**Bahria University, Lahore Campus**

Department of Computer Sciences

Lab Journal 08

**(Fall 2023)**

|  |  |  |
| --- | --- | --- |
| Course: | **Database Management System Lab** |  |
| Course Code: | CSL 220 | Max Marks: |
| Faculty’s Name: |  | Lab Engineer: |

Name: affan ahmad Enroll No: \_03-134221-003\_\_

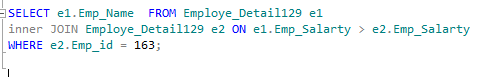
**Subquery**

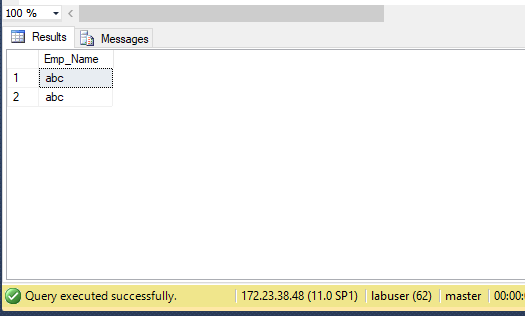
**Task 1**

Use the following Table Perform the following tasks

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EMPLOYEE\_ID | FIRST\_NAME | LAST\_NAME | EMAIL | PHONE\_NUMBER | HIRE\_DATE | JOB\_ID | SALARY | COMMISSION\_PCT | MANAGER\_ID | DEPARTMENT\_ID |
|  |  |  |  |  |  |  |  |  |  |  |

1. Write a SQL query to find those employees who receive a higher salary than the employee with ID 163. Return first name, last name.





1. Write a SQL query to find out which employees have the same designation as the employee whose ID is 169. Return first name, last name, department ID and job ID.

SELECT e.Emp\_Salarty , d.Dept\_id, e.job\_id

FROM Employe\_Detail127 e,Department\_Detail129 d

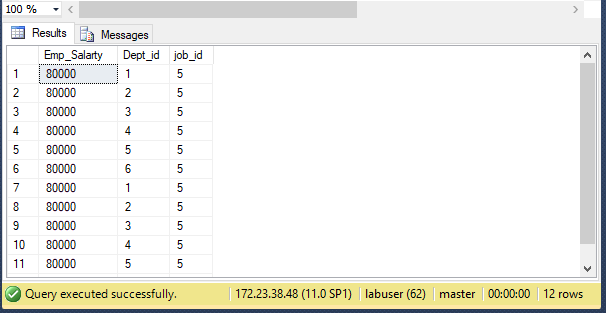
WHERE job\_id =

( SELECT job\_id

FROM Employe\_Detail127

WHERE Emp\_id=169

);



1. Write a SQL query to find those employees whose salary matches the lowest salary of any of the departments. Return first name, last name and department ID.

SELECT Emp\_Name, Emp\_Salarty, Dept\_id

FROM Employe\_Detail127

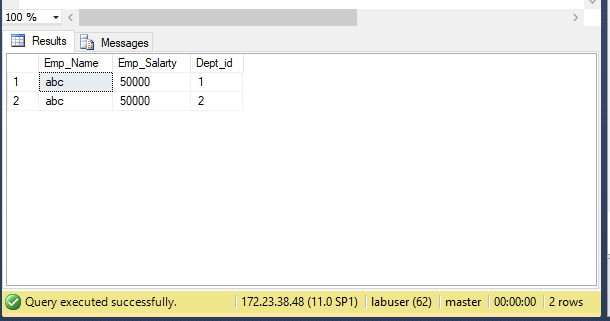
WHERE Emp\_Salarty IN

( SELECT MIN(Emp\_Salarty)

FROM Employe\_Detail127 e , Department\_Detail128 d

where e.Dept\_id=d.Dept\_id

);



1. Write a SQL query to find those employees who earn more than the average salary. Return employee ID, first name, last name.

