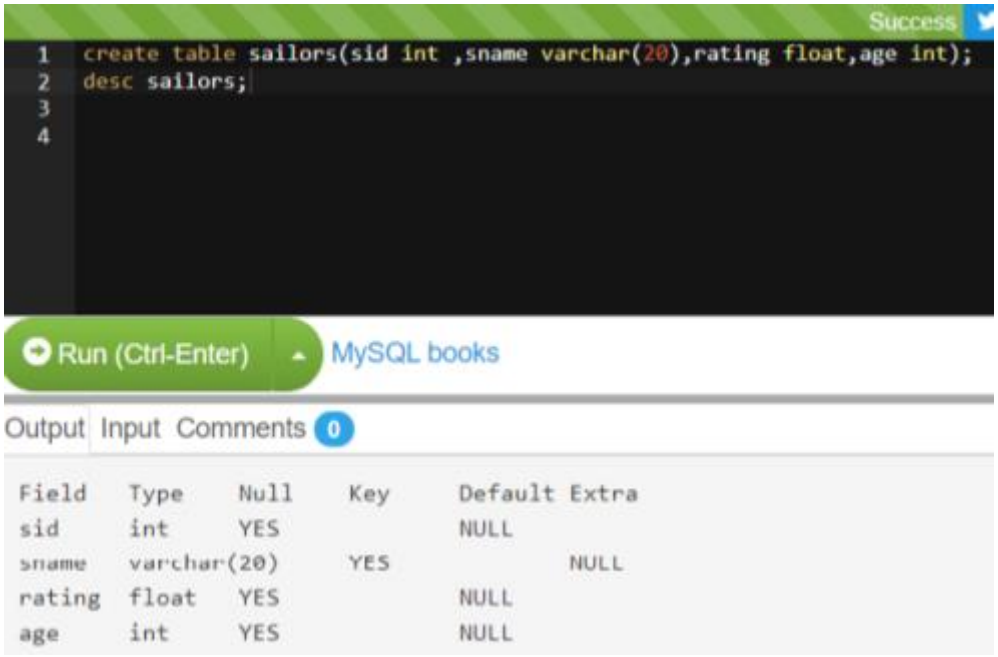
Subquery

Create table sailors with attributes sid, sname, rating, age.

Create table reserves with attributes sid, bid, day.

Create table boats with attributes bid, bname, bcolor.

1. Find the names of sailors who have not reserved a red boat.
2. Find the sailors whose rating is better than some sailor called Horatio.
3. Find the sailors with the highest rating.
4. Find the name and age of the oldest sailors.
5. Find the names of sailors who are older than the oldest sailor with rating of 10.



Success

```
1  create table sailors(sid int ,sname varchar(20),rating float,age int);
2  create table reserles(sid int,bid int,day int);
3  desc reserles;
4
5
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

Field	Type	Null	Key	Default	Extra
sid	int	YES		NULL	
bid	int	YES		NULL	
day	int	YES		NULL	

Succ

```
1  create table sailors(sid int ,sname varchar(20),rating float,age int);
2  create table reserles(sid int,bid int,day int);
3  create table boat(bid int,bname varchar(20),bcolor varchar(20));
4  desc  boat;
5
6
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

Field	Type	Null	Key	Default	Extra
bid	int	YES		NULL	
bname	varchar(20)	YES		NULL	
bcolor	varchar(20)	YES		NULL	

```
13  insert into reserles values(34,106,'1998-10-4');
14  insert into boat values(105,'Interlake','red');
15  insert into boat values(102,'Interlake','red');
16  insert into boat values(103,'Clipper','green');
17  insert into boat values(104,'Titanic','blue');
18  SELECT S.sname
19  FROM sailors S
20  WHERE S.sid NOT IN ( SELECT R.sid
21   FROM reserles R
22  WHERE R.bid IN ( SELECT B.bid
23   FROM boat B
24   WHERE B.bcolor='red' ))
25
26
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sname
Arjun
Jhon
Rohan
```

```
9   insert into reserles values(22,102,'1998-10-10');
10  insert into reserles values(22,103,'1998-11-09');
11  insert into reserles values(41,104,'1998-9-8');
12  insert into reserles values(23,105,'1998-12-10');
13  insert into reserles values(34,106,'1998-10-4');
14  insert into boat values(105,'Interlake','red');
15  insert into boat values(102,'Interlake','red');
16  insert into boat values(103,'Clipper','green');
17  insert into boat values(104,'Titanic','blue');
18  SELECT S1.sname
19  FROM sailors S1
20  WHERE S1.rating > ANY ( SELECT S2.rating
21  FROM sailors S2
22  WHERE S2.sname='Horatio' )
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sname
Jhon
Rohan
```

```
10  insert into reserles values(22,103,'1998-11-09');
11  insert into reserles values(41,104,'1998-9-8');
12  insert into reserles values(23,105,'1998-12-10');
13  insert into reserles values(34,106,'1998-10-4');
14  insert into boat values(105,'Interlake','red');
15  insert into boat values(102,'Interlake','red');
16  insert into boat values(103,'Clipper','green');
17  insert into boat values(104,'Titanic','blue');
18  SELECT S1.sname
19  FROM sailors S1
20  WHERE S1.rating >= ALL ( SELECT S2.rating
21   FROM sailors S2)
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sname
Rohan
```

Success Tweet Share

```
8   insert into sailors values(23,'Horatio',4,41);
9   insert into reserles values(22,102,'1998-10-10');
10  insert into reserles values(22,103,'1998-11-09');
11  insert into reserles values(41,104,'1998-9-8');
12  insert into reserles values(23,105,'1998-12-10');
13  insert into reserles values(34,106,'1998-10-4');
14  insert into boat values(105,'Interlake','red');
15  insert into boat values(102,'Interlake','red');
16  insert into boat values(103,'Clipper','green');
17  insert into boat values(104,'Titanic','blue');
18  select S.sname ,S.age from sailors S where S.age=(select max(S2.age)from sailors S2);
19
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sname   age
Horatio 41
```

Success Tweet Share 0

```
 8  insert into sailors values(23,'Horatio',4,41);
 9  insert into reserles values(22,102,'1998-10-10');
10  insert into reserles values(22,103,'1998-11-09');
11  insert into reserles values(41,104,'1998-9-8');
12  insert into reserles values(23,105,'1998-12-10');
13  insert into reserles values(34,106,'1998-10-4');
14  insert into boat values(105,'Interlake','red');
15  insert into boat values(102,'Interlake','red');
16  insert into boat values(103,'Clipper','green');
17  insert into boat values(104,'Titanic','blue');
18  select S.sname from sailors S where S.age>(select max(S2.age)from sailors S2 where S2.rating=10);
19
20
21
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
sname
Arjun
Jhon
Horatio
```

