

Kun Shan

Worksheet Query Builder

```
-- 1
select FNAME,LNAME from EMPLOYEE
where SSN in
(select distinct ESSN from WORKS_ON);

-- 2
select DNUMBER,DNAME,avgSalary from DEPARTMENT
left outer join
(select DNO,avg(SALARY) avgSalary from EMPLOYEE group by DNO) S
on S.DNO=DEPARTMENT.DNUMBER order by DNUMBER;
```

Query R... x

SQL | All Rows Fetched: 7 in 0.045 seconds

	FNAME	LNAME
1	John	Smith
2	Franklin	Wong
3	Joyce	English
4	James	Borg
5	Jennifer	Wallace
6	Ahmad	Jabbar
7	Alicia	Zelaya

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select FNAME,LNAME from EMPLOYEE where SS...	CSC453	16-JAN-...	SQL	1	0.045
select distinct T1.TRIPSTATE from TRIPS T1 inne...	CSC453	11-JAN-...	SQL	1	0.021
select T1.TID,T2.TID from TRIPS T1 inner join T...	CSC453	11-JAN-...	SQL	1	0.025
select T1.TID,T2.TID from TRIPS T1 cross join T...	CSC453	11-JAN-...	SQL	1	0.043
select distinct BYCAR.TID,C.TID from BYCAR inn...	CSC453	11-JAN-...	SQL	1	0.064
select TRIPS.* from TRIPS inner join TRIPS T2 on...	CSC453	11-JAN-...	SQL	1	0.053

Worksheet Query Builder

```
-- 2
select DNUMBER,DNAME,avgSalary from DEPARTMENT
left outer join
(select DNO,avg(SALARY) avgSalary from EMPLOYEE group by DNO) S
on S.DNO=DEPARTMENT.DNUMBER order by DNUMBER;

-- 3
select LNAME from EMPLOYEE where SSN in
(select MGR_SSN from DEPARTMENT
minus
select ESSN from DEPENDENT);
```

Query Result x

SQL | All Rows Fetched: 3 in 0.024 seconds

	DNUMBER	DNAME	AVGSALARY
1	1	Headquarters	55000
2	4	Administration	28000
3	5	Research	32100

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select DNUMBER,DNAME,avgSalary from DEPARTM...	CSC453	16-JAN-...	SQL	1	0.024
select FNAME,LNAME from EMPLOYEE where SS...	CSC453	16-JAN-...	SQL	1	0.045
select distinct T1.TRIPSTATE from TRIPS T1 inne...	CSC453	11-JAN-...	SQL	1	0.021
select T1.TID,T2.TID from TRIPS T1 inner join T...	CSC453	11-JAN-...	SQL	1	0.025
select T1.TID,T2.TID from TRIPS T1 cross join T...	CSC453	11-JAN-...	SQL	1	0.043
select distinct BYCAR.TID,C.TID from BYCAR inn...	CSC453	11-JAN-...	SQL	1	0.064

Worksheet Query Builder

```
-- 3
select LNAME from EMPLOYEE where SSN in
(select MGR_SSN from DEPARTMENT
minus
select ESSN from DEPENDENT);
```

```
-- 4
select FNAME,LNAME from EMPLOYEE
where DNO =
(select DNO from EMPLOYEE
where SALARY =
```

Query Result x

SQL | All Rows Fetched: 1 in 0.026 seconds

LNAME
1 Borg

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select LNAME from EMPLOYEE where SSN in (select...	CSC453	16-JAN-...	SQL	1	0.026
select DNUMBER,DNAME,avgSalary from DEPARTM...	CSC453	16-JAN-...	SQL	1	0.024
select FNAME,LNAME from EMPLOYEE where SS...	CSC453	16-JAN-...	SQL	1	0.045
select distinct T1.TRIPSTATE from TRIPS T1 inne...	CSC453	11-JAN-...	SQL	1	0.021
select T1.TID,T2.TID from TRIPS T1 inner join T...	CSC453	11-JAN-...	SQL	1	0.025
select T1.TID,T2.TID from TRIPS T1 cross join T...	CSC453	11-JAN-...	SQL	1	0.043

Worksheet Query Builder

```
-- 4
select FNAME,LNAME from EMPLOYEE
where DNO =
(select DNO from EMPLOYEE
where SALARY =
(select min(SALARY) from EMPLOYEE));
```

```
-- 5
select DNAME,emps,dpts from
(select DNO,DNAME,count(SSN) emps from EMPLOYEE
left outer join DEPARTMENT
```

Query Result x

SQL | All Rows Fetched: 3 in 0.025 seconds

FNAME	LNAME
1 Jennifer	Wallace
2 Alicia	Zelaya
3 Ahmad	Jabbar

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select FNAME,LNAME from EMPLOYEE where DN...	CSC453	16-JAN-...	SQL	1	0.025
select LNAME from EMPLOYEE where SSN in (select...	CSC453	16-JAN-...	SQL	1	0.026
select DNUMBER,DNAME,avgSalary from DEPARTM...	CSC453	16-JAN-...	SQL	1	0.024
select FNAME,LNAME from EMPLOYEE where SS...	CSC453	16-JAN-...	SQL	1	0.045
select distinct T1.TRIPSTATE from TRIPS T1 inne...	CSC453	11-JAN-...	SQL	1	0.021
select T1.TID,T2.TID from TRIPS T1 inner join T...	CSC453	11-JAN-...	SQL	1	0.025

