

DBMS Lab

Assignment - 6

Dated: 15-03-2021

Sub Code: CSE-227

Vivek Kumar Ahirwar

191112419

CSE - 3

Department of
Computer Science and Engineering

Subject Coordinator:
Dr. Sweta Jain & Dr. Nikhil Kumar Singh



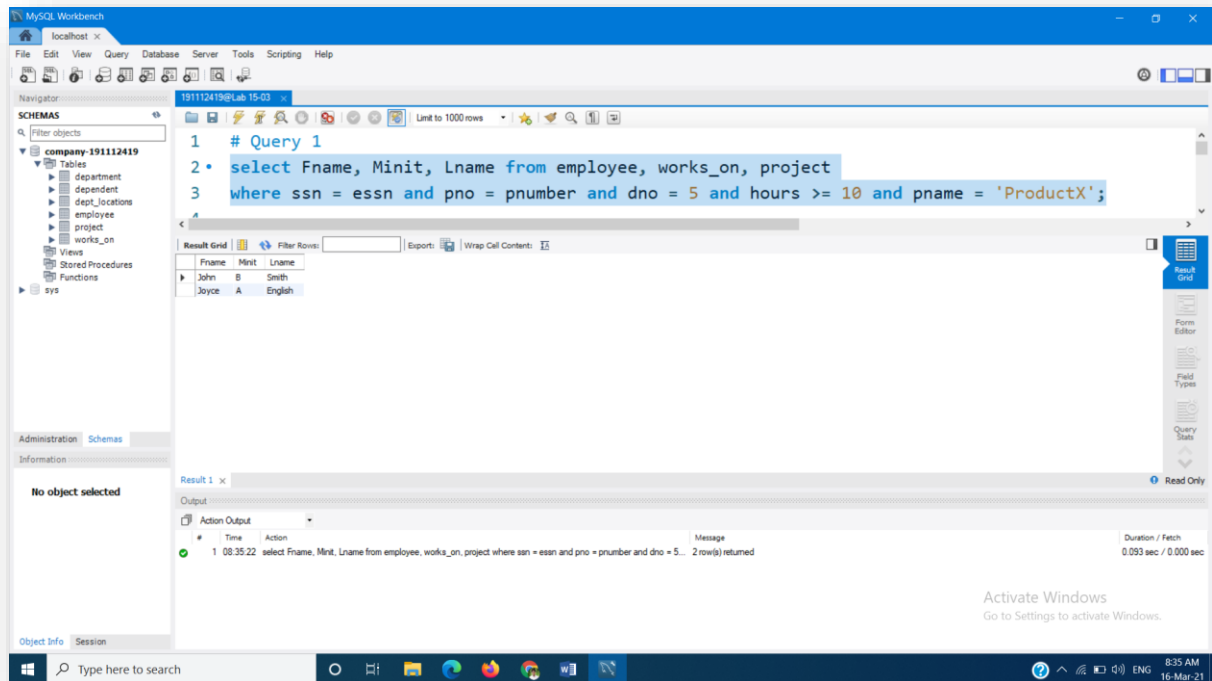
Maulana Azad
National Institute of Technology,
BHOPAL – 462 003 (INDIA)

Contents

Query 1 : Retrieve the names of all employee in dept. no. 5 who work for more than 10hrs./week on 'projectX' project.	2
Query 2 : List name of employee who have a dependent with same first name as themselves.	3
Query 3 : Find name of employee who are directly supervised by 'Franklin Wong'.	4
Query 4 : For each project, list project name, total no. of hours spent on that project per week by all the employee.	5
Query 5 : Retrieve name of all employee who work on every project.	6
Query 6 : Retrieve name of all employee who don't work on any project.	7
Query 7 : Retrieve dept. name and avg. salary of employee.	8
Query 8 : Find name and add of all employee who work on at least one project location in Houston but whose dept. has no location in Houston.	9
Query 9 : List last name of all department managers who have no dependents.	10
Query 10 : For each dept. whose avg employee salary is more than 30000, Retrieve dept. name and no. of employee working in the department.	11
Query 11 : Make list of project no. for projects that involve an employee whose LNAME IS 'smith' either as a worker or a manager of dept. that controls the project.	12
Query 12 : Find the list of employee who work on more than two projects.	13
Query 13 : Find employee whose salary > avg salary of his dept.	14
Limit Query	15
Create View Query	16
Drop View Query	17

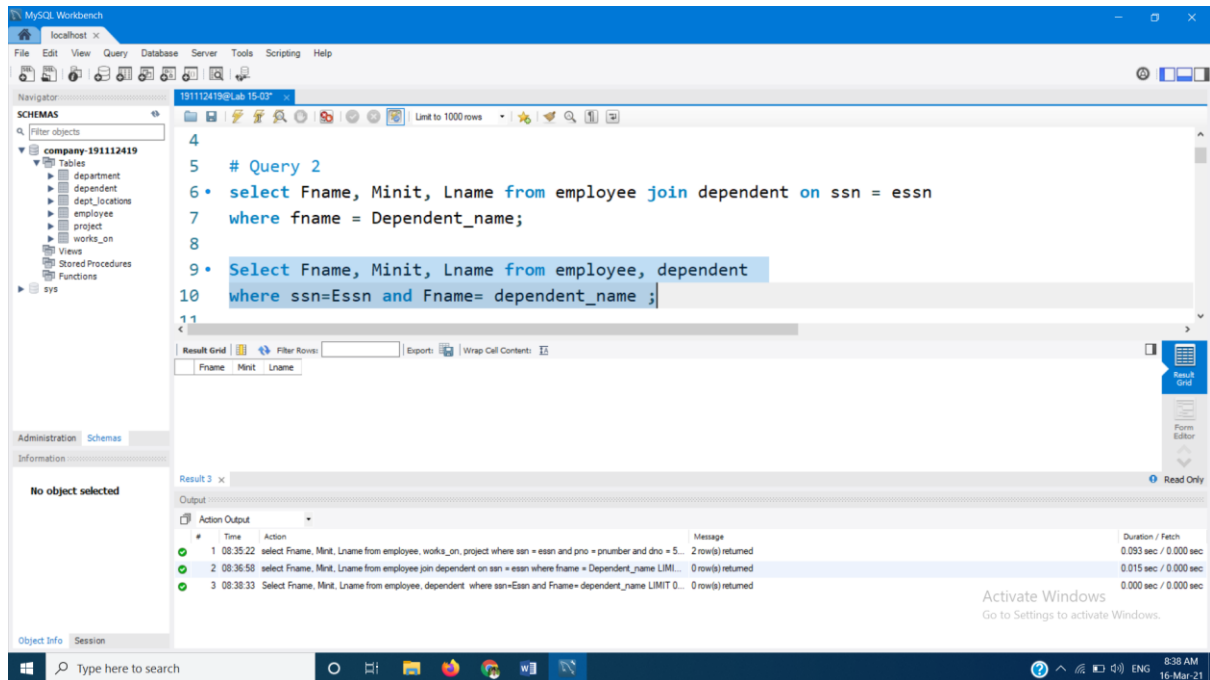
Query 1 : Retrieve the names of all employee in dept. no. 5 who work for more than 10hrs./week on 'productX' project.

```
select Fname, Minit, Lname from employee, works_on, project
where ssn = essn and pno = pnumber and dno = 5 and hours >= 10
and pname = 'ProductX';
```



