

1-

SQL File 3* works_on

```
1   select dnum, dname, mgrssn, fname, lname
2   from department, employee
3   where department.mgrssn = employee.ssn
4
5
```

Date | Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	dnum	dname	mgrssn	fname	lname
▶	10	DP1	112233	Ahmed	Ali
	20	DP2	112233	Ahmed	Ali
	30	DP3	512463	Edward	Hanna
	100	DEPT IT	968574	Noha	Mohamed

2-

SQL File 3*

```
1 •   select dname, pname
2   from department
3   inner join project
4   on department.dnum = project.dnum
```

| Result Grid | Filter Rows: | Export: | Wrap

dname	pname
DP1	AL Solimaniah
DP1	Al Rabwah
DP1	Al Rawdah
DP2	Al Rowad
DP3	Al Rehab
DP3	Pitcho american
DP2	Ebad El Rahman

3-

SQL File 3*

```
1 •   select e.fname, e.lname, d.dependent_name, d.bdate, d.gender
2   from employee as e
3   inner join dependent as d
4   on e.ssn = d.essn
```

| Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

fname	lname	dependent_name	bdate	gender
Ahmed	Ali	Hala Saeed Ali	1970-10-18	F
Amr	Omran	Ramy Amr Omran	1990-01-26	M
Amr	Omran	Omar Amr Omran	1993-03-30	M
Amr	Omran	Sanaa Gawish	1973-05-16	F
Edward	Hanna	Sara Edward	2001-09-15	F
Edward	Hanna	Nora Ghaly	1976-06-22	F

4-

SQL File 3* works_on dependent

```
1 • select concat(fname, ' ', lname) as full_name, gender
2   from employee
3 UNION
4   select dependent_name, gender
5   from dependent
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

full_name	gender
kareem mohamed	M
adham khaled	M
Ahmed Ali	M
Hanaa Sobhy	F
Kamel Mohamed	M
Amr Omran	M
Edward Hanna	M
Maged Raouf	M
Mariam Adel	F
Noha Mohamed	F
Hala Saied Ali	F
Ramy Amr Omran	M
Omar Amr Omran	M
Sanaa Gawish	F
Sara Edward	F
Nora Ghaly	F

5-

SQL File 3* works_on

```
1 • select pnumber, pname, plocation
2   from project
3   where city = 'Cairo' or city = 'Alex'
```

Result Grid | Filter Rows: | Edit: |

pnumber	pname	plocation
100	AL Solimaniah	Cairo_Alex Road
500	Al Rehab	Nasr City
600	Pitcho american	Maady
700	Ebad El Rahman	Ring Road
NULL	NULL	NULL

6-

1 • select *
 2 from project
 3 where pname like 'a%'

	pname	pnumber	plocation	city	dnum
▶	AL Solimaniah	100	Cairo_Alex Road	Alex	10
	Al Rabwah	200	6th of October City	Giza	10
	Al Rawdah	300	Zaled City	Giza	10
	Al Rowad	400	Cairo_Faiyom Road	Giza	20
	Al Rehab	500	Nasr City	Cairo	30
*	HULL	HULL	HULL	HULL	HULL

7-

8-

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query selects employees who work on project 'Al Rawdah' for at least 10 hours per week. The result grid displays two rows: 'Mariam Adel' and 'Noha Mohamed'.

```
1 • select concat(fname, ' ', lname) as full_name
2   from employee as e
3   inner join works_on as w
4     on e.ssn = w.essn
5   where e.dno = 20
6   and
7     w.pno = (select pnumber from project where pname = 'Al Rawdah')
8   and
9     w.weekly_hours >= 10
```

full_name
Mariam Adel
Noha Mohamed

9-

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query finds employees supervised by Amr Omran. The result grid displays three rows: 'Kamel Mohamed', 'Edward Hanna', and 'Noha Mohamed'.