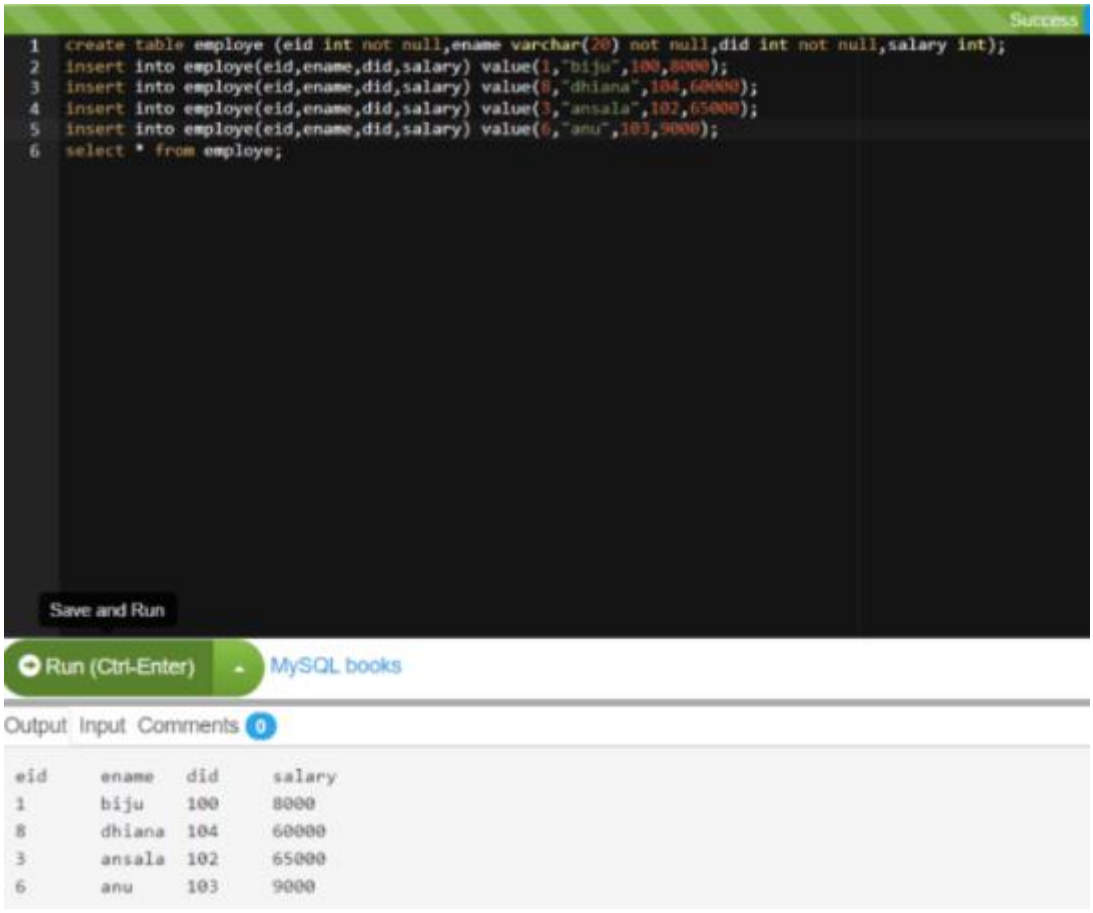
Program no: 8

Aggregate operations, Group by having clause

Create table employee with following field eid, ename, did, salary.

Create table dept with field did and dname.

1. Find out the number of employees in company.
2. Find out the total salary of all department.
3. Find out the total salary of dept with did=100.
4. Find out the average salary of all department.
5. Find out the minimum salary of department.
6. Find out the number of employees in each department.



```
1  create table employe (eid int not null,ename varchar(20) not null,did int not null,salary int);
2  insert into employe(eid,ename,did,salary) value(1,"biju",100,8000);
3  insert into employe(eid,ename,did,salary) value(8,"dhiana",104,60000);
4  insert into employe(eid,ename,did,salary) value(3,"ansala",102,65000);
5  insert into employe(eid,ename,did,salary) value(6,"anu",103,9000);
6
7
8  create table dept(did int references employe(did),dname varchar(20) not null);
9  insert into dept(did,dname) values(100,"production");
10 insert into dept(did,dname) values(102,"sales");
11 insert into dept(did,dname) values(104," It");
12 select count(*)as number_of_employe from employe;
13
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
number_of_employe
4
```


```
1  create table employe (eid int not null,ename varchar(20) not null,did int not null,salary int);
2  insert into employe(eid,ename,did,salary) value(1,"biju",100,8000);
3  insert into employe(eid,ename,did,salary) value(8,"dhiana",104,60000);
4  insert into employe(eid,ename,did,salary) value(3,"ansala",102,65000);
5  insert into employe(eid,ename,did,salary) value(6,"anu",103,9000);
6
7
8  create table dept(did int references employe(did),dname varchar(20) not null);
9  insert into dept(did,dname) values(100,"production");
10 insert into dept(did,dname) values(102,"sales");
11 insert into dept(did,dname) values(104," It");
12 select count(*)as number_of_employe from employe;
13
```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
number_of_employe
4
```

```
1  create table employe (eid int not null,ename varchar(20) not null,did int not null,salary int);
2  insert into employe(eid,ename,did,salary) value(1,"biju",100,8000);
3  insert into employe(eid,ename,did,salary) value(8,"dhiana",104,60000);
4  insert into employe(eid,ename,did,salary) value(3,"ansala",102,65000);
5  insert into employe(eid,ename,did,salary) value(6,"anu",103,9000);
6
7
8  create table dept(did int references employe(did),dname varchar(20) not null);
9  insert into dept(did,dname) values(100,"production");
10 insert into dept(did,dname) values(102,"sales");
11 insert into dept(did,dname) values(104," It");
12 select did,sum(salary) from employe group by did;
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

did	sum(salary)
100	8000
104	60000
102	65000
103	9000

```
1  create table employe (eid int not null,ename varchar(20) not null,did int not null,salary int);
2  insert into employe(eid,ename,did,salary) value(1,"biju",100,8000);
3  insert into employe(eid,ename,did,salary) value(8,"dhiana",104,60000);
4  insert into employe(eid,ename,did,salary) value(3,"ansala",102,65000);
5  insert into employe(eid,ename,did,salary) value(6,"anu",103,9000);
6
7
8  create table dept(did int references employe(did),dname varchar(20) not null);
9  insert into dept(did,dname) values(100,"production");
10 insert into dept(did,dname) values(102,"sales");
11 insert into dept(did,dname) values(104," It");
12 select sum(salary) from employe where did=100;
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

sum(salary)
8000

```
1  create table employe (eid int not null,ename varchar(20) not null,did int not null,salary int);
2  insert into employe(eid,ename,did,salary) value(1,"biju",100,8000);
3  insert into employe(eid,ename,did,salary) value(8,"dhiana",104,60000);
4  insert into employe(eid,ename,did,salary) value(3,"ansala",102,65000);
5  insert into employe(eid,ename,did,salary) value(6,"anu",103,9000);
6
7
8  create table dept(did int references employe(did),dname varchar(20) not null);
9  insert into dept(did,dname) values(100,"production");
10 insert into dept(did,dname) values(102,"sales");
11 insert into dept(did,dname) values(104," It");
12 select did ,avg(salary)as average_salary from employe group by did;
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
did     average_salary
100     8000.0000
104     60000.0000
102     65000.0000
103     9000.0000
```

```
1  create table employe (eid int not null,ename varchar(20) not null,did int not null,salary int);
2  insert into employe(eid,ename,did,salary) value(1,"biju",100,8000);
3  insert into employe(eid,ename,did,salary) value(8,"dhiana",104,60000);
4  insert into employe(eid,ename,did,salary) value(3,"ansala",102,65000);
5  insert into employe(eid,ename,did,salary) value(6,"anu",103,9000);
6
7
8  create table dept(did int references employe(did),dname varchar(20) not null);
9  insert into dept(did,dname) values(100,"production");
10 insert into dept(did,dname) values(102,"sales");
11 insert into dept(did,dname) values(104," It");
12 select did ,min(salary)as minimum_salary from employe group by did;
```

Save and Run

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

```
did     minimum_salary
100     8000
104     60000
102     65000
103     9000
```

