ASSIGNMENT

DBMS Lab

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Assignment Queries

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Contents

1. Query 1

Find employees who work in Department 5 for more than 5 hours on 'Product X'

1.1. Source Code

```
select Fname,Minit,LName from employee,works_on,project
    where Ssn=Essn and Pno=Pnumber and Dno=5 and hours>=10 and Pname='ProductX';
```

1.2. Output

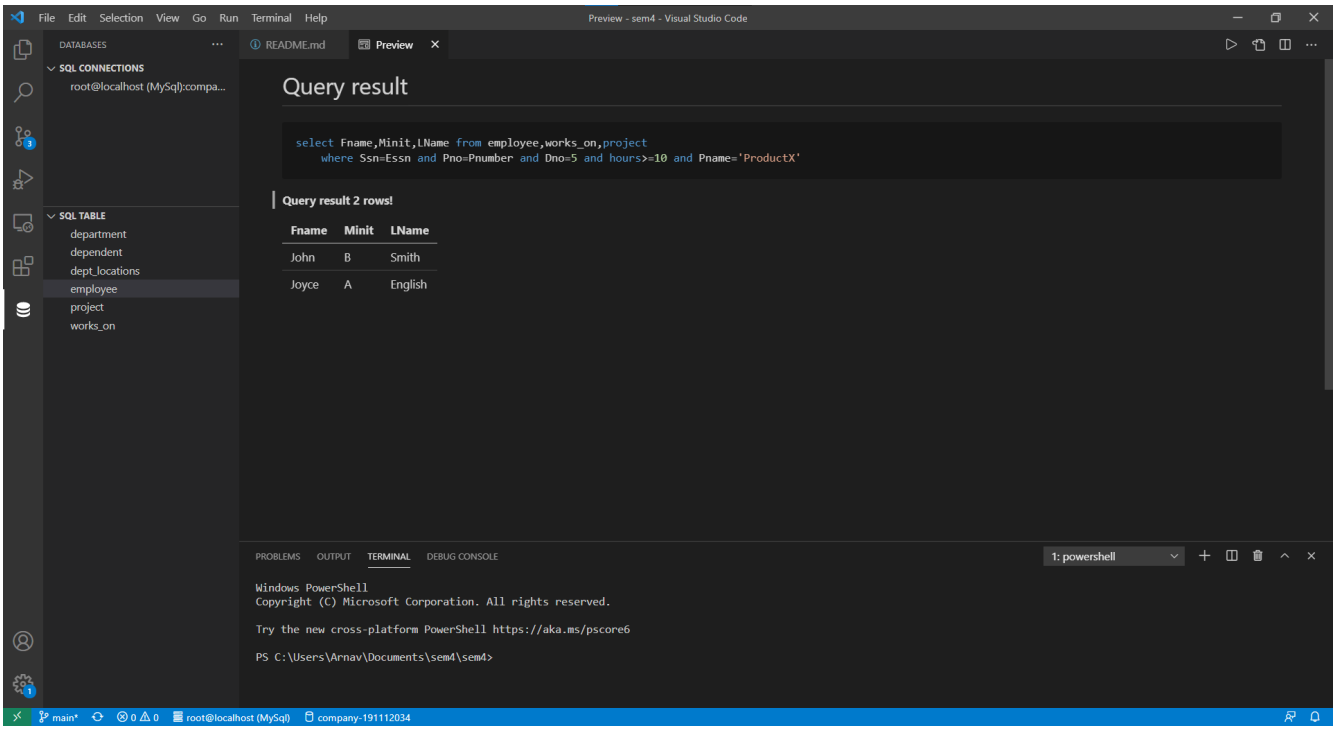

Figure 1: Query 1

2. Query 2

Find Dependents who have same first name as employees.