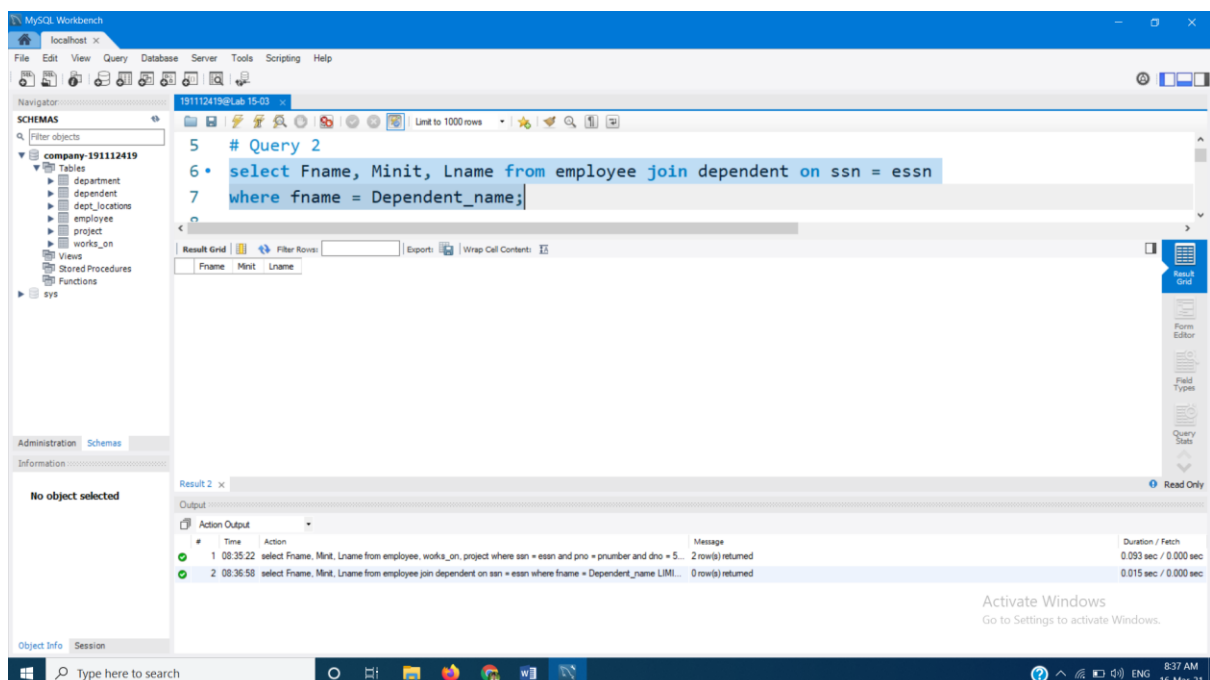
Query 2 : List name of employee who have a dependent with same first name as themselves.

select Fname, Minit, Lname from employee join dependent on ssn = essn
where fname = Dependent_name;



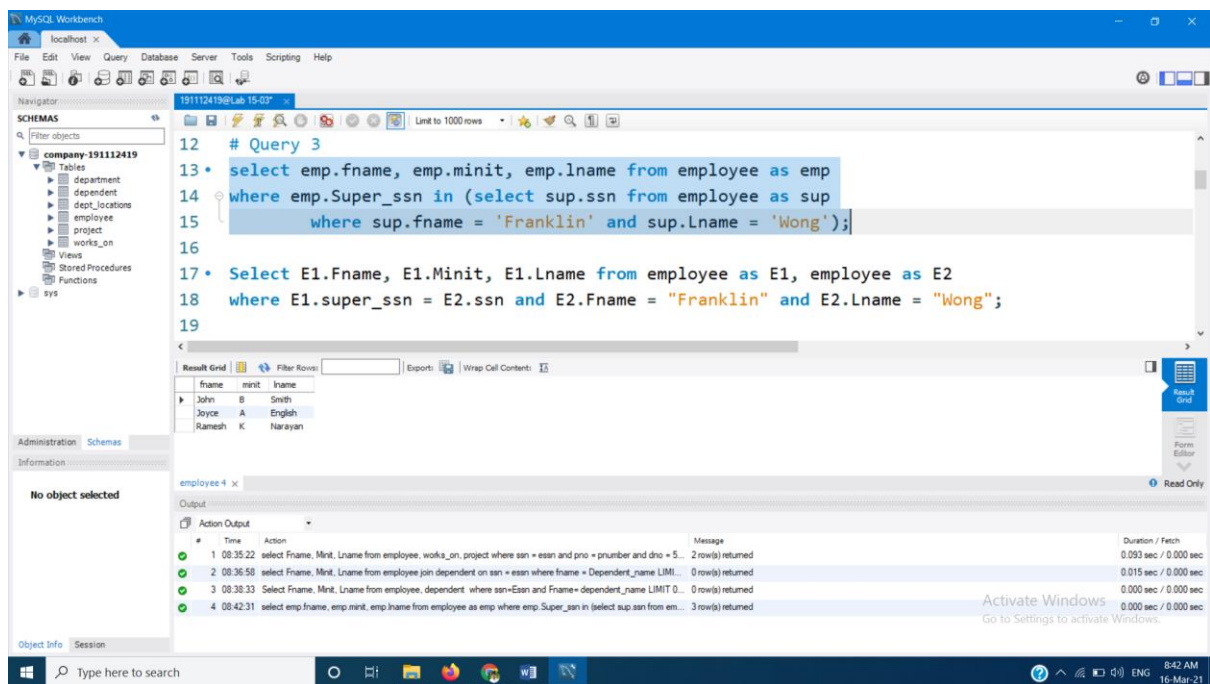
Or

select Fname, Minit, Lname from employee, dependent
where ssn=Essn and Fname= dependent_name;