```
1  create table employe (eid int not null,ename varchar(20) not null,did int not null,salary int);
2  insert into employe(eid,ename,did,salary) value(1,"biju",100,8000);
3  insert into employe(eid,ename,did,salary) value(0,"dhiana",102,60000);
4  insert into employe(eid,ename,did,salary) value(3,"ansala",102,65000);
5  insert into employe(eid,ename,did,salary) value(0,"anu",103,9000);
6
7
8  create table dept(did int references employe(did),dname varchar(20) not null);
9  insert into dept(did,dname) values(100,"production");
10 insert into dept(did,dname) values(102,"sales");
11 insert into dept(did,dname) values(104," It");
12 select did ,count(*) as number_of_employes from employe group by did;
```

Save and Run

Run (Ctrl-Enter) - MySQL books

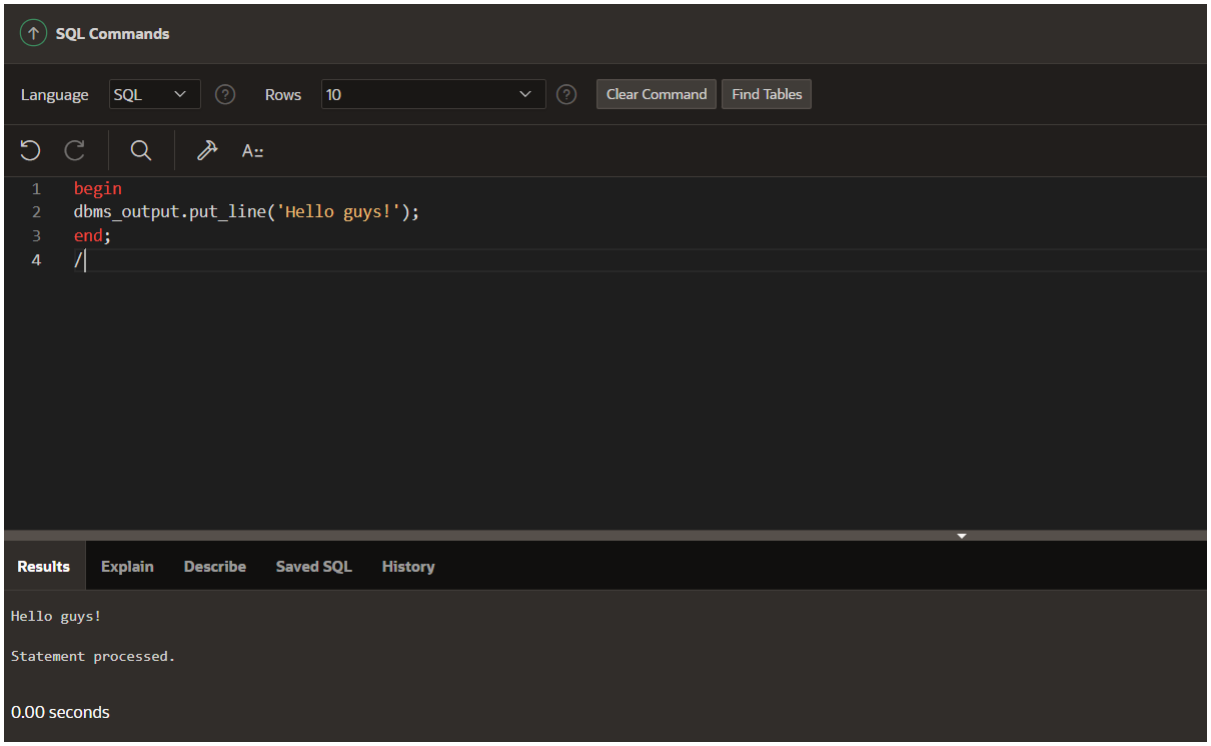
Output Input Comments 0

```
did     number_of_employes
100     1
102     2
103     1
```

Program no: 9

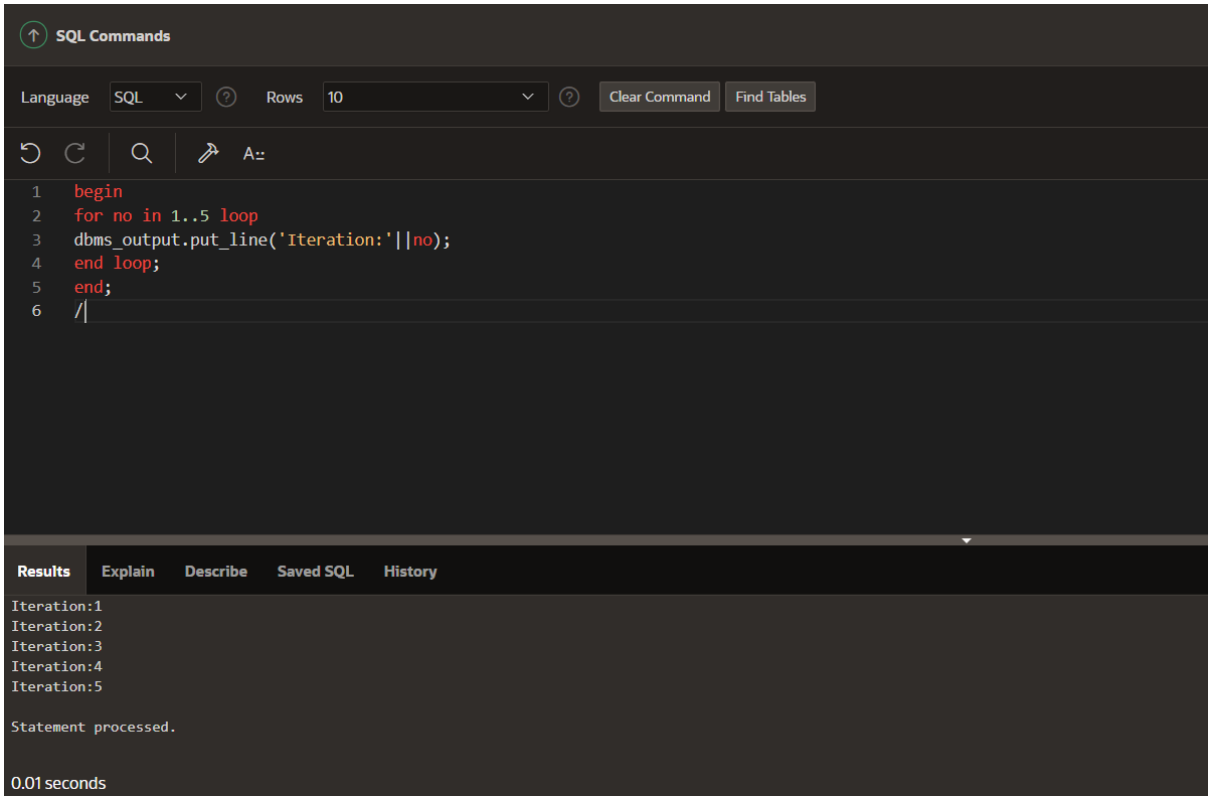
PLSQL

1. Program to display “Hello guys!”.

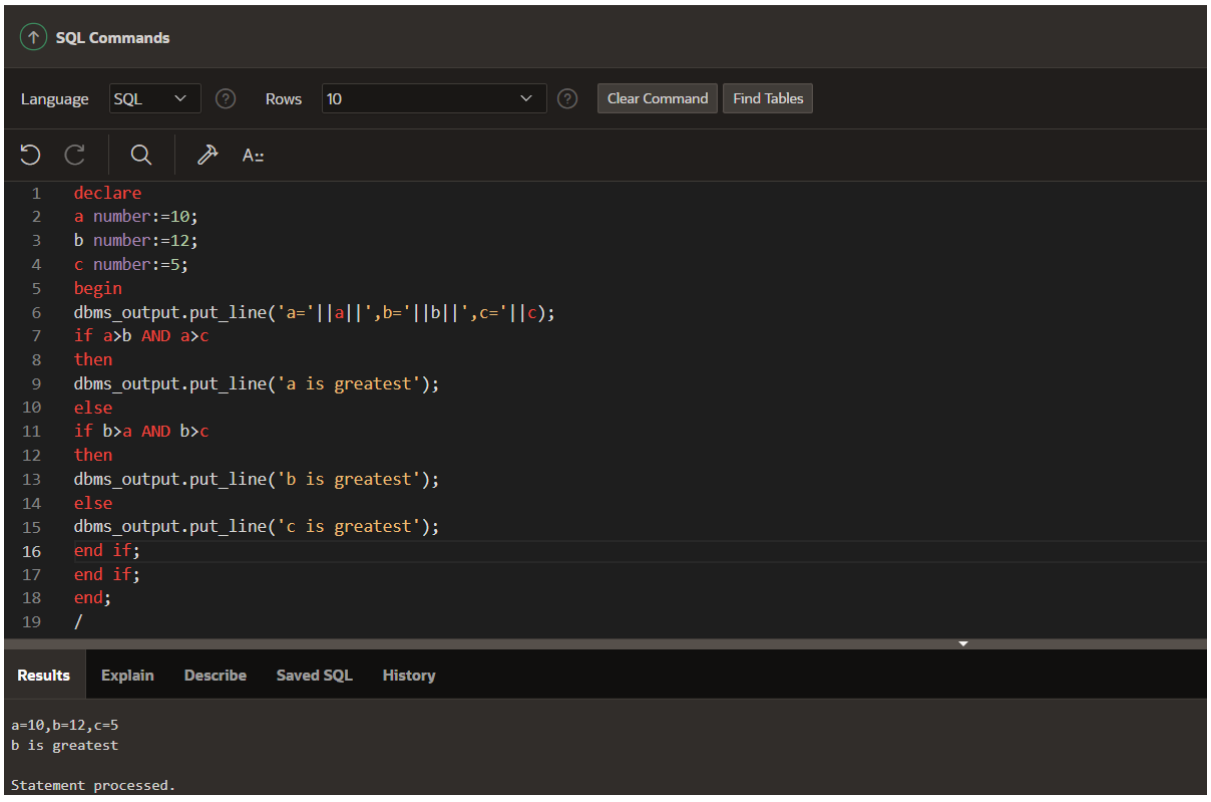


2. Program to find sum of two numbers.

3. Program to display 1 to 5.



4. Program to find greatest of three numbers.



5. Program to check whether the number is odd or even.

SQL Commands

Language SQL Rows 10 Clear Command Find Tables