2.1. Source Code

```
select Fname,Minit,Lname from employee, dependent
    where Ssn=Essn and Fname=Dependent_name;
```

2.2. Output

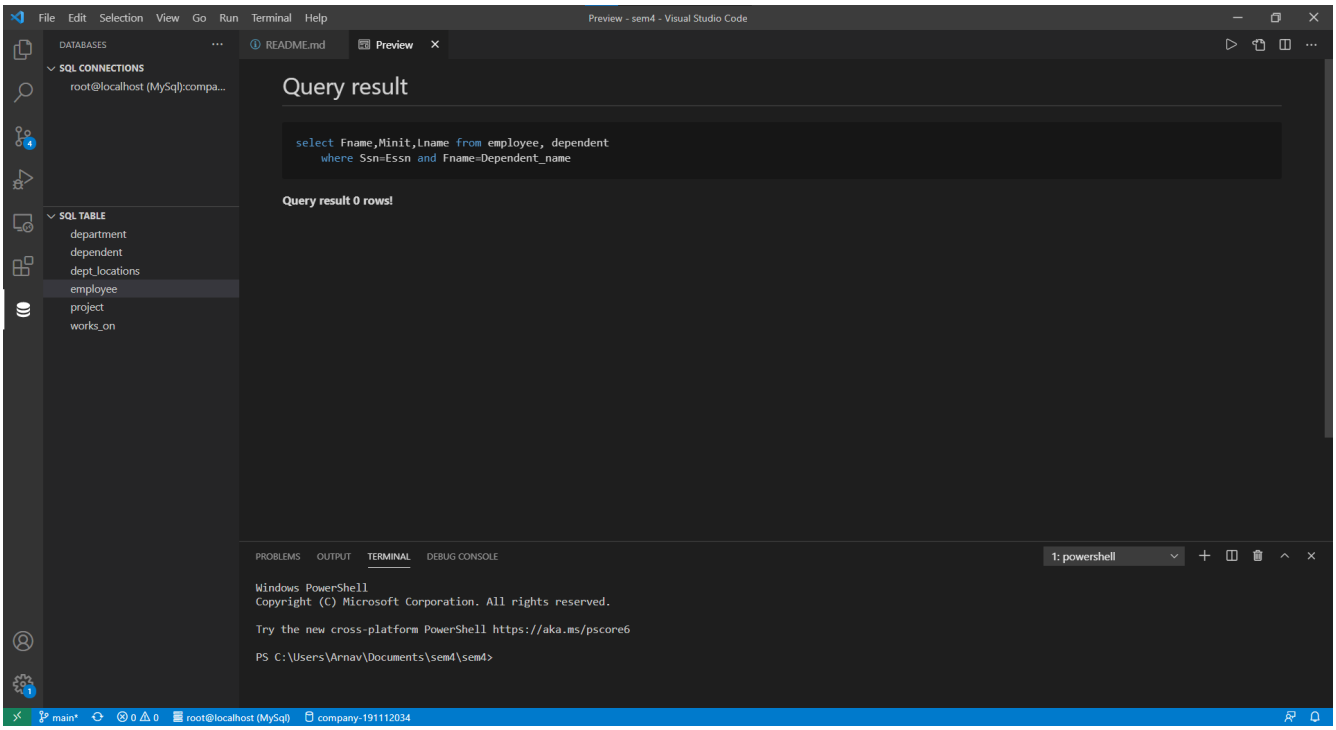

Figure 2: Query 2

3. Query 3

Find employees whose supervisor is 'Franklin Wong'

3.1. Source Code

```
select E1.Fname,E1.Lname from Employee E1,Employee E2
    where E1.Super_ssn=E2.Ssn and E2.Fname='Franklin' and E2.Lname='Wong';
```