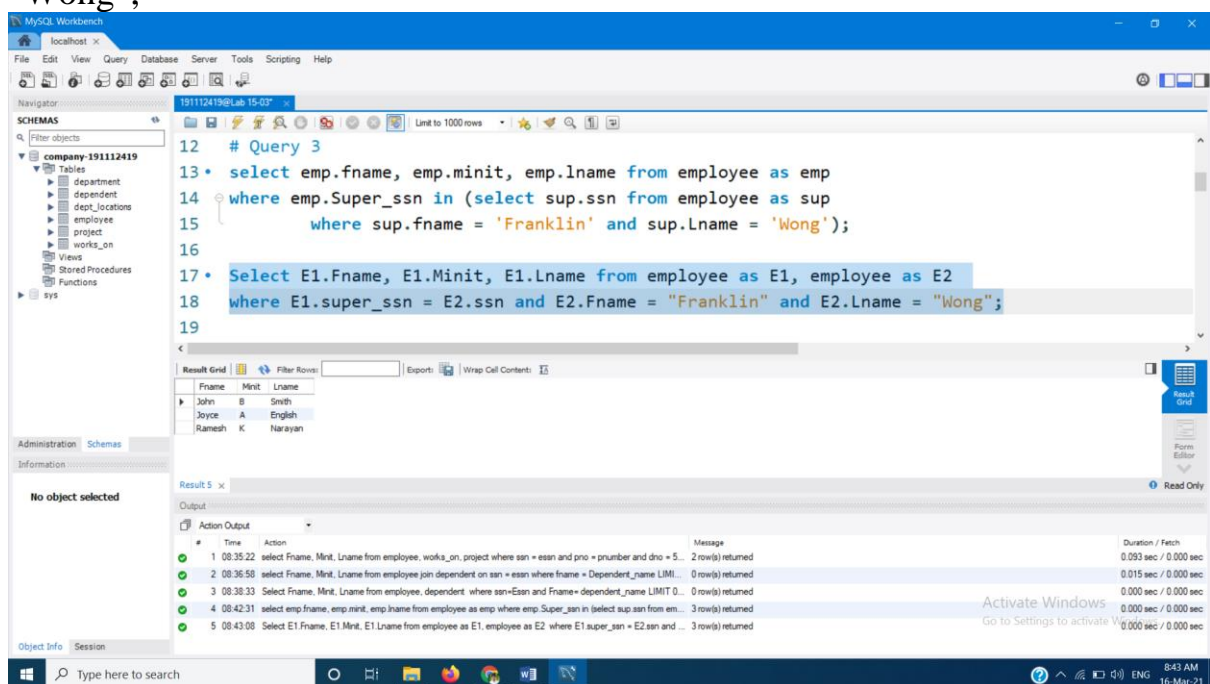
Query 3 : Find name of employee who are directly supervised by 'Franklin Wong'.

select emp.fname, emp.minit, emp.lname from employee as emp
where emp.Super_ssn in (select sup.ssn from employee as sup
where sup.fname = 'Franklin' and sup.Lname = 'Wong');



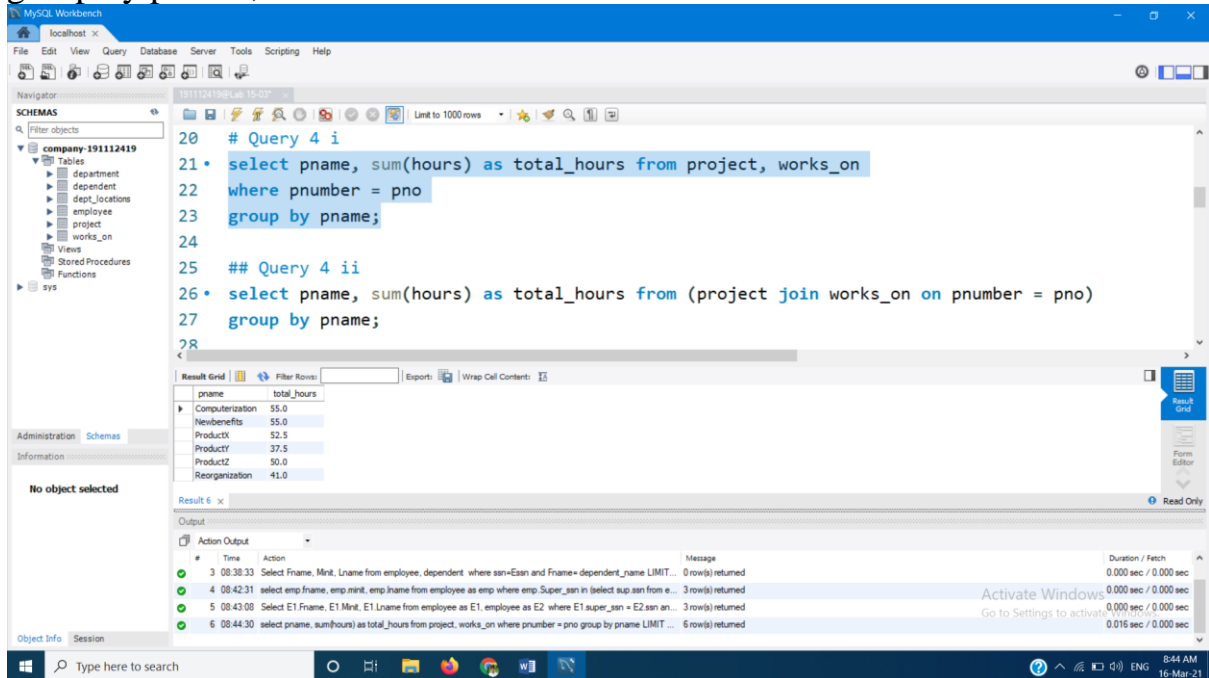
Or

Select E1.Fname, E1.Minit, E1.Lname from employee as E1, employee as E2
where E1.super_ssn = E2.ssn and E2.Fname = "Franklin" and E2.Lname = "Wong";