```
1  declare
2  n number:=8;
3  begin
4  if mod(n,2)=0
5  then
6  dbms_output.put_line('Number is even');
7  else
8  dbms_output.put_line('Number is odd');
9  end if;
10 end;
11 /
```

Results Explain Describe Saved SQL History

```
Number is even

Statement processed.
```

6. Program to find the area of a rectangle using function.

area.sql - Notepad

File Edit Format View Help

```
create or replace function area(n1 in number,n2 in number)
return number
is
n3 number(8);
begin
n3:=n1*n2;
return n3;
end;
/
```

main.sql - Notepad

File Edit Format View Help

```
declare
n3 number(2);
begin
n3:=area(2,3);
dbms_output.put_line('Area of rectangle is:'||n3);
end;
/
```

Oracle SQL*Plus

File Edit Search Options Help

```
SQL*Plus: Release 10.2.0.3.0 - Production on Tue Oct 12 12:27:17 2021

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Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> ed area

SQL> ed main

SQL> set serveroutput on;
SQL> @area

Function created.

SQL> @main
Area of rectangle is:6

PL/SQL procedure successfully completed.

SQL>
```

7. Program to find the sum of two numbers using function.

add.sql - Notepad

File Edit Format View Help

```
create or replace function adder(n1 in number,n2 in number)
return number
is
n3 number(8);
begin
n3:=n1+n2;
return n3;
end;
/
```

main.sql - Notepad

File Edit Format View Help

```
declare
n3 number(2);
begin
n3:=adder(11,22);
dbms_output.put_line('Addition is:'||n3);
end;
/
```

Oracle SQL*Plus

File Edit Search Options Help

```
SQL*Plus: Release 10.2.0.3.0 - Production on Tue Oct 12 11:59:43 2021

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Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> ed add

SQL> ed main

SQL> set severoutput on;
SP2-0735: unknown SET option beginning "severoutpu..."
SQL> set serveroutput on;
SQL> @add

Function created.

SQL> @main
Addition is:33

PL/SQL procedure successfully completed.
```

8. Program to find the minimum of two numbers using procedure.

minimum.sql - Notepad

File Edit Format View Help

```
DECLARE
        a number;
        b number;
        c number;
PROCEDURE findMin(x IN number,y IN number,z OUT number) IS
BEGIN
  IF x < y THEN
        z:=x;
  ELSE
        Z:=Y;
  END IF;
END;
BEGIN
  a:=23;
  b:=45;
  findMin(a,b,c);
  dbms_output.put_line('Minimum of(23,25):'||c);
END;
/
```

Oracle SQL*Plus

File Edit Search Options Help

```
SQL*Plus: Release 10.2.0.3.0 - Production on Tue Oct 12 12:21:50 2021

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Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> ed minimum

SQL> set serveroutput on;
SQL> @minimum
Minimum of(23,25):23

PL/SQL procedure successfully completed.

SQL>
```

9. Program to find the square of the number using procedure.

square.sql - Notepad

File Edit Format View Help

```
DECLARE
        a number;
PROCEDURE squareNum(x IN OUT number ) IS
BEGIN
        x := x * x;
END;
BEGIN
        a:=23;
        squareNum(a);
   dbms_output.put_line('Square of(23): ' || a);
END;
/
```

Oracle SQL*Plus

File Edit Search Options Help

```
SQL*Plus: Release 10.2.0.3.0 - Production on Tue Oct 12 12:23:36 2021

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Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> ed square

SQL> set serveroutput on;
SQL> @square
Square of(23): 529

PL/SQL procedure successfully completed.

SQL>
```

Program no: 10

Program to implement triggers in pl/sql.

delage.sql - Notepad

File Edit Format View Help

```
create trigger tr1 after delete on employee
for each row
when(old.age>50)
begin
insert into pension values(:old.Id,:old.Name,:old.Age);
end;
/
```

Oracle SQL*Plus

File Edit Search Options Help

```
Copyright (c) 1982, 2006, Oracle.  All Rights Reserved.


Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> create table employee(Id number,Name varchar(20),Age number);

Table created.

SQL> insert into employee values(1,'Arun',35);

1 row created.

SQL> insert into employee values(2,'Gopu',55);

1 row created.

SQL> select * from employee;

        ID NAME                          AGE
---------- -------------------- ----------
         1 Arun                          35
         2 Gopu                          55

SQL> create table pension(Id number,Name varchar(20),Age number);

Table created.

SQL> select * from pension;

no rows selected

SQL> set serveroutput on;
SQL> ed delage

SQL> @delage

Trigger created.

SQL> delete from employee where id=2;

1 row deleted.

SQL> select * from pension;

        ID NAME                          AGE
---------- -------------------- ----------
         2 Gopu                          55

SQL>
```

Program no: 11

Program to implement cursors in pl/sql.

cursor.sql - Notepad

File Edit Format View Help

```
DECLARE
   total_rows number(2);
BEGIN
   UPDATE emps
   SET salary = salary + 500;

END;
/
```

File Edit Search Options Help

```
Copyright (c) 1982, 2006, Oracle.  All Rights Reserved.


Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> drop table emps;

Table dropped.

SQL> create table emps(Id number,Name varchar(20),salary number);

Table created.

SQL> insert into emps values(1,'Anju',45000);

1 row created.

SQL> insert into emps values(2,'Akhila',40000);

1 row created.

SQL> insert into emps values(3,'Ramsi',35000);

1 row created.

SQL> select * from emps;

        ID NAME                      SALARY
---------- -------------------- ----------
         1 Anju                      45000
         2 Akhila                    40000
         3 Ramsi                     35000

SQL> set serveroutput on;
SQL> ed cursor

SQL> @cursor

PL/SQL procedure successfully completed.

SQL> select * from emps;

        ID NAME                      SALARY
---------- -------------------- ----------
         1 Anju                      45500
         2 Akhila                    40500
         3 Ramsi                     35500
```

Program no: 12

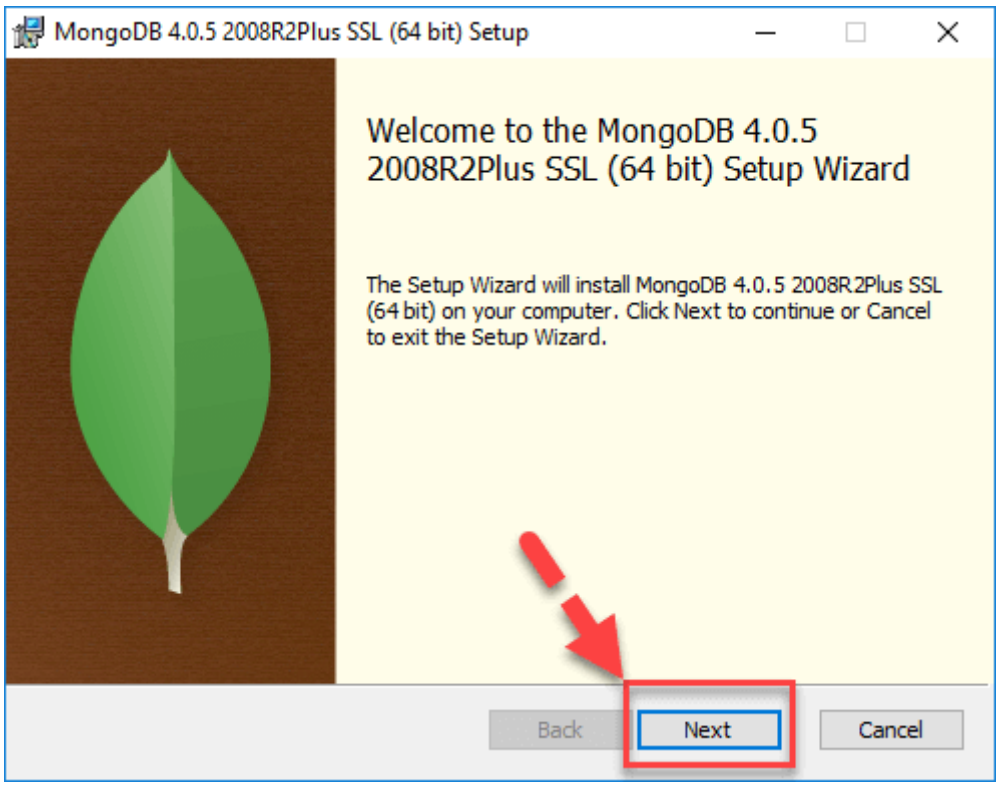
Steps to download and install MongoDB on Windows 10.

Step 1: Download MongoDB Community Server.

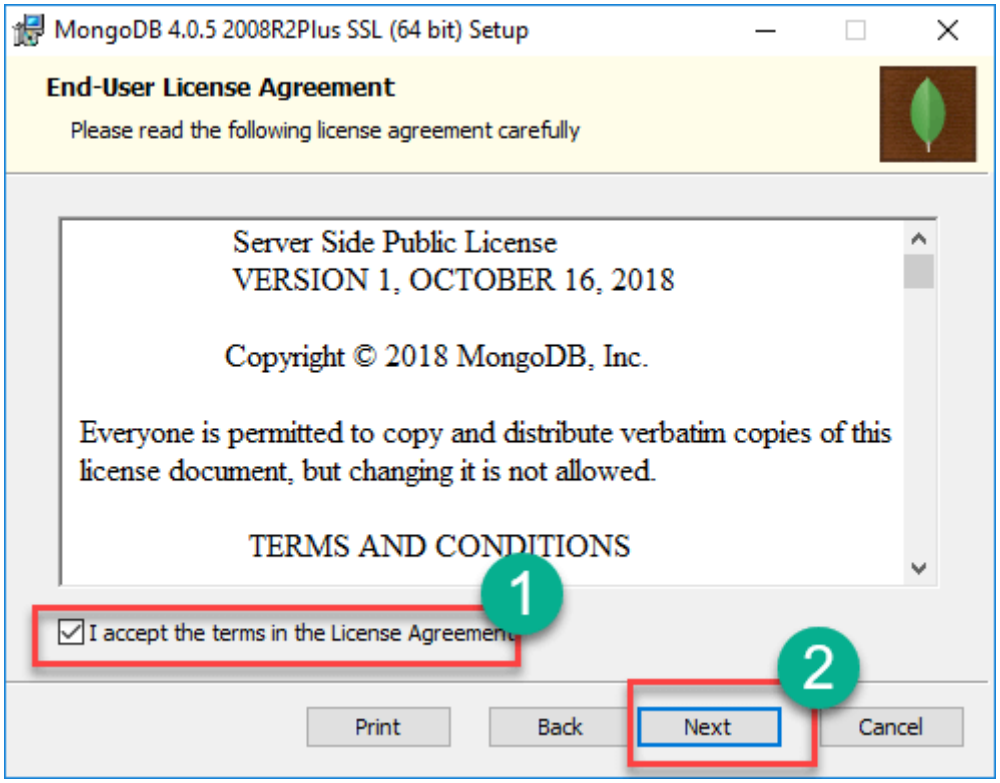
Go to link and Download MongoDB Community Server. We will install the 64-bit version for Windows.

Step 2: Click on Setup.

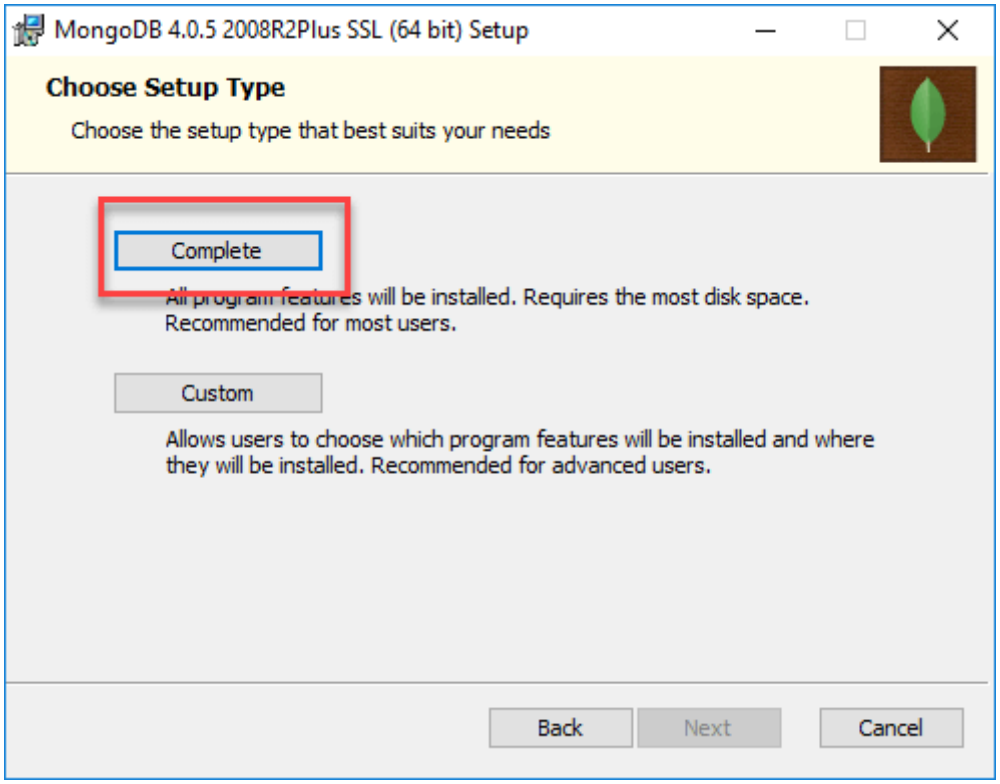
Once download is complete open the msi file. Click Next in the start up screen.



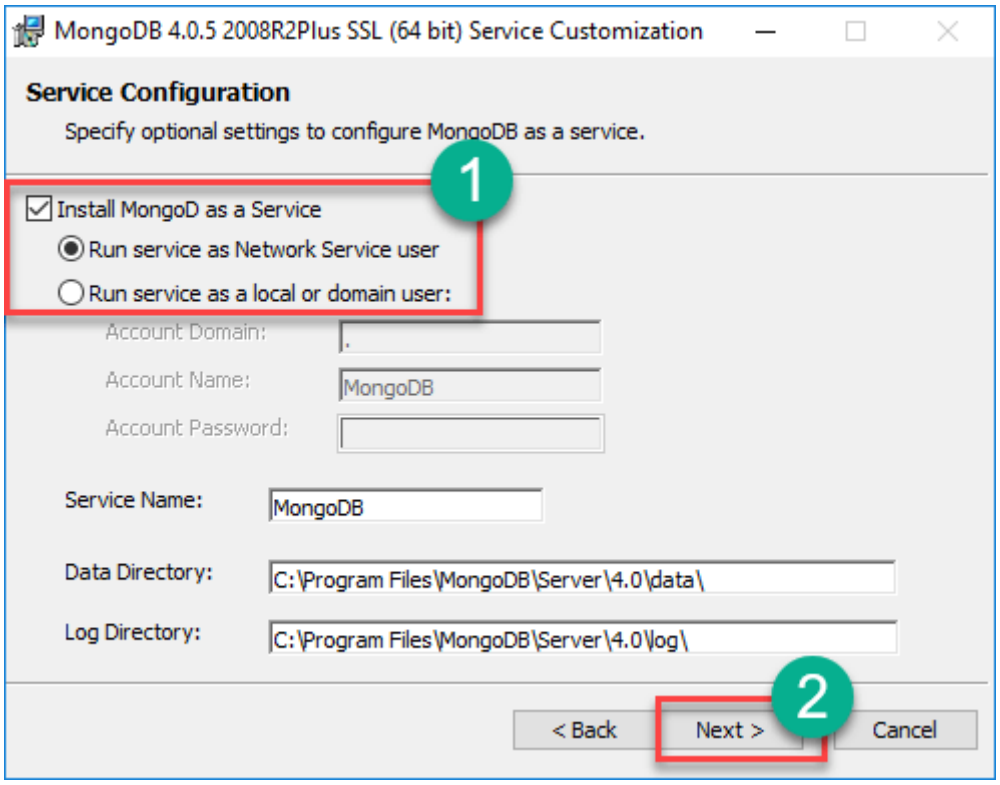
Step 3: Accept the End-User License Agreement. Click Next.



Step 4: Click on the "complete" button to install all of the components. The custom option can be used to install selective components or if you want to change the location of the installation.

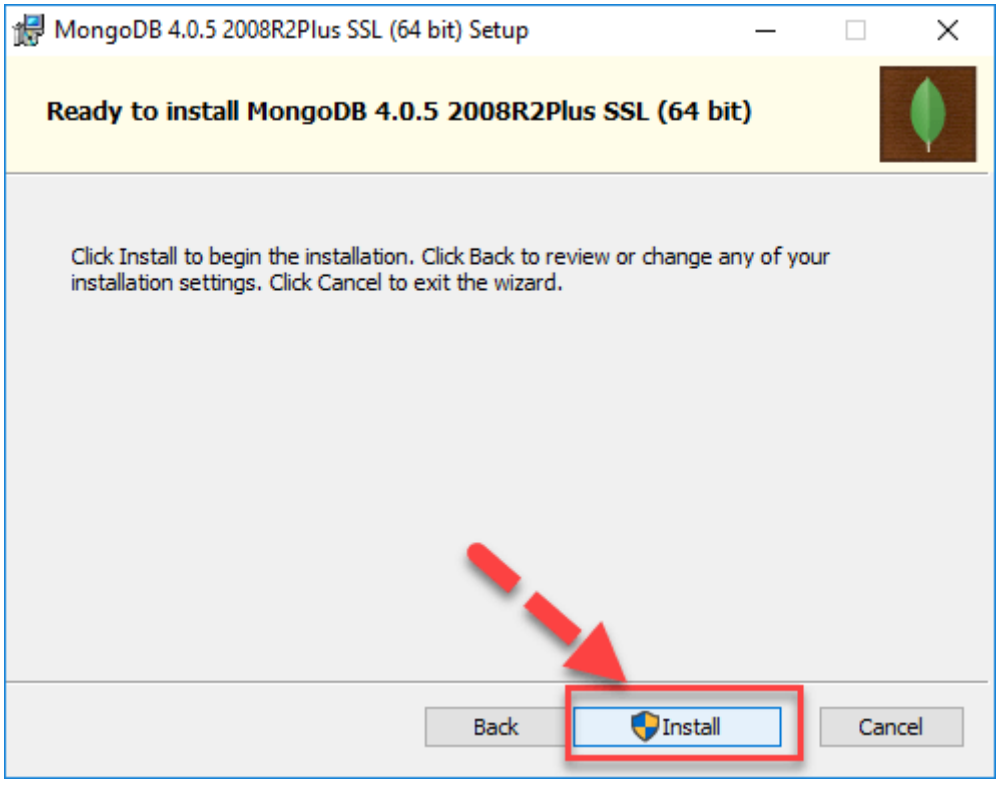