Run Statement (^+↵)ier

```
-- 5
select DNAME,emps,dpts from
(select DNO,DNAME,count(SSN) emps from EMPLOYEE
left outer join DEPARTMENT
on EMPLOYEE.DNO = DEPARTMENT.DNUMBER
group by DNO, DNAME) A
left outer join
(select DNO,count(ESSN) dpts from EMPLOYEE
left outer join DEPENDENT
on EMPLOYEE.SSN = DEPENDENT.ESSN
group by DNO) B
on A.DNO=B.DNO;
```

Query Result x

All Rows Fetched: 3 in 0.029 seconds

	DNAME	EMPS	DPTS
1	Headquarters	1	0
2	Research	5	7
3	Administration	3	2

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select DNAME,emps,dpts from (select DNO,DNAME...	CSC453	16-JAN-...	SQL	1	0.029
select FNAME,LNAME from EMPLOYEE where DN...	CSC453	16-JAN-...	SQL	1	0.025
select LNAME from EMPLOYEE where SSN in (select...	CSC453	16-JAN-...	SQL	1	0.026
select DNUMBER,DNAME,avgSalary from DEPARTM...	CSC453	16-JAN-...	SQL	1	0.024
select FNAME,LNAME from EMPLOYEE where SS...	CSC453	16-JAN-...	SQL	1	0.045
select distinct T1.TRIPSTATE from TRIPS T1 inne...	CSC453	11-JAN-...	SQL	1	0.021

Worksheet Query Builder

```
-- 6
select count(*) from EMPLOYEE where SEX='M' and SALARY > all
(select SALARY from EMPLOYEE where SEX='F');
```

```
-- 7
select FNAME, LNAME from EMPLOYEE
where SALARY >=
(select max(SALARY) from EMPLOYEE) - 20000;
```

```
-- 8
select FNAME, LNAME, ADDRESS from EMPLOYEE
where DNO not in
(select DEPARTMENT.DNUMBER
from DEPARTMENT
```

Query Result x

All Rows Fetched: 1 in 0.11 seconds

	COUNT(*)
1	3

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select count(*) from EMPLOYEE where SEX='M' and...	CSC453	16-JAN-...	SQL	1	0.11
select DNAME,emps,dpts from (select DNO,DNAME...	CSC453	16-JAN-...	SQL	1	0.029
select FNAME,LNAME from EMPLOYEE where DN...	CSC453	16-JAN-...	SQL	1	0.025
select LNAME from EMPLOYEE where SSN in (select...	CSC453	16-JAN-...	SQL	1	0.026
select DNUMBER,DNAME,avgSalary from DEPARTM...	CSC453	16-JAN-...	SQL	1	0.024
select FNAME,LNAME from EMPLOYEE where SS...	CSC453	16-JAN-...	SQL	1	0.045

Query Builder

Worksheet Query Builder

```
-- 7
select FNAME, LNAME from EMPLOYEE
where SALARY >=
(select max(SALARY) from EMPLOYEE) - 20000;
```

```
-- 8
select FNAME, LNAME, ADDRESS from EMPLOYEE
where DNO not in
(select DEPARTMENT.DNUMBER
from DEPARTMENT
left outer join DEPT_LOCATIONS
on DEPARTMENT.DNUMBER = DEPT_LOCATIONS.DNUMBER
where DLOCATION = 'Houston')
and SSN in
```

Query Result x

SQL | All Rows Fetched: 4 in 0.014 seconds

	FNAME	LNAME
1	James	Borg
2	Jennifer	Wallace
3	Franklin	Wong
4	Ramesh	Narayan

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select FNAME, LNAME from EMPLOYEE where SALA...	CSC453	16-JAN-...	SQL	1	0.014
select count(*) from EMPLOYEE where SEX='M' and...	CSC453	16-JAN-...	SQL	1	0.11
select DNAME,emps,dpts from (select DNO,DNAME...	CSC453	16-JAN-...	SQL	1	0.029
select FNAME,LNAME from EMPLOYEE where DN...	CSC453	16-JAN-...	SQL	1	0.025
select LNAME from EMPLOYEE where SSN in (select...	CSC453	16-JAN-...	SQL	1	0.026
select DNUMBER,DNAME,avgSalary from DEPARTM...	CSC453	16-JAN-...	SQL	1	0.024

Query Builder

Worksheet Query Builder

```
-- 8
select FNAME, LNAME, ADDRESS from EMPLOYEE
where DNO not in
(select DEPARTMENT.DNUMBER
from DEPARTMENT
left outer join DEPT_LOCATIONS
on DEPARTMENT.DNUMBER = DEPT_LOCATIONS.DNUMBER
where DLOCATION = 'Houston')
and SSN in
(select ESSN
from WORKS_ON
left outer join PROJECT
on WORKS_ON.PNO = PROJECT.PNUMBER
where PLOCATION = 'Houston');
```

Query Result x

SQL | All Rows Fetched: 2 in 0.027 seconds

	FNAME	LNAME	ADDRESS
1	Jennifer	Wallace	291 Berry, Bellaire, Tx
2	Franklin	Wong	638 Voss, Houston, TX

SQL History

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
select FNAME, LNAME, ADDRESS from EMPLOYEE w...	CSC453	16-JAN-...	SQL	1	0.027
select FNAME, LNAME from EMPLOYEE where SALA...	CSC453	16-JAN-...	SQL	1	0.014
select count(*) from EMPLOYEE where SEX='M' and...	CSC453	16-JAN-...	SQL	1	0.11
select DNAME,emps,dpts from (select DNO,DNAME...	CSC453	16-JAN-...	SQL	1	0.029
select FNAME,LNAME from EMPLOYEE where DN...	CSC453	16-JAN-...	SQL	1	0.025
select LNAME from EMPLOYEE where SSN in (select...	CSC453	16-JAN-...	SQL	1	0.026