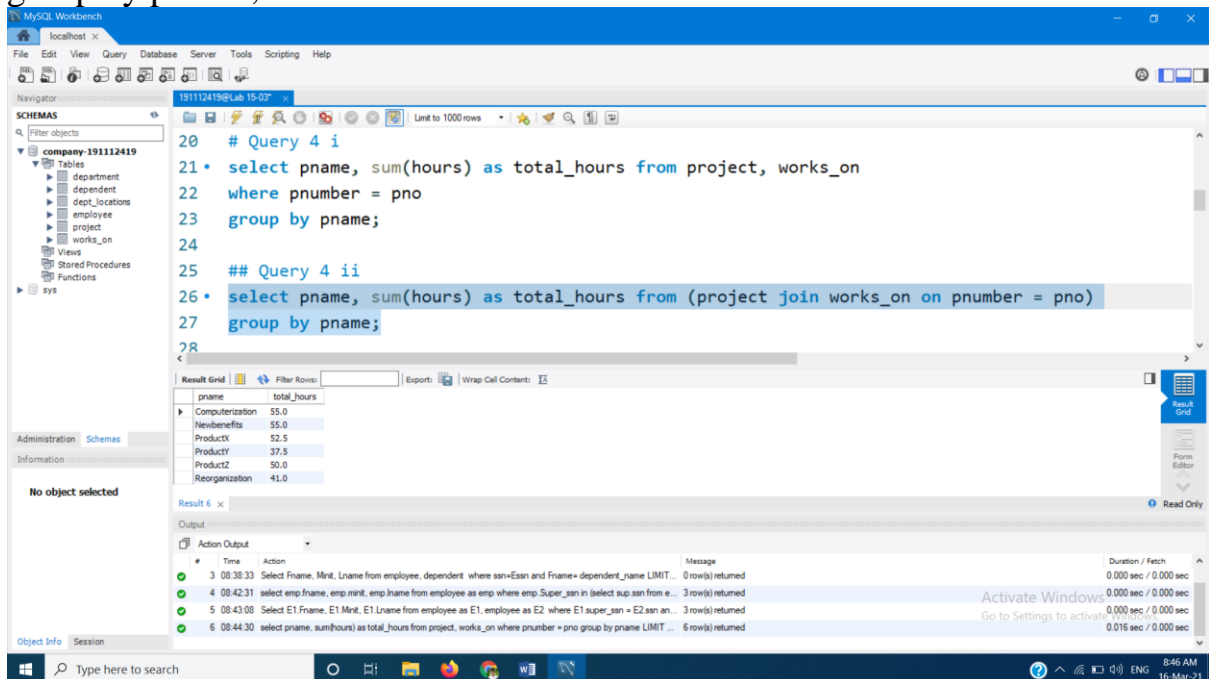
Query 4 : For each project, list project name, total no. of hours spent on that project per week by all the employee.

select pname, sum(hours) as total_hours from project, works_on
where pnumber = pno
group by pname;



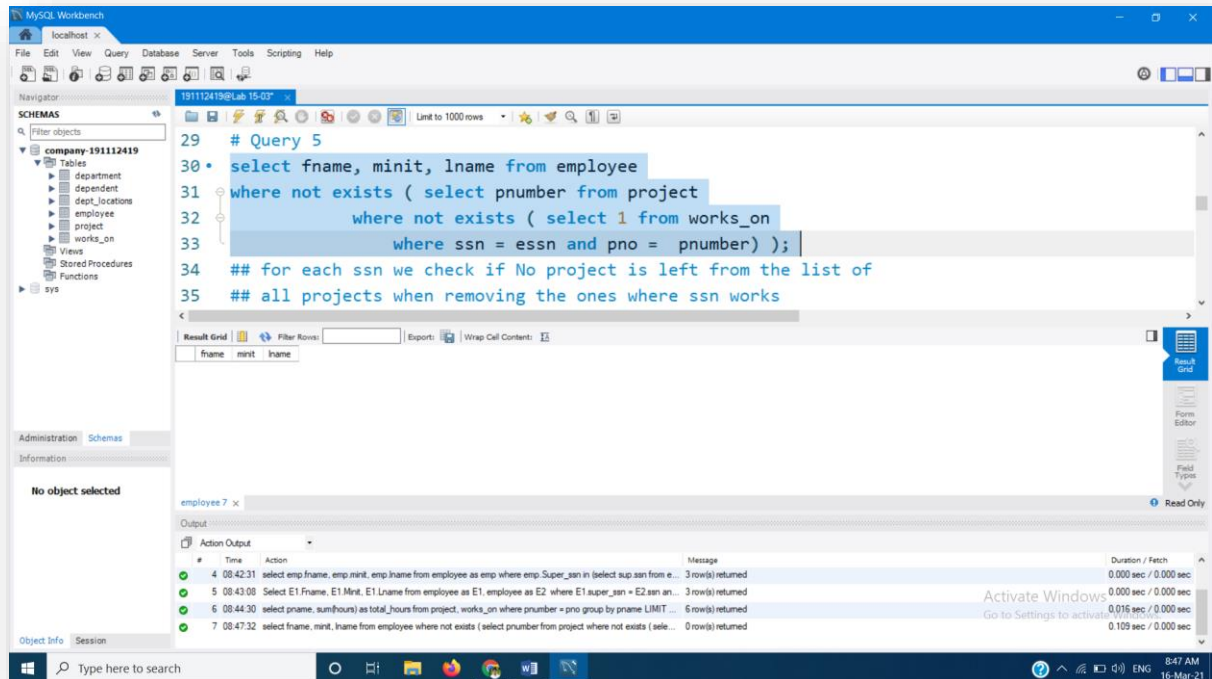
Or

select pname, sum(hours) as total_hours from
(project join works_on on pnumber = pno)
group by pname;



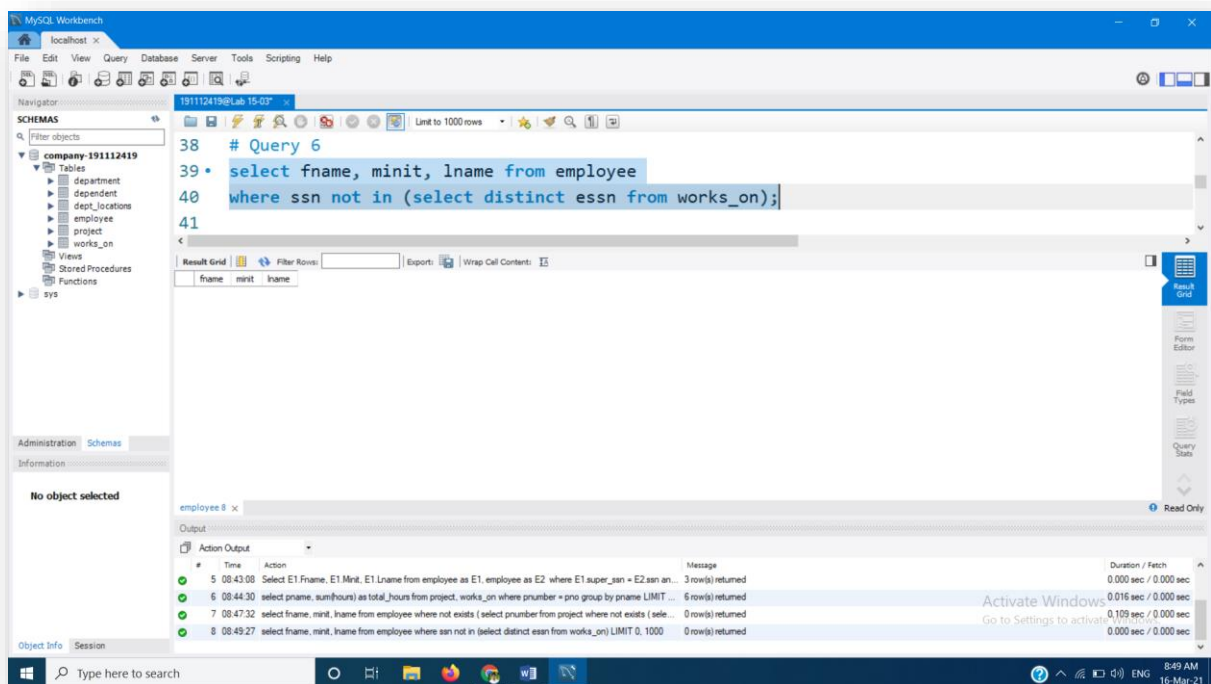
Query 5 : Retrieve name of all employee who work on every project.