3.2. Output

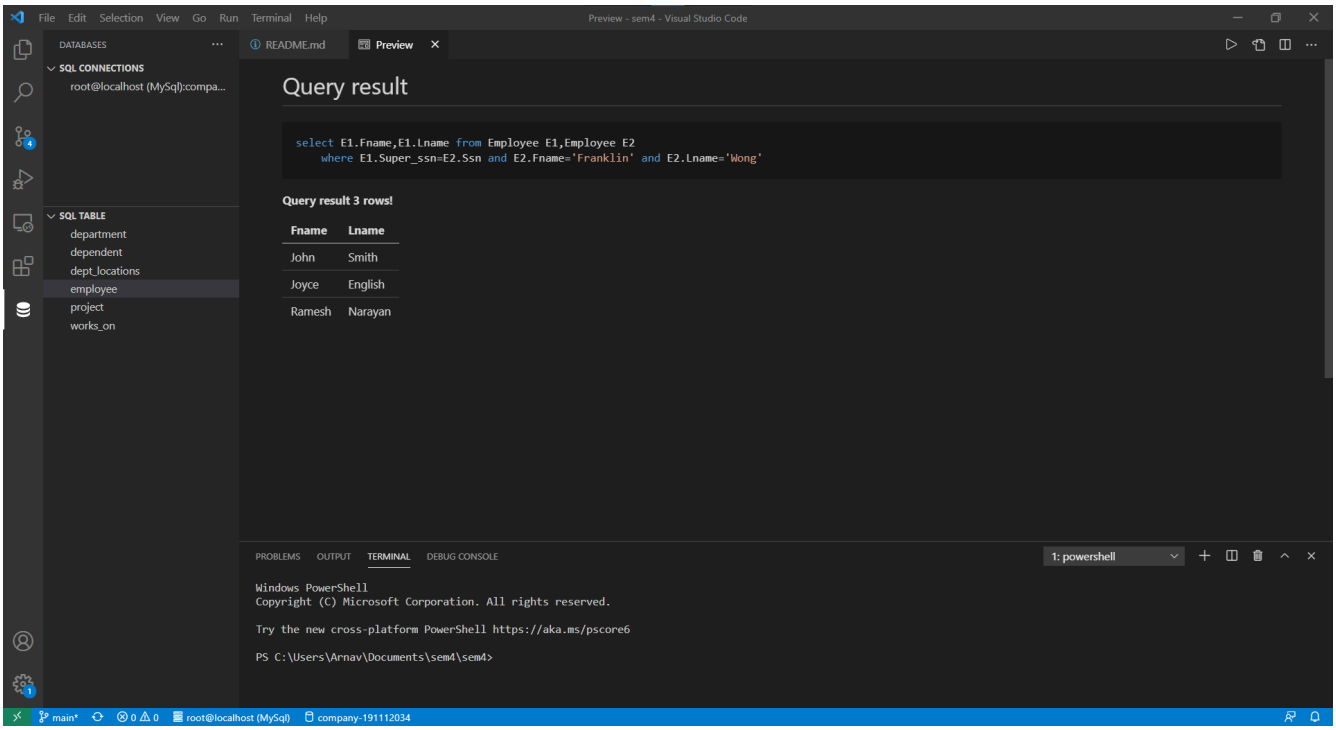

Figure 3: Query 3

4. Query 4

Find total hours worked on each project

4.1. Source Code

```
select Pname,sum(hours) from (Project join works_on on Pnumber=Pno)
    group by Pname;
```

4.2. Output

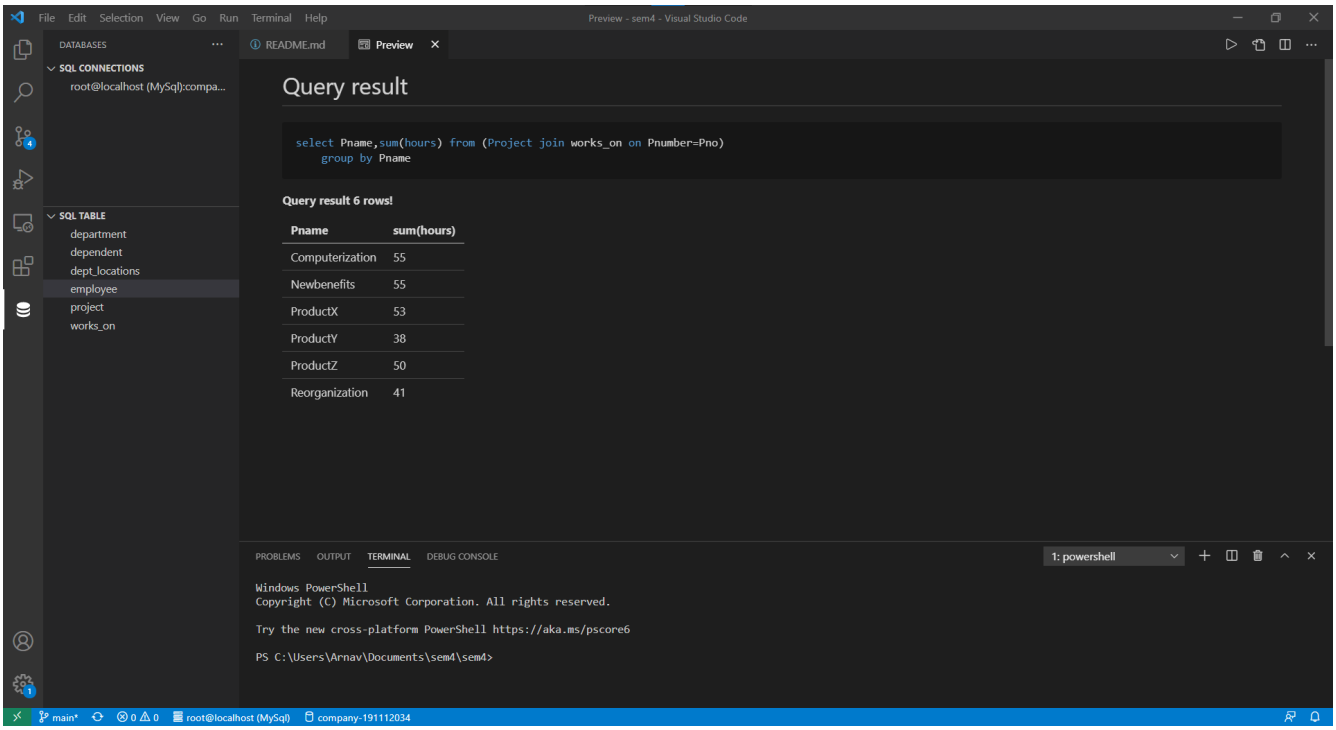

Figure 4: Query 4

5. Query 5

Find employees who work on every project

5.1. Source Code

```
select Fname, Minit, Lname from employee
    where not exists
        (select Pnumber from project where not exists
            (select Pno from works_on where Pnumber=Pno and Essn=Ssn));
```