SELECT Emp\_Name, Emp\_Salarty, Dept\_id

FROM Employe\_Detail127

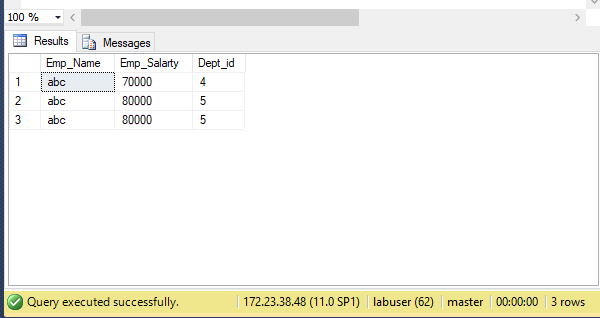
WHERE Emp\_Salarty >

( SELECT avg(Emp\_Salarty)

FROM Employe\_Detail127 e , Department\_Detail128 d

where e.Dept\_id=d.Dept\_id

);



1. Write a SQL query to find those employees who report to that manager whose first name is ‘Payam’. Return first name, last name, employee ID and salary.

SELECT Emp\_Name, Emp\_id , Emp\_Salarty

FROM Employe\_Detail127

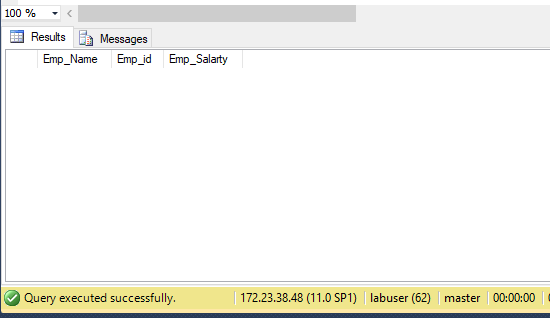
WHERE manager\_id =

(SELECT Emp\_id

FROM Employe\_Detail127

WHERE Emp\_Name = 'Payam'

);



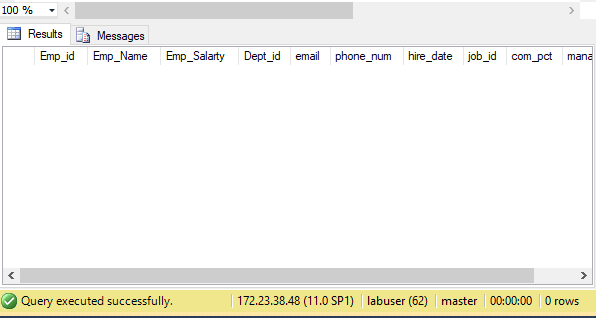
1. Write a SQL query to find the employee whose salary is 3000 and reporting person’s ID is 121. Return all fields.

SELECT \*

FROM Employe\_Detail127 e

WHERE e.Emp\_Salarty = 3000

AND EXISTS (SELECT 1 FROM Employe\_Detail127 m WHERE m.Emp\_id = 121 AND e.manager\_id = m.Emp\_id);



1. Write a SQL query to find all those employees who work in the Finance department. Return department ID, name (first), job ID and department name.

SELECT \*

from Department\_Detail128

WHERE Dept\_id =

(SELECT e.Dept\_id

FROM Employe\_Detail127 e

);

**Joins**

**Task 2**

Implement this database

create database JOINS

use joins

create table Employe\_Detail

(Emp\_id int primary key ,

Emp\_Name nvarchar(15),

Emp\_Salarty int ,

Dept\_id int foreign key references Department\_Detail (Dept\_id )

);

Create table Department\_Detail

(

Dept\_id int not null primary key ,

Dept\_Name nvarchar (15)

);

create table Employe\_Detail127

(Emp\_id int primary key ,

Emp\_Name nvarchar(15),

Emp\_Salarty int ,

Dept\_id int foreign key references Department\_Detail (Dept\_id ),

email varchar (50),

phone\_num int ,

hire\_date varchar(25),

job\_id int ,

com\_pct int ,

manager\_id int ,

);

Create table Department\_Detail128

(

Dept\_id int not null primary key ,

Dept\_Name nvarchar (15),

job\_id int

);