select fname, minit, lname from employee
where not exists (select pnumber from project
 where not exists (select 1 from works_on
 where ssn = essn and pno = pnumber));



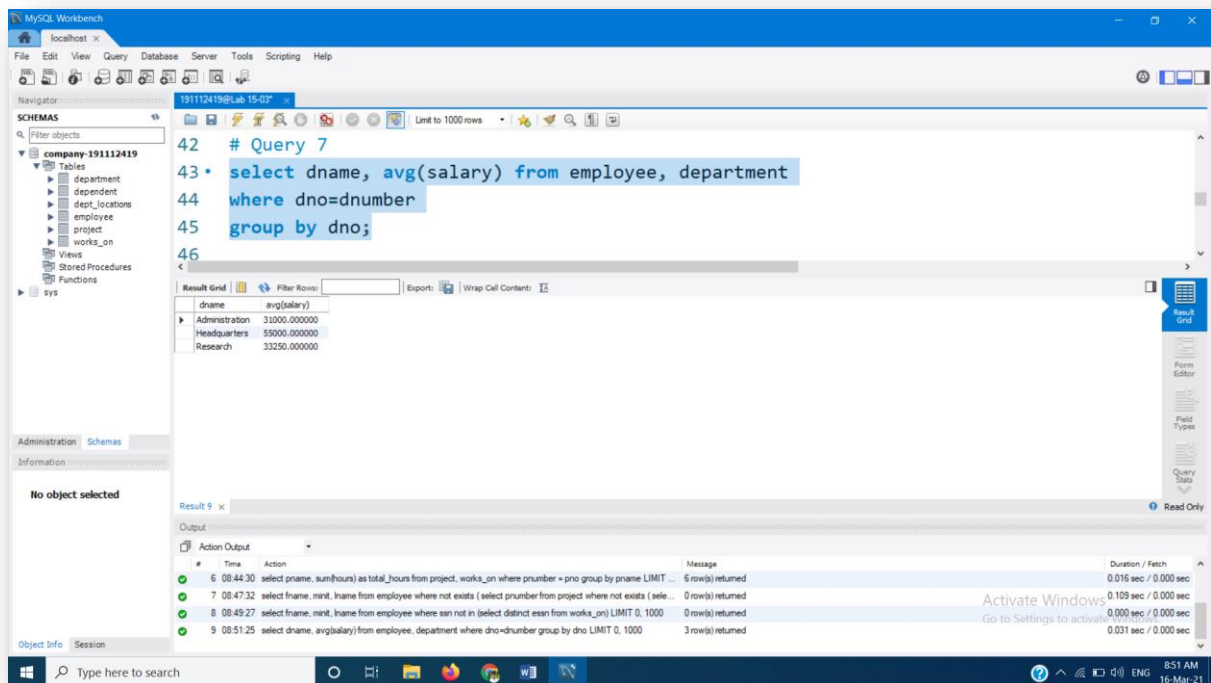
Query 6 : Retrieve name of all employee who don't work on any project.

```
select fname, minit, lname from employee  
where ssn not in (select distinct essn from works_on);
```



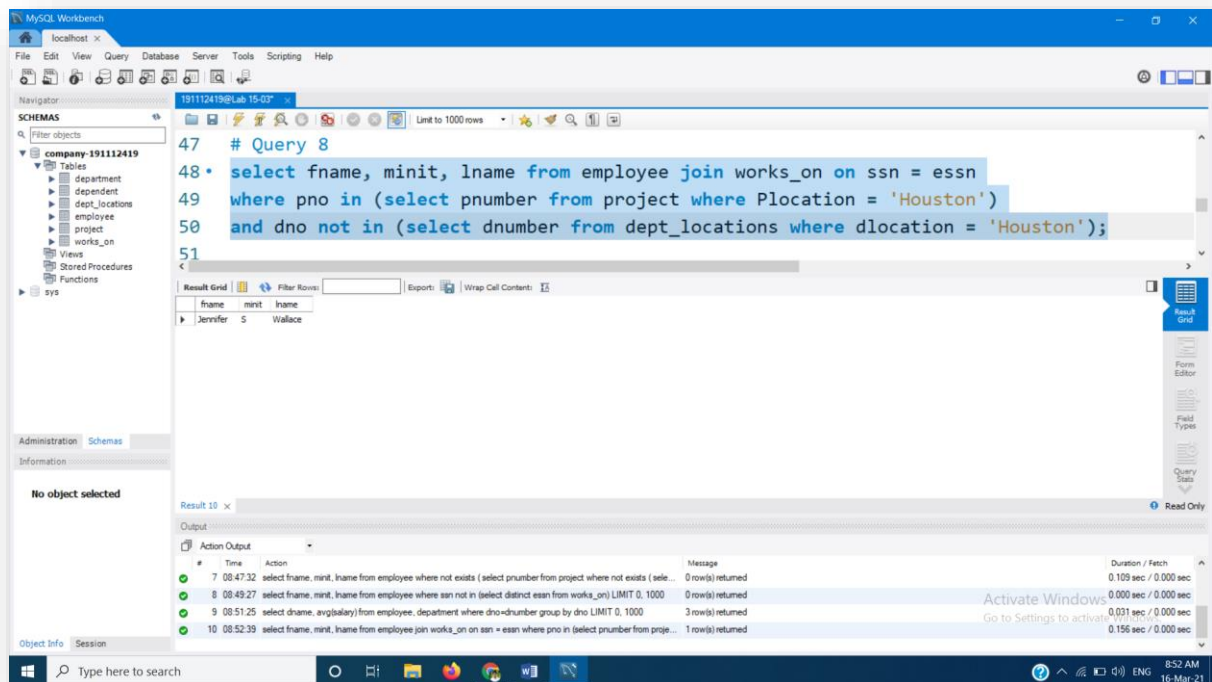
Query 7 : Retrieve dept. name and avg. salary of employee.

select dname, avg(salary) from employee, department
where dno=dnumber
group by dno;