5.2. Output

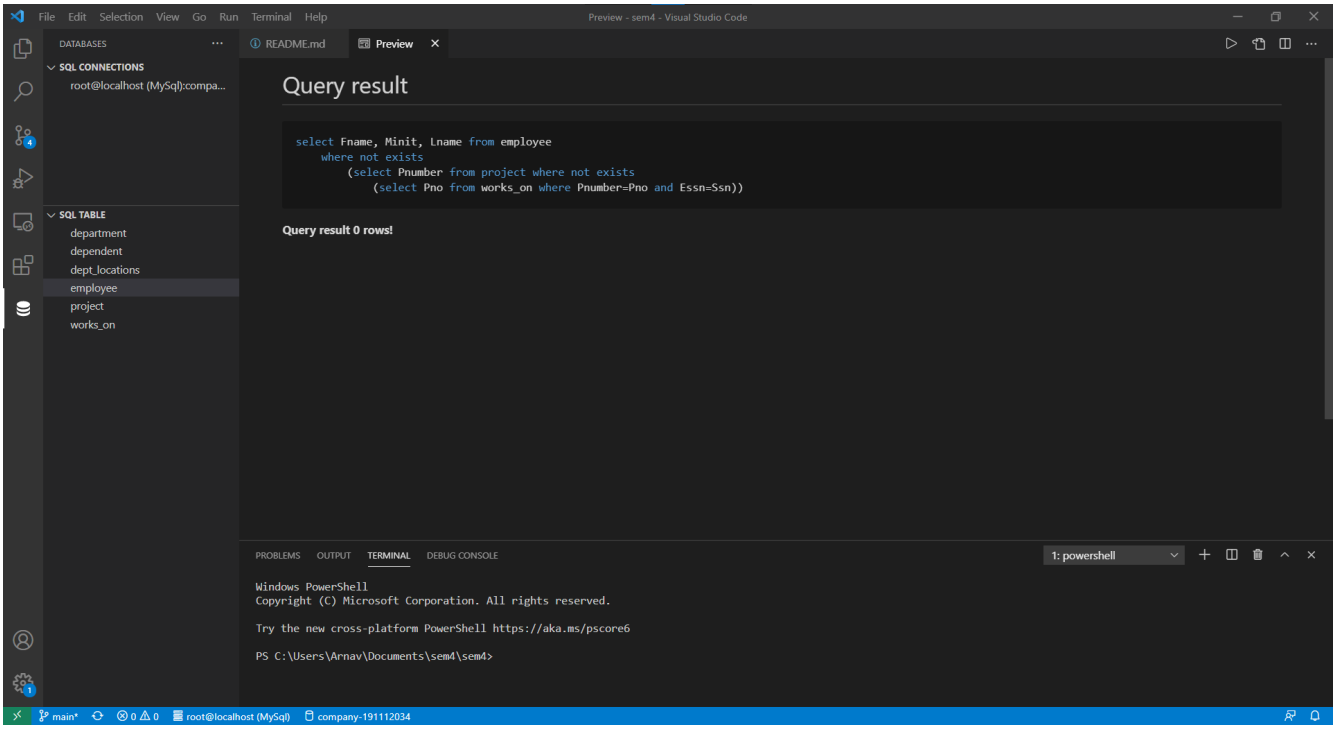

Figure 5: Query 5

6. Query 6

Find employees who do not work on any project

6.1. Source Code

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

6.2. Output

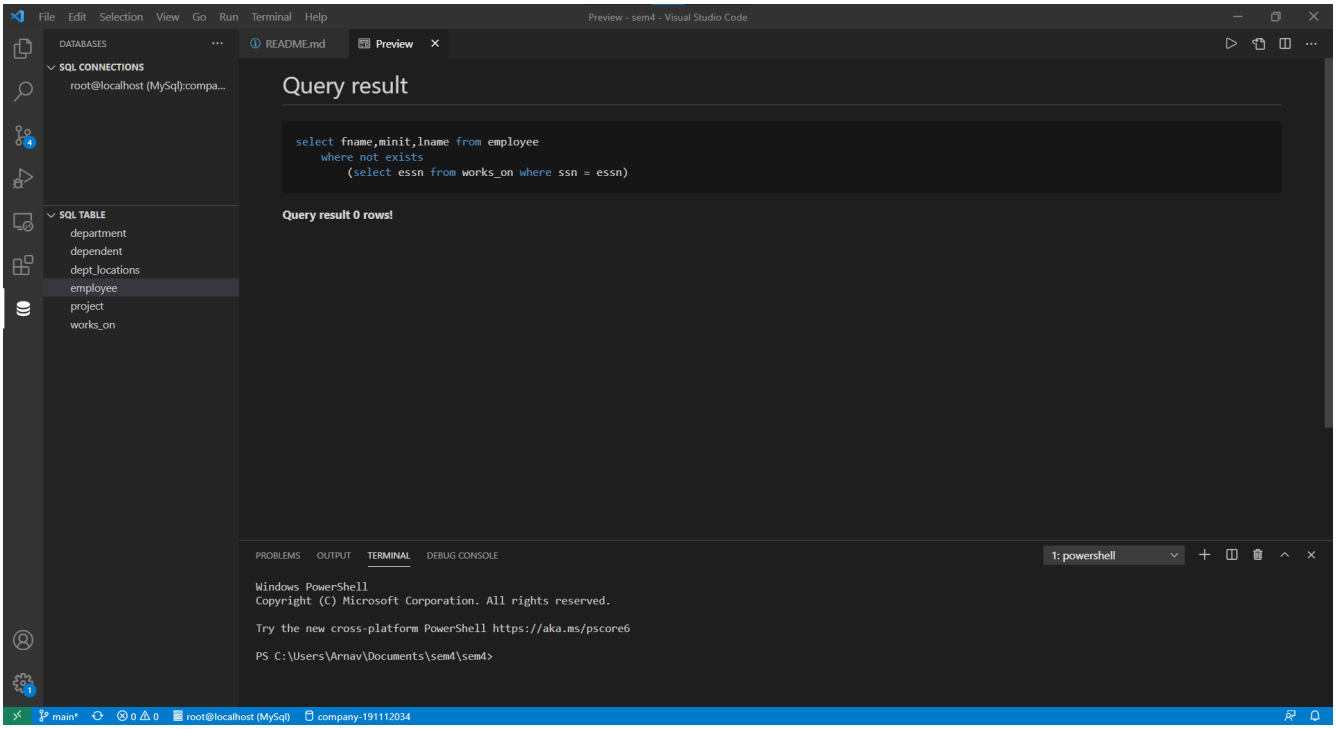

Figure 6: Query 6

7. Query 7

Find average salary of employees by department

7.1. Source Code

```
Select Dname,avg(salary) from employee,department
    where Dno=Dnumber group by Dname;
```

7.2. Output

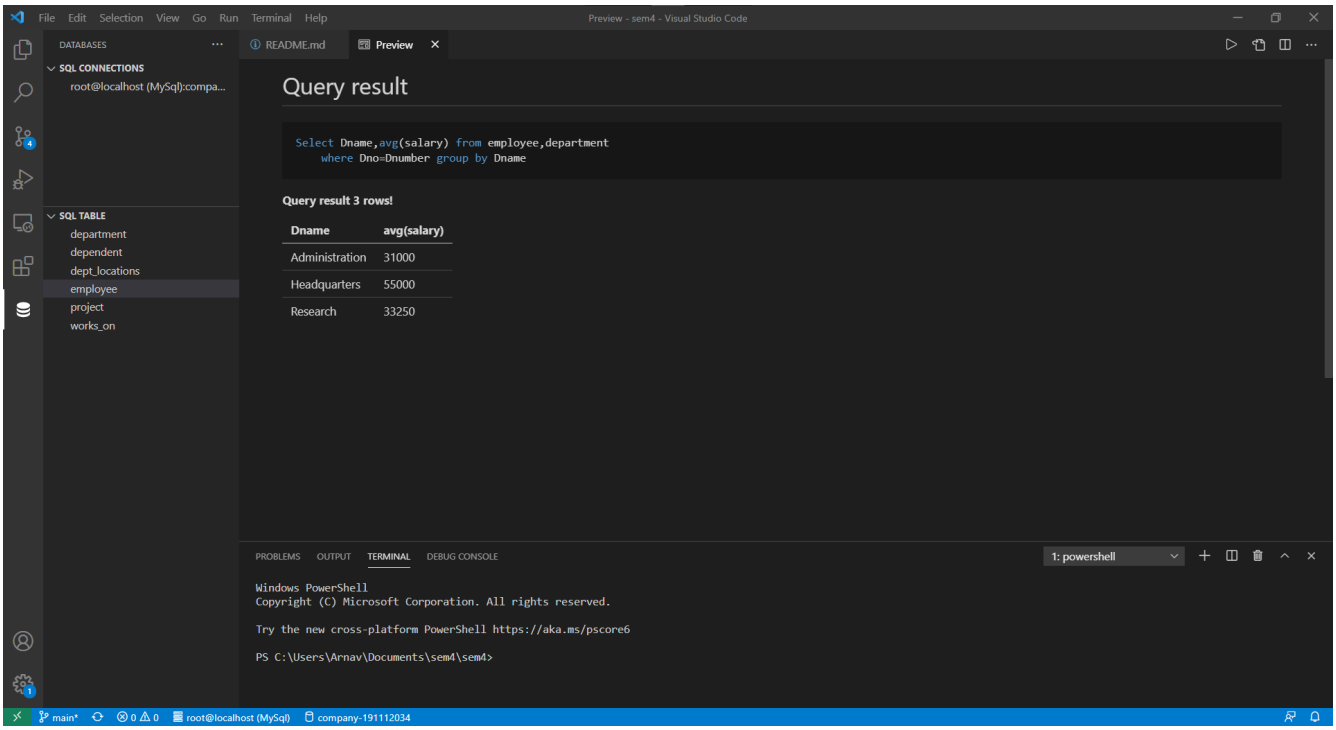

Figure 7: Query 7

8. Query 8

