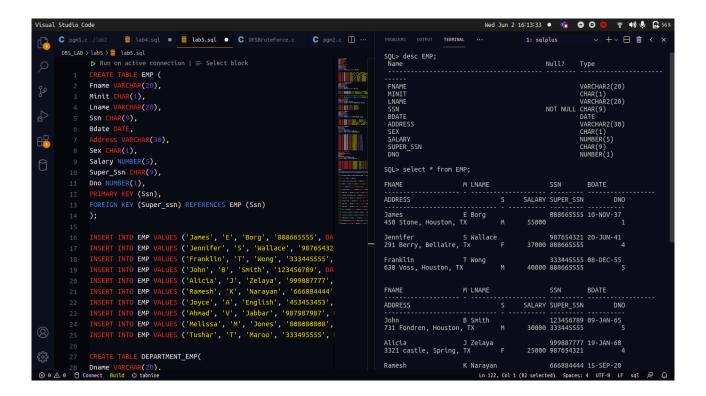
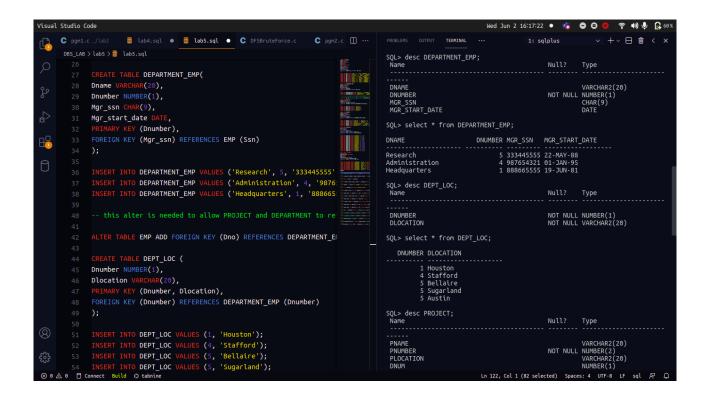
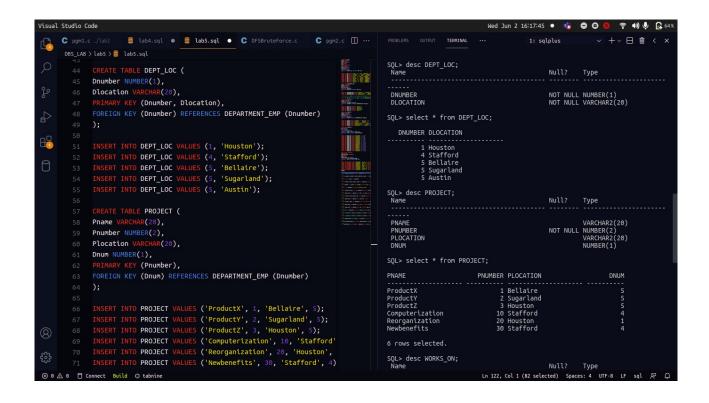
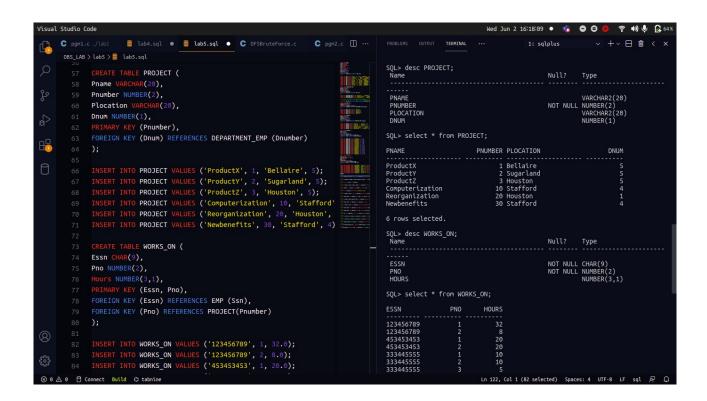
## **SCHEMA**:

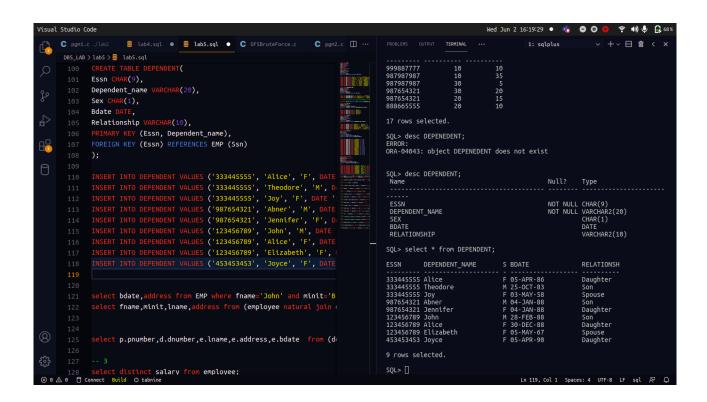








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/isual Studio Code
                                                                                                                                                                                                                                                                                                       Wed Jun 2 16:18:34 ● 🐧 🕤 🖸 😵 🛜 📢 🤚 🕞 64%
            ∨ +∨ 目 🛍 〈 ×
                                                                                                                                                                                                                                                                                                                                  1: sqlplus
              DBS_LAB > lab5 > 🛢 lab5.sql
                                                                                                                                                                                                                                    SQL> desc WORKS_ON;
Name
                                                                                                                                                                                                                                                                                                                                                                Туре
                   73 CREATE TABLE WORKS_ON (
74 Essn CHAR(9),
75 Pno NUMBER(2),
                                                                                                                                                                                                                                                                                                                                                NOT NULL CHAR(9)
NOT NULL NUMBER(2)
NUMBER(3,1)
                                                                                                                                                                                                                                       PNO
HOURS
                                                                                                                                                                                                         76 Hours NUMBER(3,1),
77 PRIMARY KEY (Essn, Pno),
                                                                                                                                                                                                                                     SQL> select * from WORKS_ON;
                   78 FOREIGN KEY (ESSN) REFERENCES EMP (SSN),
                                                                                                                                                                                                                                                                                                   HOURS
                                                                                                                                                                                                                                    ESSN PP
123456789
123456789
453453453
453453453
333445555
333445555
333445555
333445555
233345555
233345555
233345555
233345555
25999887777
25
8
                               FOREIGN KEY (Pno) REFERENCES PROJECT(Pnumber)
                                                                                                                                                                                                                                                                                 1
2
1
2
1
2
3
10
20
30
30
                                                                                                                                                                                                                                                                                                            32
20
20
10
10
5
10
5
30
                                                                                                                                                                                                     INSERT INTO WORKS_ON VALUES ('123456789', 1, 32.0);
INSERT INTO WORKS_ON VALUES ('123456789', 2, 8.0);
INSERT INTO WORKS_ON VALUES ('123456789', 2, 8.0);
INSERT INTO WORKS_ON VALUES ('453453453', 1, 20.0);
INSERT INTO WORKS_ON VALUES ('453453453', 2, 20.0);
INSERT INTO WORKS_ON VALUES ('333445555', 2, 10.0);
INSERT INTO WORKS_ON VALUES ('333445555', 2, 10.0);
INSERT INTO WORKS_ON VALUES ('333445555', 3, 5.0);
INSERT INTO WORKS_ON VALUES ('333445555', 20, 10.0);
INSERT INTO WORKS_ON VALUES ('333445555', 30, 5.0);
INSERT INTO WORKS_ON VALUES ('333445555', 30, 5.0);
INSERT INTO WORKS_ON VALUES ('999887777', 30, 30.0);
INSERT INTO WORKS_ON VALUES ('998987777', 10, 10.0);
INSERT INTO WORKS_ON VALUES ('987987987', 10, 35.0);
INSERT INTO WORKS_ON VALUES ('987987987', 30, 30.0);
INSERT INTO WORKS_ON VALUES ('987987987', 30, 20.0);
INSERT INTO WORKS_ON VALUES ('987654321', 20, 20.0);
INSERT INTO WORKS_ON VALUES ('987654321', 20, 15.0);
0
                                                                                                                                                                                                                                   PNO
                                                                                                                                                                                                                                                                                                     HOURS
                                                                                                                                                                                                                                                                                                             10
35
5
                                                                                                                                                                                                                                     987654321
888665555
                                                                                                                                                                                                                                     17 rows selected.
                                                                                                                                                                                                                                   SQL> desc DEPENEDENT;
ERROR:
ORA-04043: object DEPENEDENT does not exist
                                                                                                                                                                                                                                     SQL> desc DEPENDENT;
                     COENTE TADIE DEDENDE
                                                                                                                                                                                                                                                                                                  Ln 122, Col 1 (82 selected) Spaces: 4 UTF-8 LF sql
```