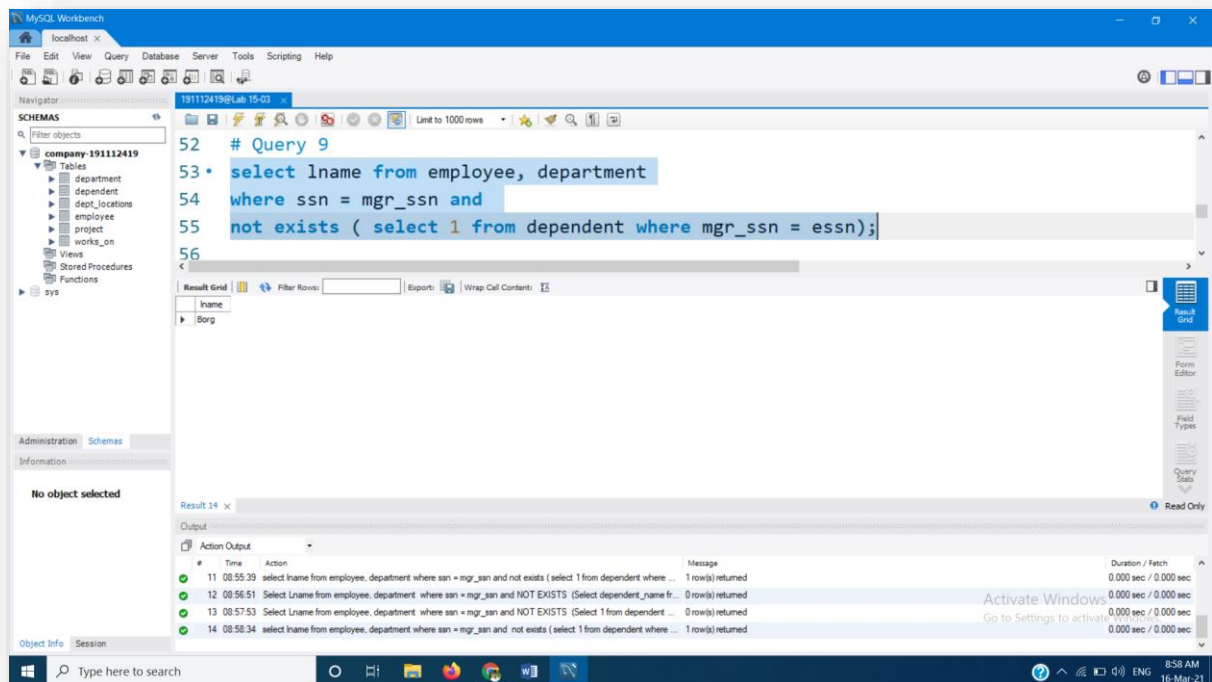
Query 8 : Find name and add of all employee who work on at least one project location in Houston but whose dept. has no location in Houston.

select fname, minit, lname from employee join works_on on ssn = essn
where pno in (select pnumber from project where Plocation = 'Houston')
and dno not in (select dnumber from dept_locations
where dlocation = 'Houston');



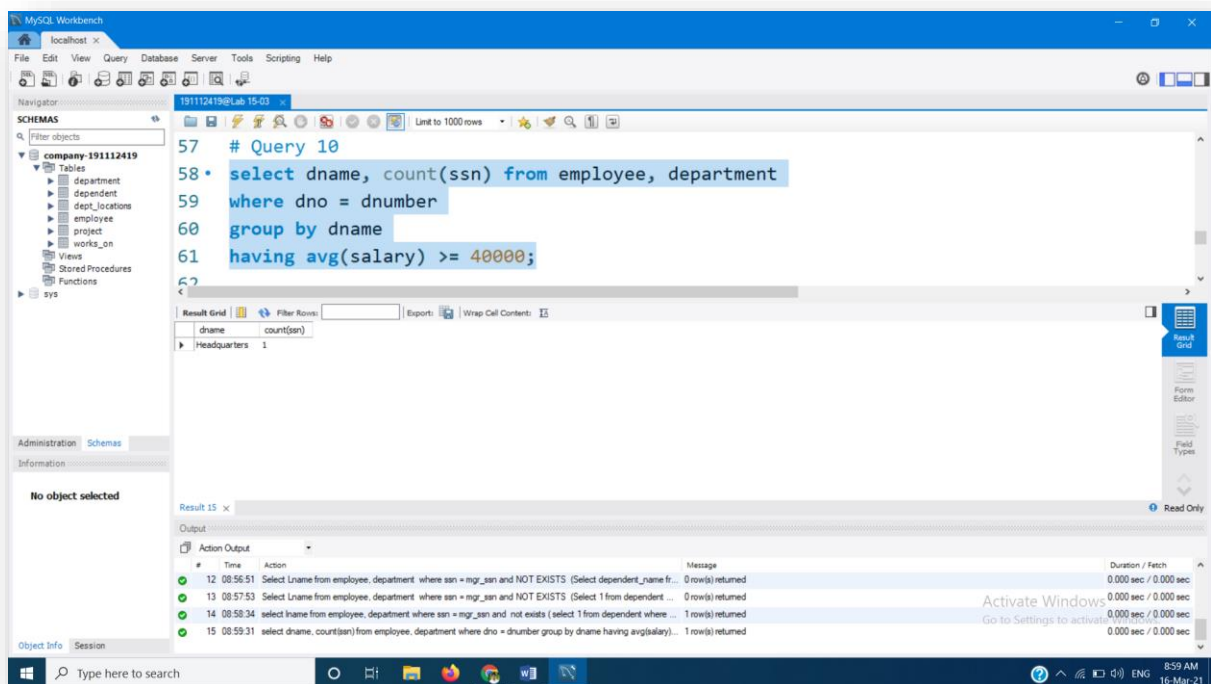
Query 9 : List last name of all department managers who have no dependents.

select lname from employee, department
where ssn = mgr_ssn and
not exists (select 1 from dependent where mgr_ssn = essn);



Query 10 : For each dept. whose avg employee salary is more than 30000, Retrieve dept. name and no. of employee working in the department.