Find name and address of all employees who work on at least one project located in Houston but whose department has no location in Houston

8.1. Source Code

```
Select Fname, Minit, Lname, Address 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');
```

8.2. Output

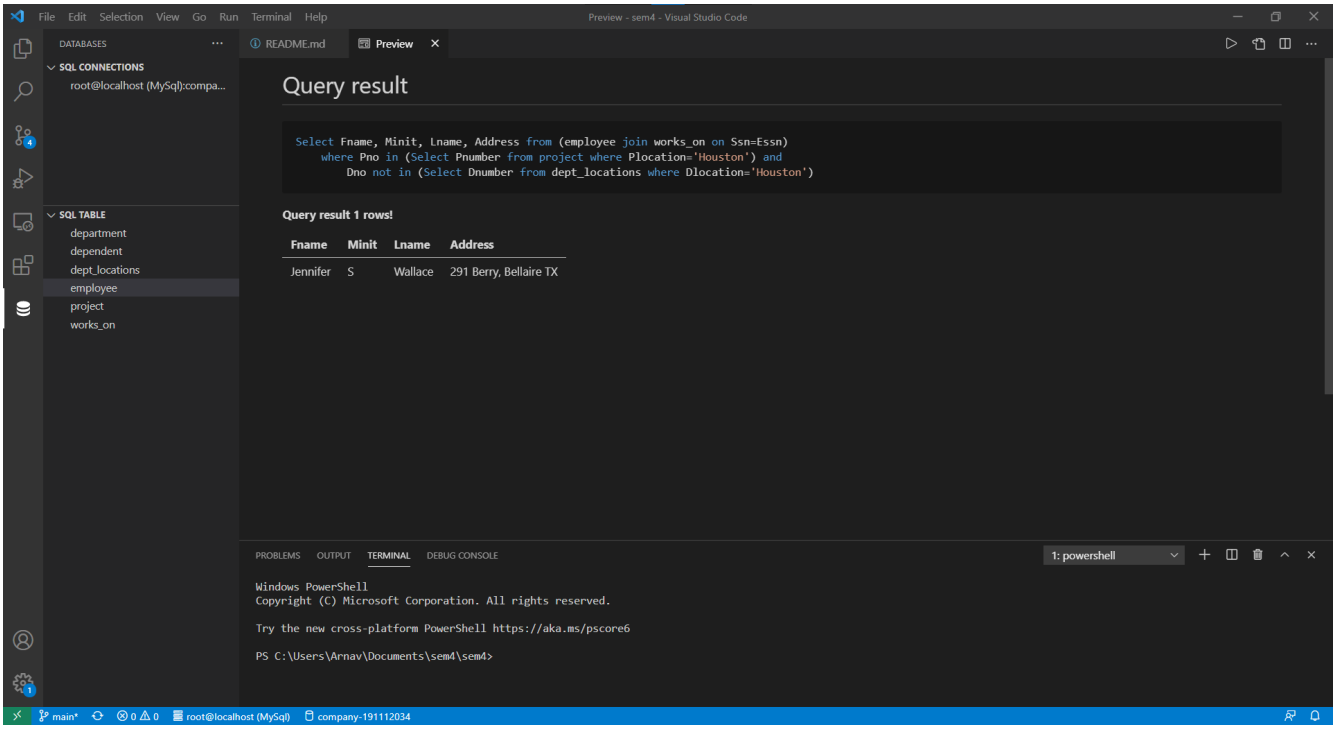

Figure 8: Query 8

9. Query 9

Find last name of all department managers who have no dependents

9.1. Source Code

```
Select Lname from employee,department
    where Ssn = Mgr_ssn and not exists (select dependent_name from dependent where Mgr_ssn=Ssn);
```