**Task 3**

Insert data

insert into Employe\_Detail values (1, 'abc',50000,1);

insert into Employe\_Detail values (2, 'abc',50000,2);

insert into Department\_Detail values (1,'CS'),(2,'BS'),(3,'EE'),(4,'IT'),(5,'BBA'),(6,'MBA')

select \* from Employe\_Detail

select \* from Department\_Detail

insert into Employe\_Detail127 values (1, 'abc',50000,1,'adaw',003,23,1,1000,1);

insert into Employe\_Detail127 values (2, 'abc',50000,2,'adad',567,23,2,5000,2);

insert into Employe\_Detail127 values (163, 'abc',60000,3,'adasd',678,23,3,67000,3);

insert into Employe\_Detail127 values (160, 'abc',70000,4,'adad',234,23,4,89000,4);

insert into Employe\_Detail127 values (169, 'abc',80000,5,'adada',434,23,5,30000,5);

insert into Employe\_Detail127 values (161, 'payam',80000,5,'adada',434,23,5,30000,5);

insert into Department\_Detail128 values (1,'CS',1),(2,'BS',2),(3,'EE',3),(4,'IT',4),(5,'BBA',5),(6,'MBA',6)

**Task 4**

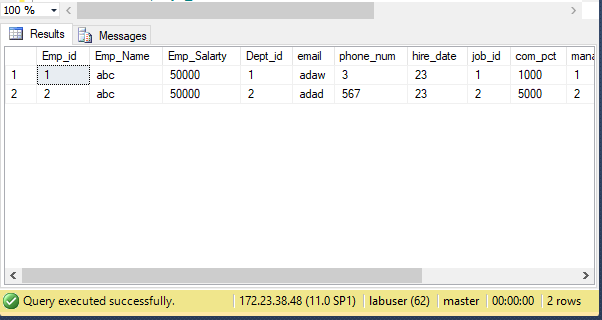
Implement joins

select \* from Employe\_Detail

inner join Department\_Detail

on

Employe\_Detail.Emp\_id = Department\_Detail.dept\_id;

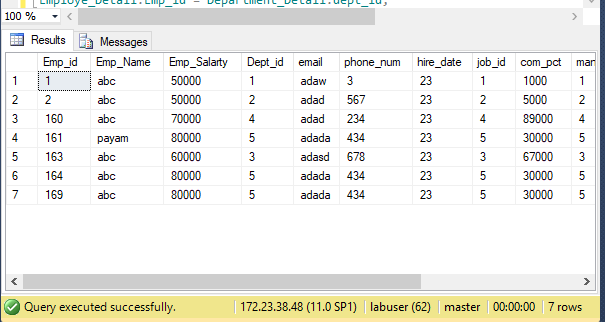


select \* from Employe\_Detail

left join Department\_Detail

on

Employe\_Detail.Emp\_id = Department\_Detail.dept\_id;

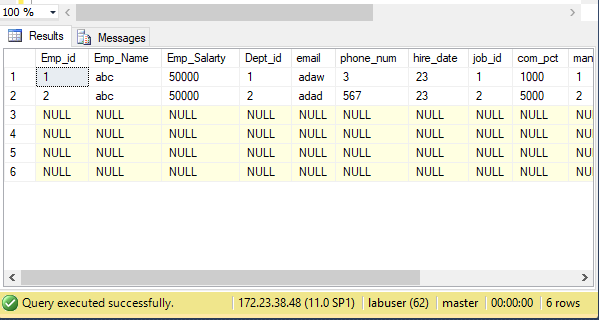


select \* from Employe\_Detail

right join Department\_Detail

on

Employe\_Detail.Emp\_id = Department\_Detail.dept\_id;

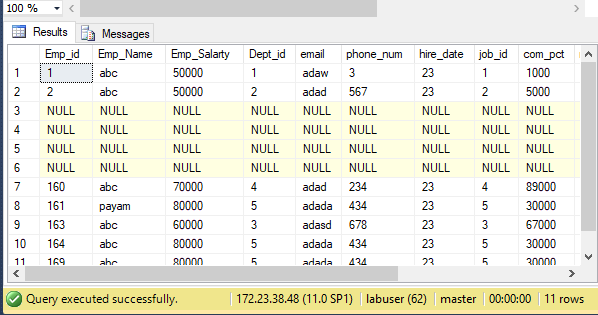


select \* from Employe\_Detail

full join Department\_Detail

on

Employe\_Detail.Emp\_id = Department\_Detail.dept\_id;



**Lab Grading Sheet :**

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Max Marks** | **Obtained Marks** | **Comments(*if any*)** |
| 1. | 10 |  |  |
| 2 | 10 |  |  |
| 3 | 10 |  |  |
| 4 | 10 |  |  |
| **Total** | **40** |  | **Signature** |

**Note : Attempt all tasks and get them checked by your Lab. Instructor**