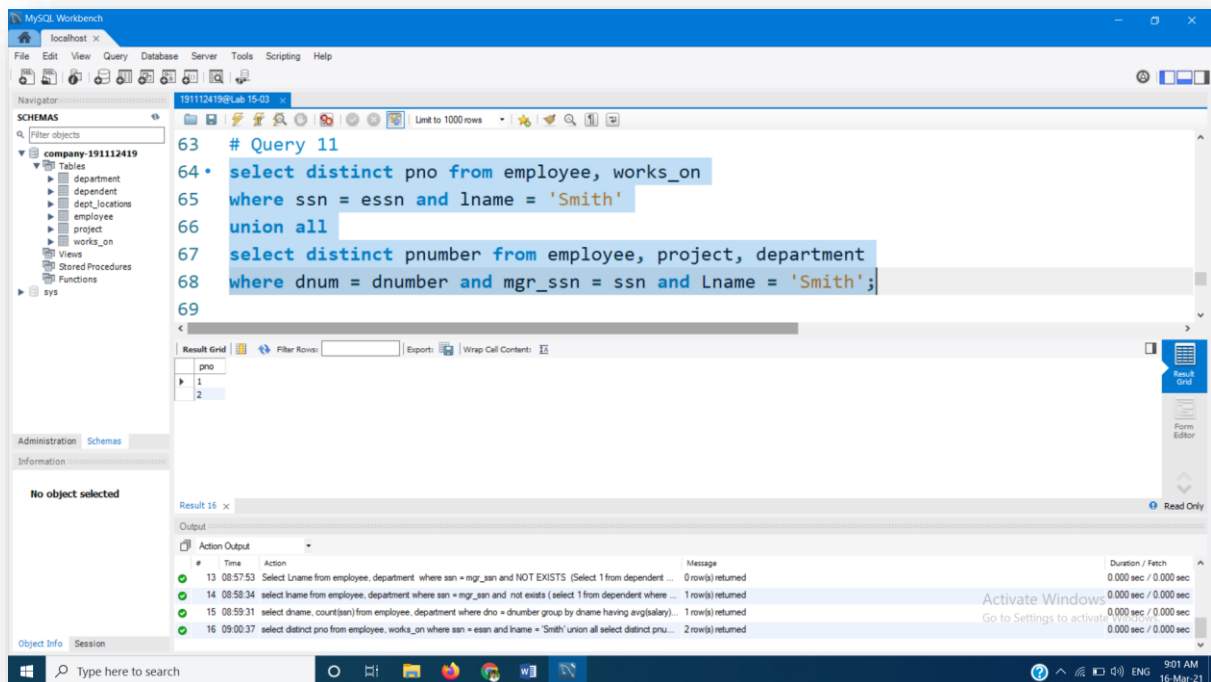
```
select dname, count(ssn) from employee, department
where dno = dnumber
group by dname
having avg(salary) >= 40000;
```



Query 11 : Make list of project no. for projects that involve an employee whose LNAME IS 'smith' either as a worker or a manager of dept. that controls the project.

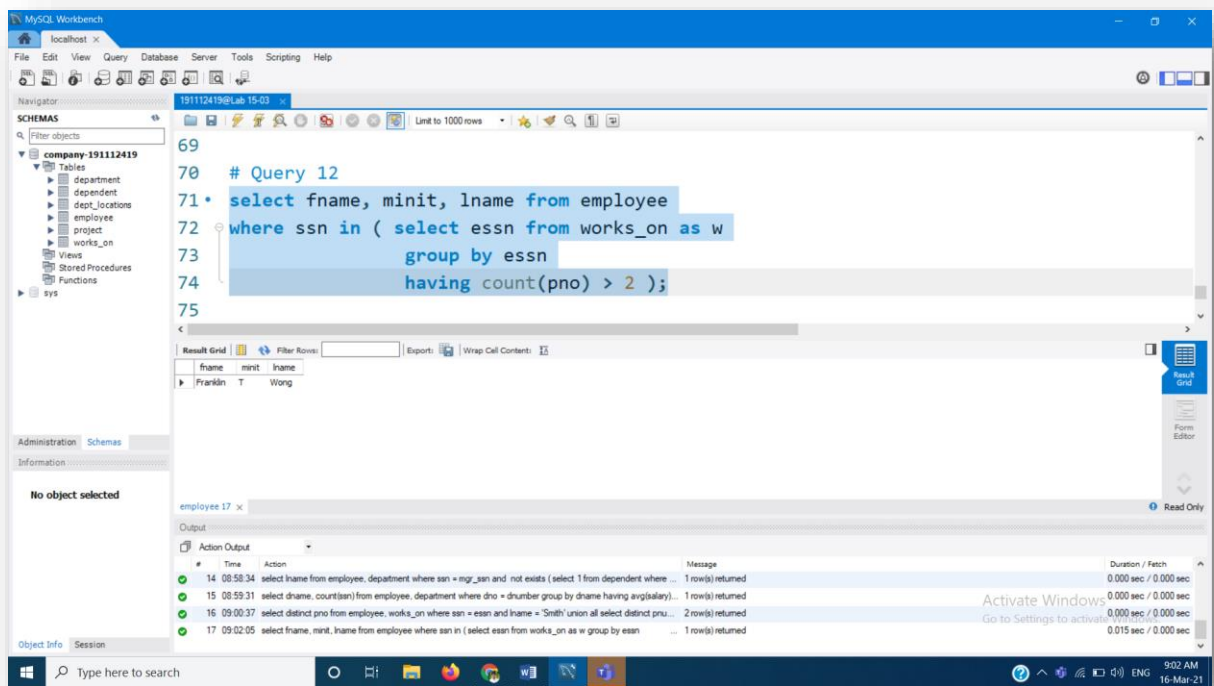
select distinct pno from employee, works_on
where ssn = essn and lname = 'Smith'
union all

select distinct pnumber from employee, project, department
where dnum = dnumber and mgr_ssn = ssn and Lname = 'Smith';