9.2. Output

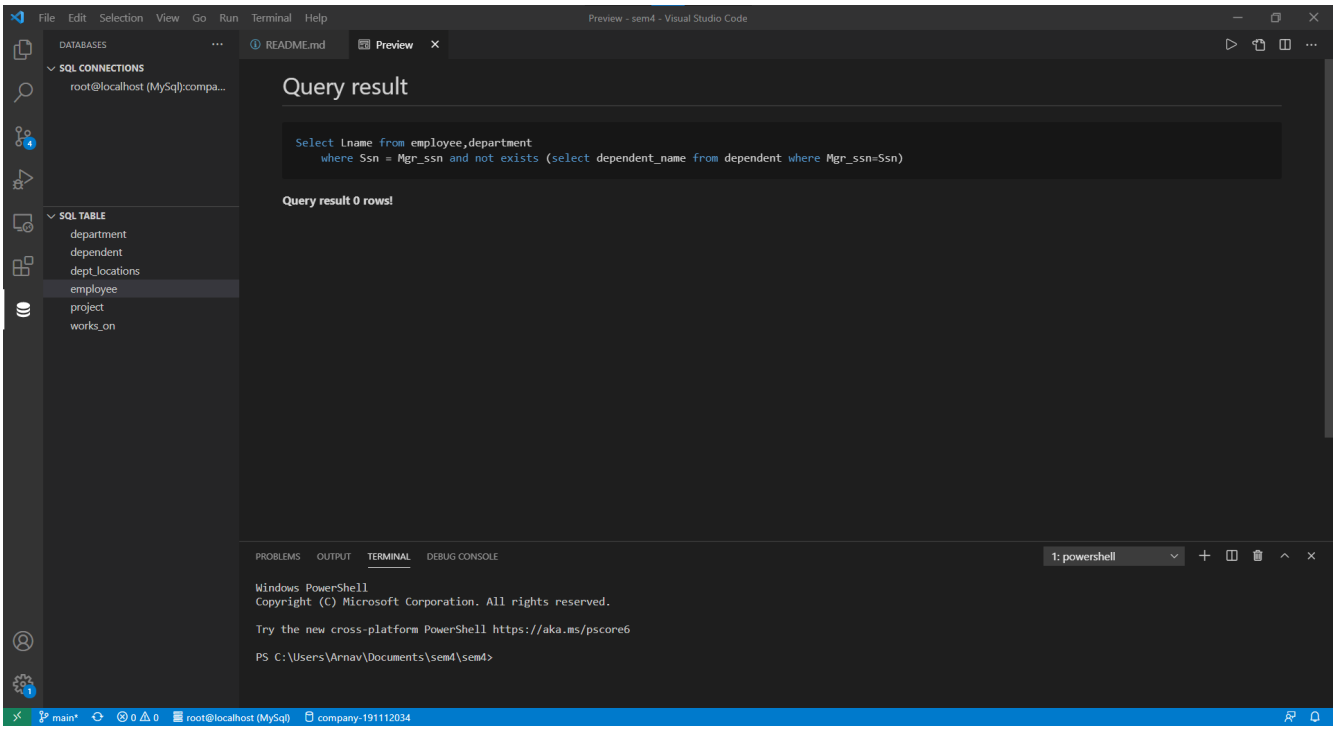

Figure 9: Query 9

10. Query 10

Find the number of employee in each department whose average department employee salary is more than $8000.

10.1. Source Code

```
select Dname,count(Ssn) from employee,department
    where Dno=Dnumber group by Dname having avg(Salary)>=80000;
```

10.2. Output

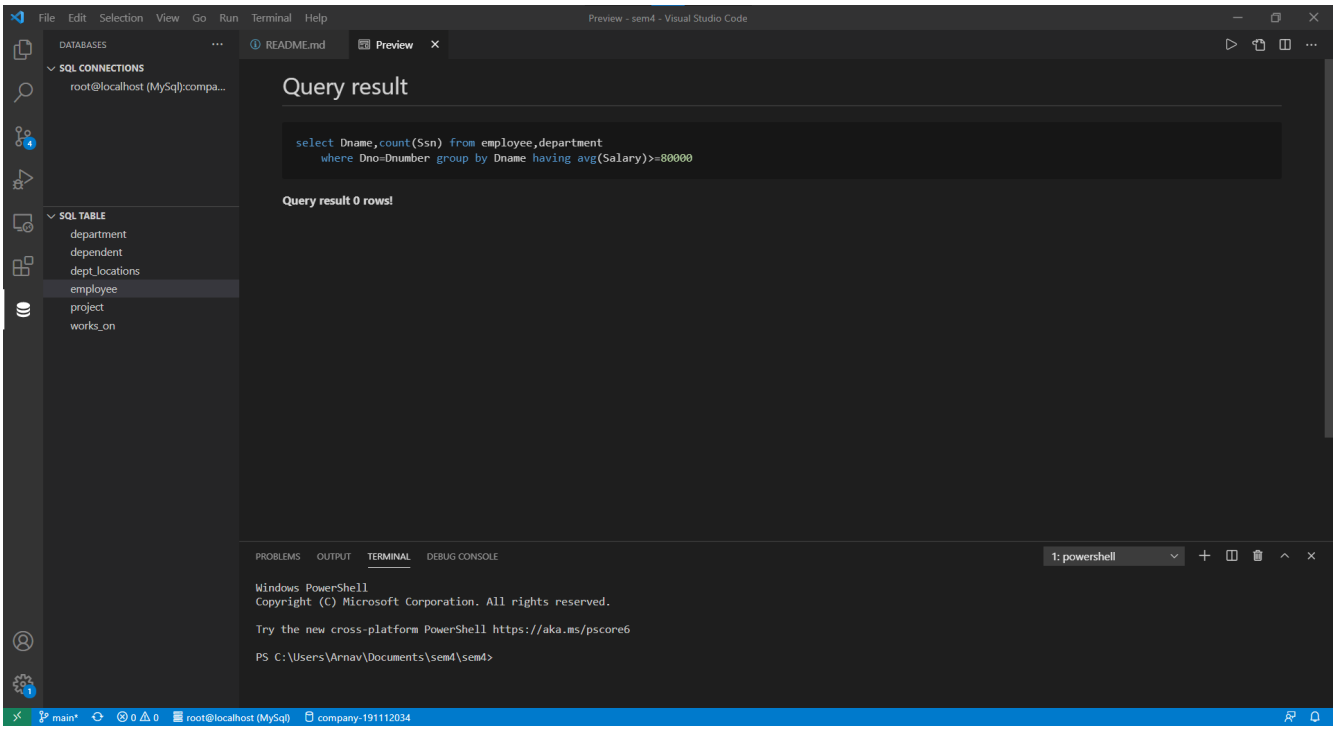

Figure 10: Query 10

11. Query 11

Find projects which involve employee with last name 'Smith' either as worker or as manager of the department that controls the project