Step 5: Service Configuration. Select “Run service as Network Service user”. make a note of the data directory, we’ll need this later. Click Next.

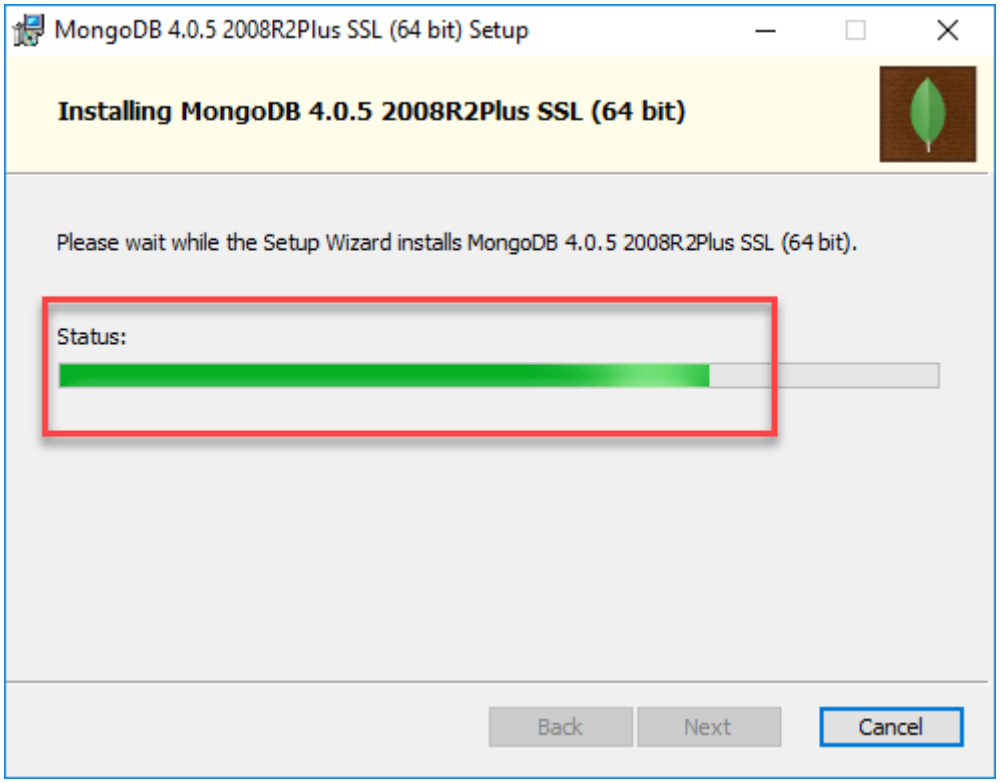


Step 6: Start installation process.

Click on the Install button to start the installation.

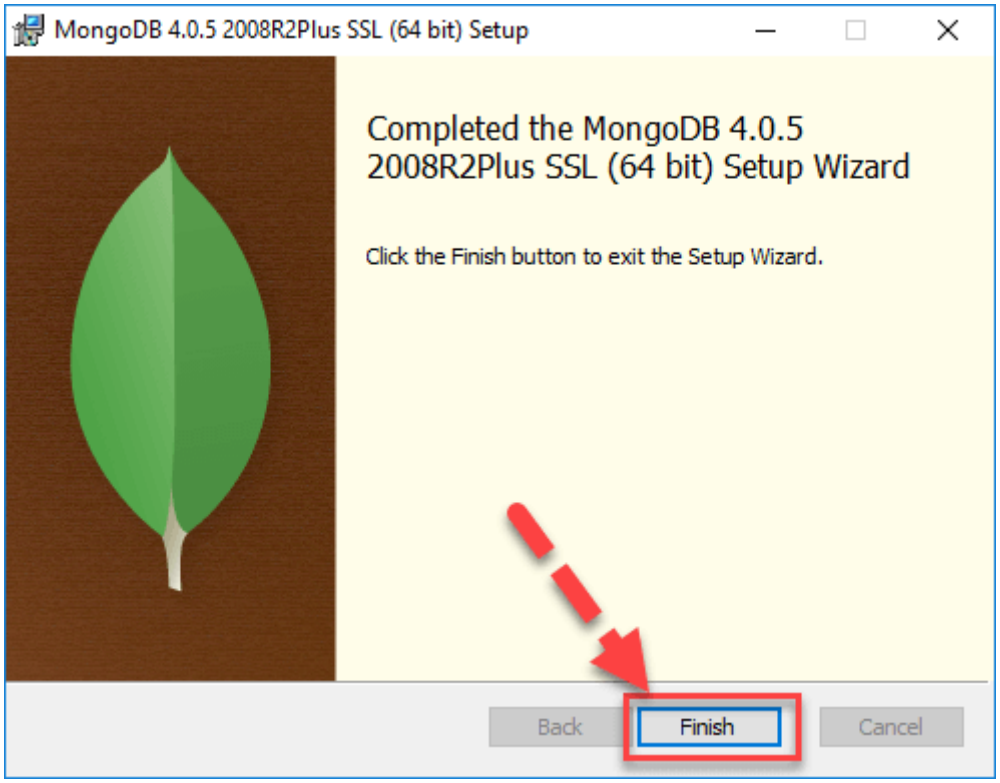


Step 7: Click Next once completed. Installation begins. Click Next once completed.

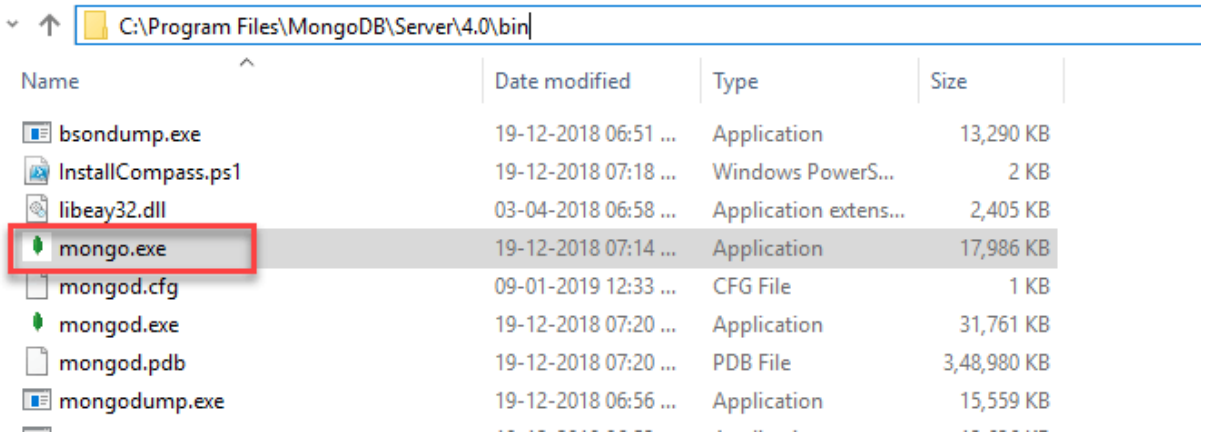


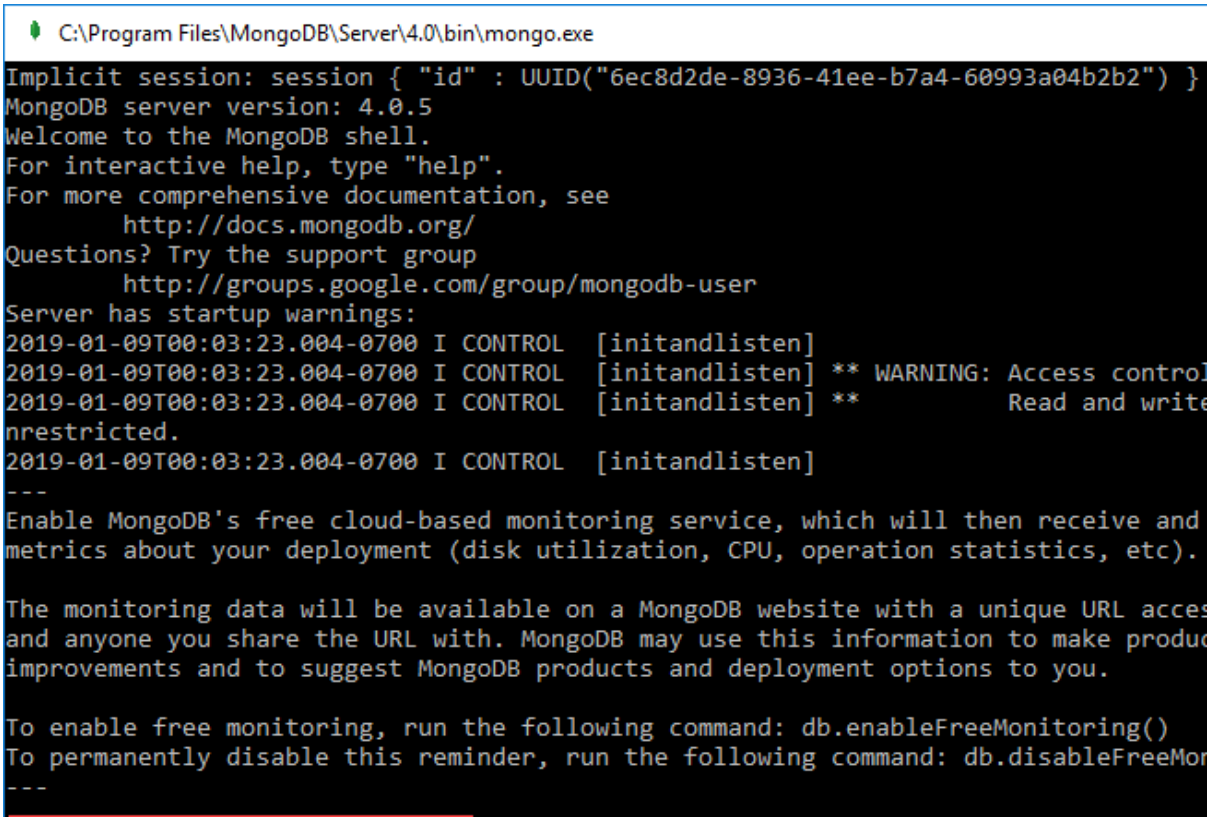
Step 8: Click on the Finish button.

Final step, Once completes the installation, Click on the Finish button.



Step 9: Go to" C:\Program Files\MongoDB\Server\4.0\bin" and double click on mongo.exe. Alternatively, you can also click on the MongoDB desktop item.





Program no: 13

CRUD Operations in NoSql.

1. Create a database school and create a collection class.

Command Prompt - mongo