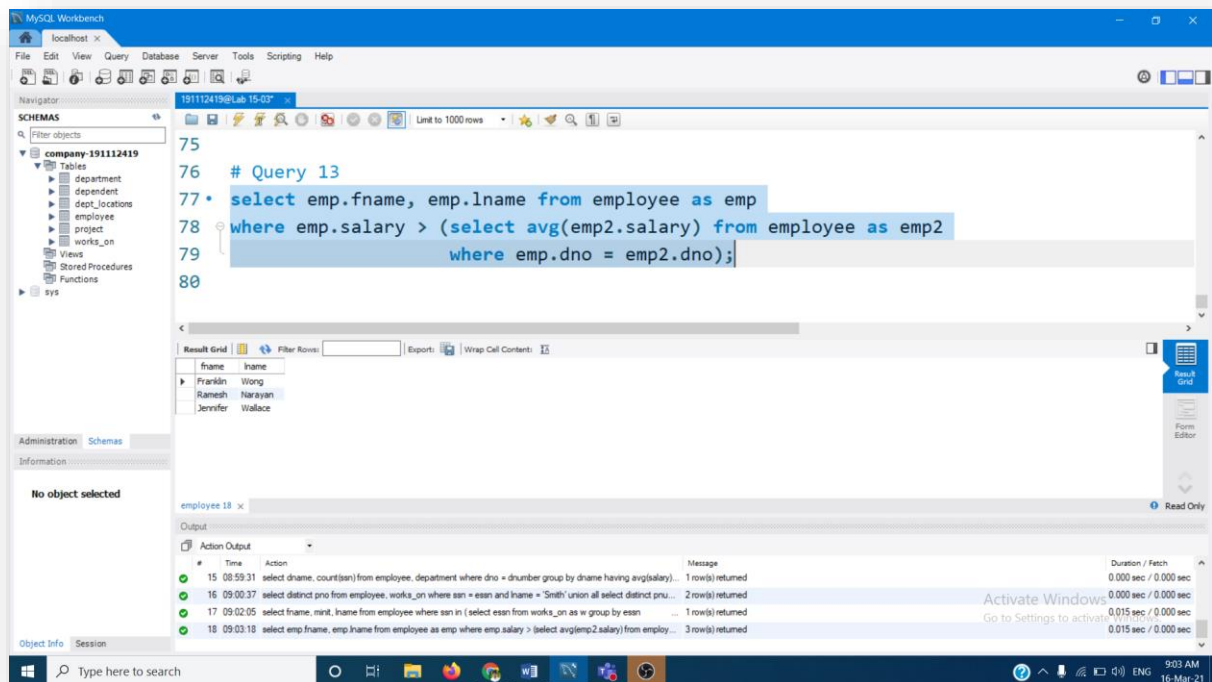
Query 12 : Find the list of employee who work on more than two projects.

```
select fname, minit, lname from employee
where ssn in ( select essn from works_on as w
              group by essn having count(pno) > 2 );
```



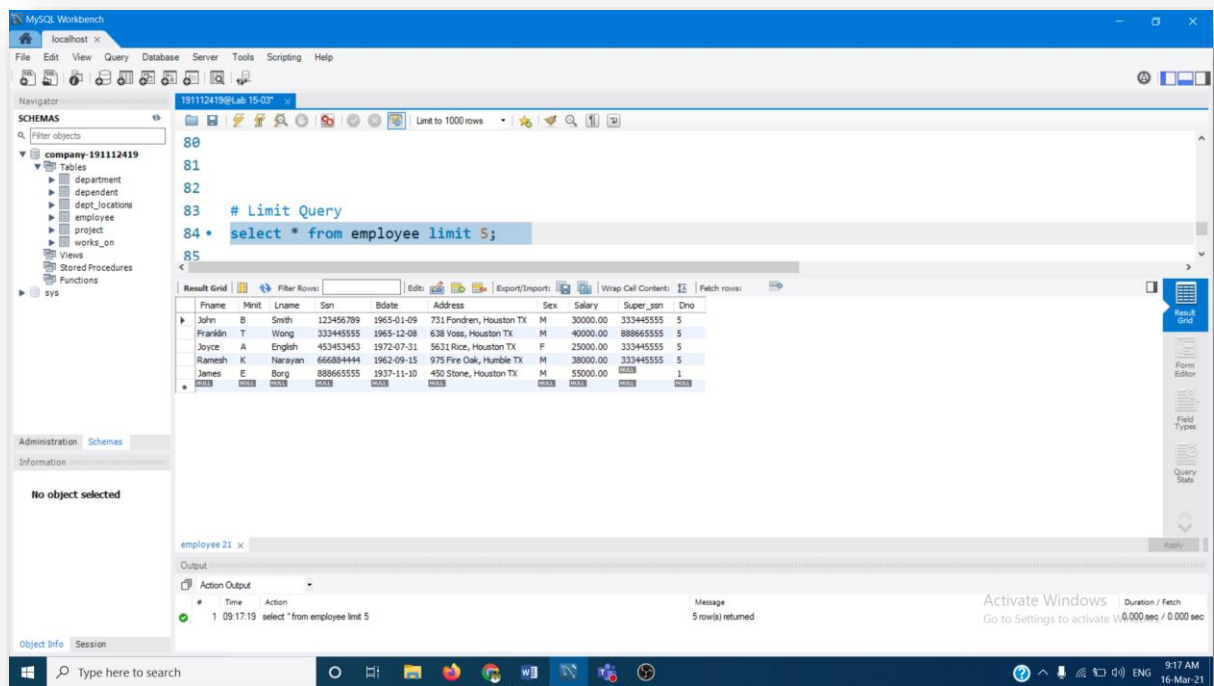
Query 13 : Find employee whose salary > avg salary of his dept.

```
select emp.fname, emp.lname from employee as emp
where emp.salary > (select avg(emp2.salary) from employee as emp2
                    where emp.dno = emp2.dno);
```



Limit Query

`select * from employee limit 5;`



The screenshot displays the MySQL Workbench interface. The SQL editor contains the query `select * from employee limit 5;` on line 84. The result grid shows the first five rows of the `employee` table. The output pane at the bottom indicates that 5 rows were returned.

Id	Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno
1	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston TX	M	30000.00	333445555	5
2	Franklin	T	Wong	333445555	1965-12-08	638 Voss, Houston TX	M	40000.00	888665555	5
3	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston TX	F	25000.00	333445555	5
4	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble TX	M	38000.00	333445555	5
5	James	E	Borg	888665555	1937-11-10	450 Stone, Houston TX	M	55000.00	00000	1

Create View Query

```
create view project_work as
select concat(fname, ' ', Minit, ' ', Lname) as Name,
       Pname as Project, Hours
from employee, project, works_on
where Ssn = Essn and Pno = Pnumber;
select * from project_work;
```

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
87 #create View
88 * create view project_work as
89 select concat(fname, ' ', Minit, ' ', Lname) as Name,
90        Pname as Project, Hours
91 from employee, project, works_on
92 where Ssn = Essn and Pno = Pnumber;
93 * select * from project_work;
```

The Results grid displays the data returned by the query:

Name	Project	Hours
Franklin T. Wong	Computerization	10.0
Ahmad V. Jabbar	Computerization	35.0
Alice J. Zelaya	Computerization	10.0
Jennifer S. Wallace	Newbenefits	20.0
Ahmad V. Jabbar	Newbenefits	5.0
Alice J. Zelaya	Newbenefits	30.0
John B. Smith	Product1	32.5
Joyce A. English	Product1	20.0
John B. Smith	Product1	7.5
Franklin T. Wong	Product1	10.0
Joyce A. English	Product1	20.0
Franklin T. Wong	Product2	10.0
Ramesh K. Narayan	Product2	40.0
Franklin T. Wong	Reorganization	10.0
James E. Borg	Reorganization	16.0

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
2	09:19:52	select * from project_work LIMIT 0, 1000	16 row(s) returned	0.000 sec / 0.000 sec
3	09:20:27	select * from project_work LIMIT 0, 1000	16 row(s) returned	0.000 sec / 0.000 sec

Drop View Query

drop view project_work;