11.1. Source Code

```
select distinct Pno from employee, works_on
    where Ssn=Essn and Lname='Smith'
    union
    select distinct Pnumber from employee,project,department
        where Dnum=Dnumber and Mgr_ssn=Ssn and Lname='Smith';
```

11.2. Output

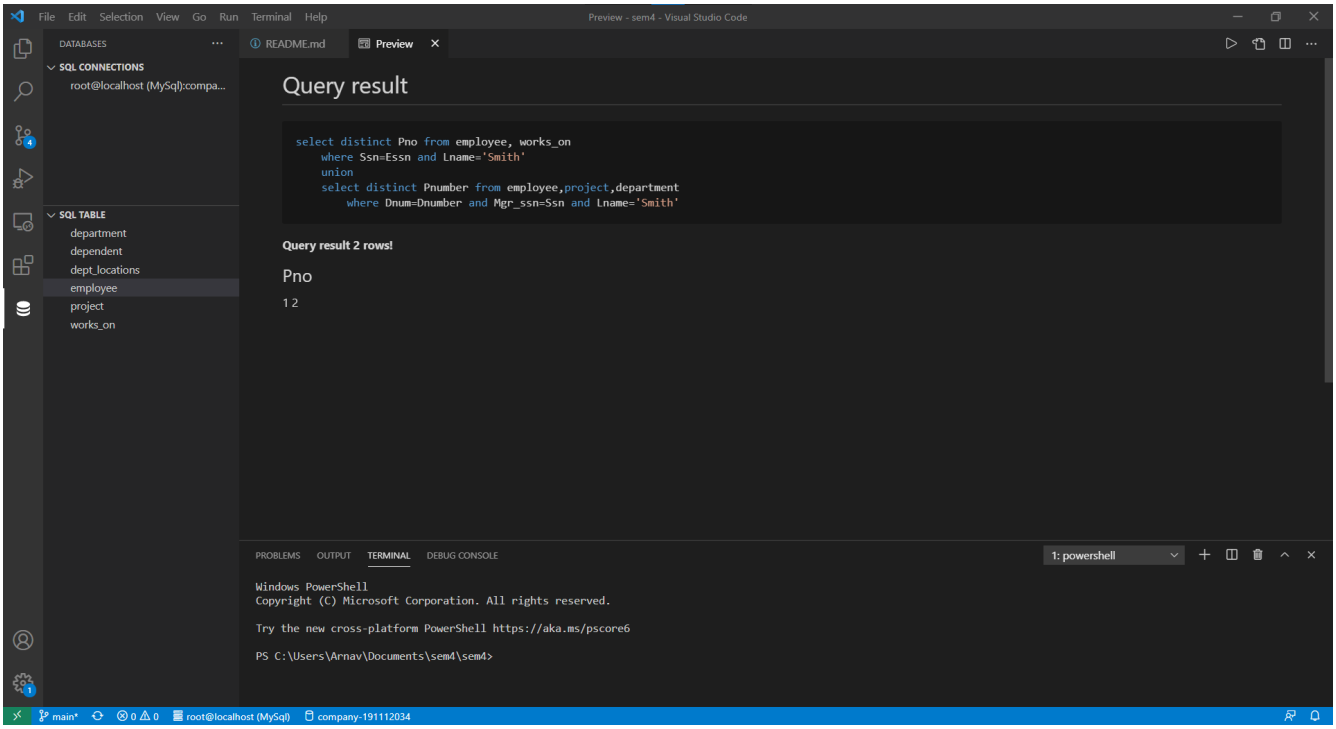

Figure 11: Query 11

12. Query 12

Find employees who work on more than two projects

12.1. Source Code

```
select distinct Lname,Fname from employee E, works_on W1, works_on W2
    where W1.Essn=E.Ssn and W2.Essn=E.Ssn and W1.Pno <> W2.Pno;
```