```
Microsoft Windows [Version 10.0.19042.1237]
(c) Microsoft Corporation. All rights reserved.

C:\Users\HP>mongo
MongoDB shell version v4.4.9
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("41fb551d-62c7-4934-96f1-1a6f63ccaeb3") }
MongoDB server version: 4.4.9
---
The server generated these startup warnings when booting:
        2021-10-13T12:17:04.559+05:30: Access control is not enabled for the database. Read and write access
        2021-10-13T12:17:04.560+05:30: This server is bound to localhost. Remote systems will be unable to c
d serve responses from, or with --bind_ip_all to bind to all interfaces. If this behavior is desired, start
---
---
        Enable MongoDB's free cloud-based monitoring service, which will then receive and display
        metrics about your deployment (disk utilization, CPU, operation statistics, etc).

        The monitoring data will be available on a MongoDB website with a unique URL accessible to you
        and anyone you share the URL with. MongoDB may use this information to make product
        improvements and to suggest MongoDB products and deployment options to you.

        To enable free monitoring, run the following command: db.enableFreeMonitoring()
        To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
> show dbs
Test     0.000GB
admin    0.000GB
config   0.000GB
food     0.000GB
local    0.000GB
student  0.000GB
> use school
switched to db school
> db.class
school.class
>
```

2. Insert values into class.

```
> db.class.insert([{"id":"5","name":"sree","mark":"60"}]);
BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
})
>
```

```
> db.class.insertMany([{"id":"1","name":"anu","mark":"50"},{"id":"2","name":"appu","mark":"52"},
... {"id":"3","name":"manu","mark":"45"},{"id":"4","name":"arya","mark":"55"}]);
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("61668eef1712115868448dd9"),
                ObjectId("61668eef1712115868448dda"),
                ObjectId("61668eef1712115868448ddb"),
                ObjectId("61668eef1712115868448ddc")
        ]
}
```

3. Display the whole data in the collection ‘class’.

```
> db.class.find();
{ "_id" : ObjectId("61668eef1712115868448dd9"), "id" : "1", "name" : "anu", "mark" : "50" }
{ "_id" : ObjectId("61668eef1712115868448dda"), "id" : "2", "name" : "appu", "mark" : "52" }
{ "_id" : ObjectId("61668eef1712115868448ddb"), "id" : "3", "name" : "manu", "mark" : "45" }
{ "_id" : ObjectId("61668eef1712115868448ddc"), "id" : "4", "name" : "arya", "mark" : "55" }
{ "_id" : ObjectId("61668f511712115868448ddd"), "id" : "5", "name" : "sree", "mark" : "60" }
>
```

4. Display the details of the student with id=4.

```
> db.class.find({"id":"4"});
{ "_id" : ObjectId("61668eef1712115868448ddc"), "id" : "4", "name" : "arya", "mark" : "55" }
>
```

5. Display the details of the students whose mark is greater than 50.

```
> db.class.find({"mark":{"$gt":"50"}});
{ "_id" : ObjectId("61668eef1712115868448dda"), "id" : "2", "name" : "appu", "mark" : "52" }
{ "_id" : ObjectId("61668eef1712115868448ddc"), "id" : "4", "name" : "arya", "mark" : "55" }
{ "_id" : ObjectId("61668f511712115868448ddd"), "id" : "5", "name" : "sree", "mark" : "60" }
>
```

6. Display the details of the students whose mark is greater than or equal to 55.

```
> db.class.find({"mark":{"$gte":"55"}});
{ "_id" : ObjectId("61668eef1712115868448ddc"), "id" : "4", "name" : "arya", "mark" : "55" }
{ "_id" : ObjectId("61668f511712115868448ddd"), "id" : "5", "name" : "sree", "mark" : "60" }
>
```

7. Display the details of the students whose mark is less than 50.

```
> db.class.find({"mark":{"$lt":"50"}});
{ "_id" : ObjectId("61668eef1712115868448ddb"), "id" : "3", "name" : "manu", "mark" : "45" }
>
```

8. Display the details of the students whose mark is less than or equal to 50.

```
> db.class.find({"mark":{"$lte":"50"}});
{ "_id" : ObjectId("61668eef1712115868448dd9"), "id" : "1", "name" : "anu", "mark" : "50" }
{ "_id" : ObjectId("61668eef1712115868448ddb"), "id" : "3", "name" : "manu", "mark" : "45" }
>
```

9. Display the details of the student whose mark is equal to 60.

```
> db.class.find({"mark":{"$eq":"60"}});
{ "_id" : ObjectId("61668f511712115868448ddd"), "id" : "5", "name" : "sree", "mark" : "60" }
>
```

10. Find out the total number of entries to the class.

```
> db.class.count();
5
>
```

11. Update the name of the student Anu to Anupama.

```
> db.class.update({"id":"1"},{"$set":{"name":"Anupama"}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.class.find({"id":"1"});
{ "_id" : ObjectId("61668eef1712115868448dd9"), "id" : "1", "name" : "Anupama", "mark" : "50" }
>
```

```
> db.class.update(
... {
... "id":"5"
... },
... {
... "$set":
... {
... "name":"sreerag","mark":"57"
... }});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

```
> db.class.find({"id":"5"});
{ "_id" : ObjectId("61668f511712115868448ddd"), "id" : "5", "name" : "sreerag", "mark" : "57" }
>
```

12. Remove the student whose id equal to 2.

```
> db.class.remove({"id":"2"});
WriteResult({ "nRemoved" : 1 })
>
```

13. Drop the collection class.

```
> db.class.drop();
true
>
```