```
1 -- 9. Find the names of the employees who directly supervised with Amr Omran.
2 • select concat(fname, ' ', lname)
3   from employee
4   where superssn = (select ssn from employee where fname = 'AMR' and lname = 'Omran')
5
```

concat(fname, ' ', lname)
Kamel Mohamed
Edward Hanna
Noha Mohamed

10-

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query calculates the total weekly hours worked on each project. The result grid displays six rows: AL Solimaniah (40), Al Rehab (20), Pitcho american (45), Al Rawdah (26), Al Rowad (39), and Ebad El Rahman (22).

```
1 • select p.pname, sum(w.weekly_hours) as total_hours
2   from project as p
3   inner join works_on as w
4     on p.pnumber= w.pno
5   group by p.pname
6
```

pname	total_hours
AL Solimaniah	40
Al Rehab	20
Pitcho american	45
Al Rawdah	26
Al Rowad	39
Ebad El Rahman	22

11-

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1 • select concat(e.fname, ' ', e.lname) as full_name, p.pname  
2   from employee as e  
3   inner join works_on as w  
4   on e.ssn = w.essn  
5   inner join project as p  
6   on p.pnumber = w.pno  
7   order by p.pname asc
```

Below the SQL editor is a "Result Grid" window. It has a header row with columns "full_name" and "pname". The data grid contains 15 rows of data, each consisting of a "full_name" and a "pname".

full_name	pname
Maged Raouf	Al Rawdah
Mariam Adel	Al Rawdah
Noha Mohamed	Al Rawdah
Edward Hanna	Al Rehab
Maged Raouf	Al Rehab
Maged Raouf	Al Rowad
Mariam Adel	Al Rowad
Noha Mohamed	Al Rowad
Ahmed Ali	AL Solimaniah
Mariam Adel	Ebad El Rahman
Noha Mohamed	Ebad El Rahman
Edward Hanna	Pitcho american
Maged Raouf	Pitcho american

12-

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1 • select *  
2   from department  
3  where department.dnum = (select dno from employee order by ssn limit 1)
```

Below the SQL editor is a "Result Grid" window. It has a header row with columns "dnum", "dname", "mgrssn", and "MGRStart Date". The data grid contains 2 rows of data.

dnum	dname	mgrssn	MGRStart Date
30	DP3	512463	2006-06-01
*	HULL	HULL	HULL

13-

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1 • select d.dname, max(e.salary) as max_salary , min(e.salary) as min_salary , avg(e.salary) as avg_salary  
2   from employee as e  
3   inner join department as d  
4   on e.dno = d.dnum  
5   group by d.dname
```

Below the SQL editor is a "Result Grid" window. It has a header row with columns "dname", "max_salary", "min_salary", and "avg_salary". The data grid contains 3 rows of data.

dname	max_salary	min_salary	avg_salary
DP1	1800	800	1386.6667
DP2	1600	750	1175.0000
DP3	2000	1000	1500.0000

14-

```
1 • select concat(e.fname, ' ', e.lname) as full_name
2   from department as d
3   inner join employee as e
4     on d.mgrssn = e.ssn
5   where d.mgrssn not in (select essn from dependent)
```

The screenshot shows a MySQL Workbench interface with a query editor and a results grid. The query selects the concatenated first and last names of employees whose manager's social security number is not listed in the dependent table. The result grid displays a single row with the name 'Noha Mohamed'.

full_name
Noha Mohamed

15-

```
1 • select d.dname, d.dnum, count(*)
2   from department as d
3   inner join employee as e
4     on d.dnum = e.dno
5   group by d.dnum, d.dname
6   having avg(e.salary) < (select avg(salary) from employee)
```

The screenshot shows a MySQL Workbench interface with a query editor and a results grid. The query groups departments by their number and name, then filters them based on an average salary that is less than the overall average salary for all employees. The result grid shows three rows: DP1 (dnum 10, count 3), DP2 (dnum 20, count 2), and DP3 (dnum 30, count 4).