```
QUERIES:
1.
select bdate,address from EMP where fname='John' and minit='B' and
lname='Smith';
select fname, minit, lname, address from (employee natural join
department emp) where dname='Research';
2.
select p.pnumber,d.dnumber,e.lname,e.address,e.bdate
from (department_emp d
inner join project p on
(d.dnumber=p.dnum) inner join
EMP e on (d.mgr_ssn=e.ssn));
3.
select distinct salary from EMP;
4.
select e.fname,e.lname,s.fname,s.lname
from
(EMP e inner join EMP s on (e.super_ssn=s.ssn));
5.
select pnumber from project where
pnumber in (select pno from
(EMP e inner join works_on w on (e.ssn=w.essn))
where e.lname='Smith') or pnumber in
(select p.pnumber from (department_emp d inner join
project p on (d.dnumber=p.dnum) inner join
EMP e on (d.mgr_ssn=e.ssn))
where e.lname='Smith');
6.
select * from EMP where address='Houston, Texas';
7.
select e.fname,e.salary*1.10 from
(EMP e inner join works_on w on
(e.ssn=w.essn) inner join project p on
(p.pnumber=w.pno)) where p.pname='ProductX';
```

```
8.
select fname, lname from EMP
where dno=5 and salary between 30000 and 40000;
9.
select e.fname,e.lname,p.pname,e.dno from
(EMP e inner join works_on w on (e.ssn=w.essn)
inner join project p on (p.pnumber=w.pno))
order by e.dno,e.fname,e.lname;
10.
select fname, lname from EMP where
super_ssn is null;
11.
select e.fname,e.lname from
(EMP e inner join dependent d on (e.ssn=d.essn))
where e.fname=d.dependent_name and e.sex=d.sex;
12.
select fname, lname from EMP where
ssn not in
(select essn from dependent);
13
select fname, Iname from EMP where
ssn in
(select mgr_ssn from department_emp)
and ssn in
(select essn from dependent);
14
select ssn from
(EMP e inner join works_on w on (e.ssn=w.essn))
where pno<=3;
15.
select min(salary),max(salary),avg(salary),sum(salary) from EMP;
```

```
16.
select min(salary),max(salary),avg(salary),
sum(salary) from
(EMP natural join department_emp) where dname='Research';
17.
select pnumber,pname,count(w.essn) from
(project p inner join works_on w on (w.pno=p.pnumber))
group by p.pnumber,p.pname;
18.
with pr_cnt(pnum,pname,cnt) as
(select pnumber,pname,count(w.essn) from
(project p inner join works_on w on (w.pno=p.pnumber))
group by p.pnumber,p.pname)
select * from pr_cnt where cnt>2;
19.
with req_dno(dno) as(select dno from EMP group by
dno having count(ssn)>=5) ,
req_tab as (select * from
(EMP e natural join req_dno rd) where salary>40000)
select dno,count(ssn) from req_tab group by dno;
```