12.2. Output

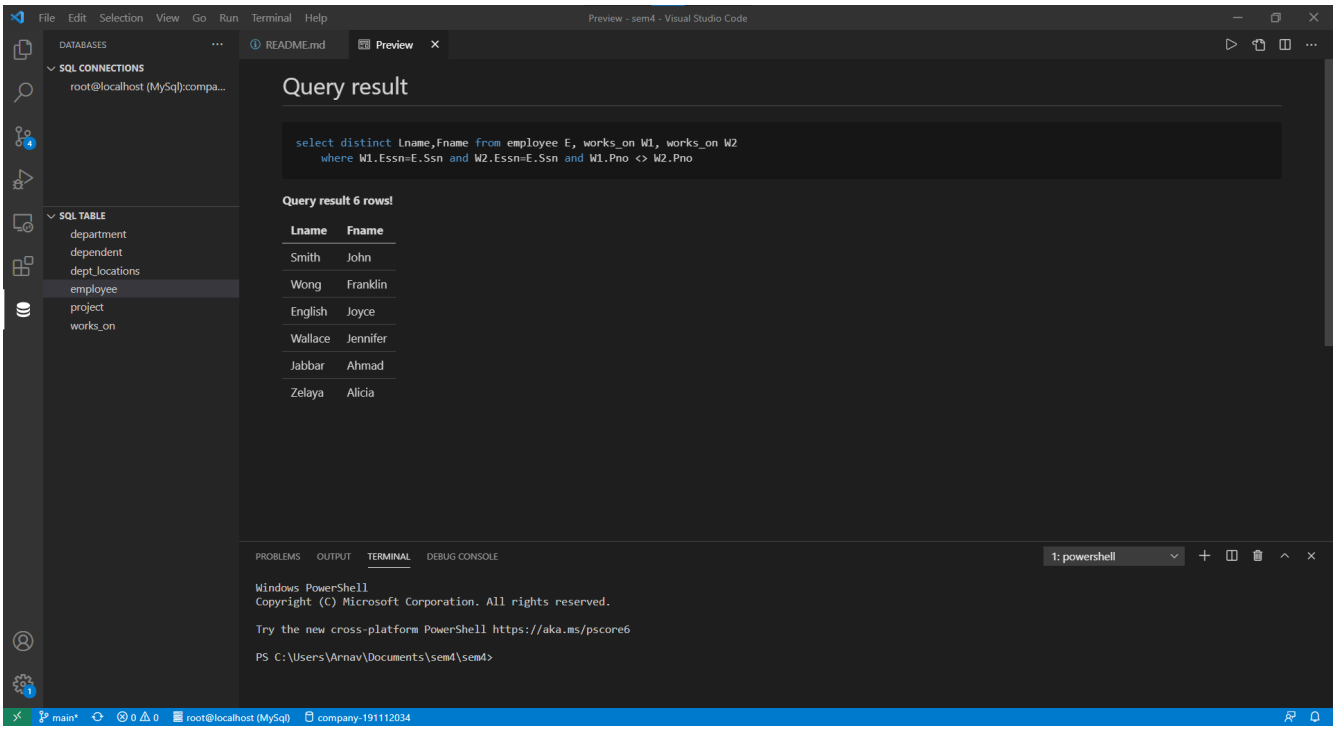

Figure 12: Query 12

13. Query 13

Find total hours worked on each project

13.1. Source Code

```
select E1.Fname,E1.Lname from Employee E1
    where E1.salary > (select avg(E2.salary) from employee E2 where E1.Dno=E2.Dno);
```

13.2. Output

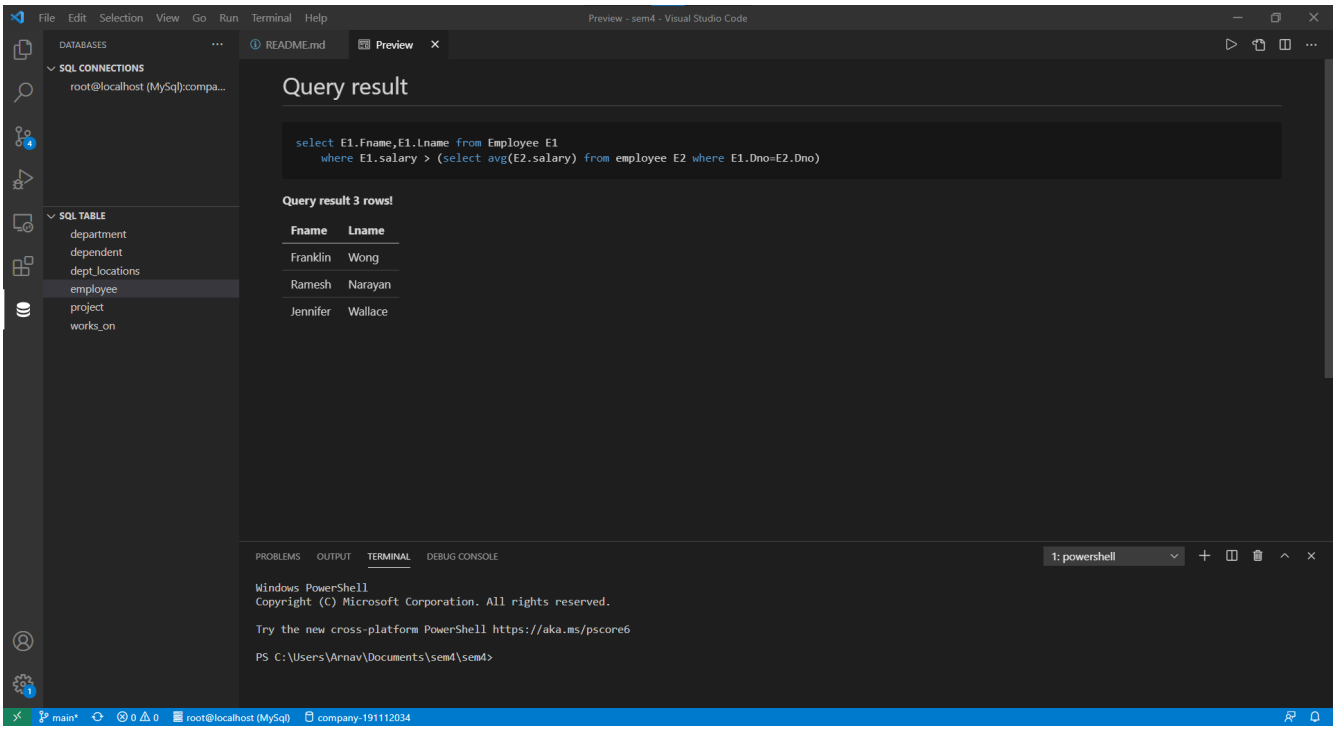

Figure 13: Query 13