dname	dnum	count(*)
DP1	10	3
DP2	20	2
DP3	30	4

16-

```
1 • select e.fname, e.lname, e.ssn, e.bdate, e.address, e.gender, e.salary, e.superssn, e.dno,
2   p.pname, p.pnumber, p.plocation, p.city, p.dnum
3   from employee as e
4   inner join works_on as w
5     on e.ssn = w.essn
6   inner join project as p
7     on w.pno = p.pnumber
8   order by e.dno, e.lname, e.fname
```

The screenshot shows a MySQL Workbench interface with a query editor and a results grid. The query joins four tables: employee, works_on, project, and address. It retrieves information such as employee names, addresses, gender, salaries, and project details. The results are ordered by employee ID, last name, and first name. The results grid is very large, containing over 50 rows of data.

fname	Iname	ssn	bdate	address	gender	salary	superssn	dno	pname	pnumber	plocation	city	dnum
Ahmed	Ali	112233	1965-01-01	15 Ali Fahmy St.Giza	M	1560	112233	10	AL Solimaniah	100	Cairo_Alex Road	Alex	10
Mariam	Adel	669955	1982-06-12	269 El-Haram st. Giza	F	750	512463	20	Al Rawdah	300	Zaiied City	Giza	20
Mariam	Adel	669955	1982-06-12	269 El-Haram st. Giza	F	750	512463	20	Al Rowad	400	Cairo_Faiyom Road	Giza	20
Mariam	Adel	669955	1982-06-12	269 El-Haram st. Giza	F	750	512463	20	Ebad El Rahman	700	Ring Road	Cairo	20
Noha	Mohamed	968574	1975-02-01	55 Orabi St. El Mohandiseen .Cairo	F	1600	321654	20	Al Rawdah	300	Zaiied City	Giza	10
Noha	Mohamed	968574	1975-02-01	55 Orabi St. El Mohandiseen .Cairo	F	1600	321654	20	Al Rowad	400	Cairo_Faiyom Road	Giza	20
Noha	Mohamed	968574	1975-02-01	55 Orabi St. El Mohandiseen .Cairo	F	1600	321654	20	Ebad El Rahman	700	Ring Road	Cairo	20
Edward	Hanna	512463	1972-08-19	18 Abaa El Sakaad St. Nasr City.Cairo	M	1500	321654	30	Al Rehab	500	Nasr City	Cairo	30
Edward	Hanna	512463	1972-08-19	18 Abaa El Sakaad St. Nasr City.Cairo	M	1500	321654	30	Pitcho american	600	Maady	Cairo	30
Maged	Raoof	521634	1980-04-06	18 Kholosi st.Shobra.Cairo	M	1000	968574	30	Al Rawdah	300	Zaiied City	Giza	10
Maged	Raoof	521634	1980-04-06	18 Kholosi st.Shobra.Cairo	M	1000	968574	30	Al Rehab	400	Cairo_Faiyom Road	Giza	20
Maged	Raoof	521634	1980-04-06	18 Kholosi st.Shobra.Cairo	M	1000	968574	30	Pitcho american	500	Nasr City	Cairo	30
Maged	Raoof	521634	1980-04-06	18 Kholosi st.Shobra.Cairo	M	1000	968574	30	Pitcho american	600	Maady	Cairo	30

17-

The screenshot shows a MySQL Workbench interface. At the top, there's a toolbar with various icons. Below the toolbar, a SQL query is displayed:

```
1 •  select p.pnumber, d.dname, e.lname, e.address, e.bdate
2   from project as p
3   inner join department as d
4   on p.dnum = d.dnum
5   inner join employee as e
6   on d.mgrssn = e.ssn
7   where p.city = 'Cairo'
8
```

Below the query, the results are shown in a grid:

	pnumber	dname	lname	address	bdate
▶	500	DP3	Hanna	18 Abaas El Zakaad St. Nasr City.Cairo	1972-08-19
	600	DP3	Hanna	18 Abaas El Zakaad St. Nasr City.Cairo	1972-08-19
	700	DP2	Ali	15 Ali Fahmy St.Giza	1965-01-01