

Data Manipulating Language:

1-

The screenshot shows the SQL Developer interface with a SQL File 3 window. The code entered is:

```
1 •  insert into employee values ('adham', 'khaled', 102672, '2001-03-12', '18 Hadayek El Kobba.cairo', 'M', 2000, 112233, 30)
```

The output window below shows the execution results:

#	Time	Action	Message
1	09:41:36	insert into employee values ('adham', 'khaled', 102672, '2001-03-12', '18 Hadayek El Kobba.cairo', 'M', 2000, 112233, 30)	1 row(s) affected

2-

The screenshot shows the SQL Developer interface with a SQL File 3 window. The code entered is:

```
1 •  insert into employee (fname, lname, ssn, bdate, address, gender, dno)
2   values ('kareem', 'mohamed', 102660, '2002-11-03', '19 Ahmed Fakhry.Cairo', 'M', 30)
```

The output window shows the results of the first statement and the second statement, which is a SELECT query, followed by an error message for the third statement, and the successful execution of the fourth statement.

#	Time	Action	Message
1	09:41:36	insert into employee values ('adham', 'khaled', 102672, '2001-03-12', '18 Hadayek El Kobba.cairo', 'M', 2000, 112233, 30)	1 row(s) affected
2	09:41:57	SELECT * FROM it.employee LIMIT 0, 1000	9 row(s) returned
3	09:46:44	insert into employee values ('kareem', 'mohamed', 102660, '2002-11-03', '19 Ahmed Fakhry.Cairo', 'M')	Error Code: 1136. Column count doesn't match value count at row 1
4	09:48:05	insert into employee (fname, lname, ssn, bdate, address, gender, dno) values ('kareem', 'mohamed', 102660, '2002-11-03', '19 Ahmed Fakhry.Cairo', 'M', 30)	1 row(s) affected

3-

The screenshot shows the SQL Server Management Studio interface. The left pane displays the Navigator with the schema 'iti' selected. Under 'Tables', the 'department' table is expanded, showing columns: dnum, dname, mgrssn, and MGRStart Date. The 'employee' table is also listed. The right pane shows a query window titled 'SQL File 3* employee'. It contains the following SQL code:

```
1 • insert into department values (100,'DEPT IT', 112233, '2006-11-01')
```

Below the code is an 'Output' window titled 'Action Output' which displays the results of the execution:

#	Time	Action	Message
1	09:41:36	insert into department values ('adham', 'khaled', 102672, '2001-03-12', '18 Hadayek El Kobba.cairo', 'M', 2000, 112...)	1 row(s) affected
2	09:41:57	SELECT * FROM iti.employee LIMIT 0, 1000	9 row(s) returned
3	09:46:44	insert into employee values ('kareem', 'mohamed', 102660, '2002-11-03', '19 Ahmed Fakhry.Cairo', 'M')	Error Code: 1136. Column count doesn't match value count at row 1
4	09:48:05	insert into employee (fname, lname, ssn, bdate, address, gender, dno) values ('kareem', 'mohamed', 102660, '200...')	1 row(s) affected
5	09:51:09	insert into department values (100,'DEPT IT', 112233, '2006-11-01')	1 row(s) affected

4-

a-

The screenshot shows the SQL Server Management Studio interface. The left pane displays the Navigator with the schema 'iti' selected. Under 'Tables', the 'department' table is expanded, showing columns: dnum, dname, mgrssn, and MGRStart Date. The 'employee' table is also listed. The right pane shows a query window titled 'SQL File 3* employee'. It contains the following SQL code:

```
1 update department  
2 set mgrssn = 968574  
3 where dnum = 100
```

Below the code is an 'Output' window titled 'Action Output' which displays the results of the execution:

#	Time	Action	Message
1	09:41:36	insert into employee values ('adham', 'khaled', 102672, '2001-03-12', '18 Hadayek El Kobba.cairo', 'M', 2000, 112...)	1 row(s) affected
2	09:41:57	SELECT * FROM iti.employee LIMIT 0, 1000	9 row(s) returned
3	09:46:44	insert into employee values ('kareem', 'mohamed', 102660, '2002-11-03', '19 Ahmed Fakhry.Cairo', 'M')	Error Code: 1136. Column count doesn't match value count at row 1
4	09:48:05	insert into employee (fname, lname, ssn, bdate, address, gender, dno) values ('kareem', 'mohamed', 102660, '200...')	1 row(s) affected
5	09:51:09	insert into department values (100,'DEPT IT', 112233, '2006-11-01')	1 row(s) affected
6	09:56:10	update department set mgrssn = 968574 where dnum = 100	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

b-

The screenshot shows the SQL Server Management Studio interface. The left pane displays the Navigator with the schema 'iti' selected. Under 'Tables', the 'department' table is expanded, showing columns: dnum, dname, mgrssn, and MGRStart Date. The 'employee' table is also listed. The right pane shows a query window titled 'SQL File 3* employee'. It contains the following SQL code:

```
1 update department  
2 set mgrssn = 112233  
3 where dnum = 20
```

Below the code is an 'Output' window titled 'Action Output' which displays the results of the execution:

#	Time	Action	Message
1	09:59:23	update department set mgrssn = 112233 where dnum = 20	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

C-

The screenshot shows the SQL Developer interface. In the Navigator pane, the schema 'iti' is selected, and the 'employee' table is expanded, showing its columns: fname, lname, ssn, bdate, address, gender, salary, and superssn. The SQL File 3* tab contains the following update statement:

```
1 • update employee
2   set superssn = 112233
3   where ssn = 102660
```

The Output pane shows the results of the update operation:

#	Time	Action
1	09:59:23	update department set mgrssn = 112233 where dnum = 20
2	10:01:20	update employee set superssn = 112233 where ssn = 102660

Message pane: 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

5-

Check if Mr.Kamel is a department manager and take his position

The screenshot shows the SQL Developer interface. In the Navigator pane, the schema 'iti' is selected, and the 'employee' table is expanded, showing its columns: fname, lname, ssn, bdate, address, gender, salary, superssn, and dno. The SQL File 3* tab contains the following select statement:

```
1   select * from department where mgrssn = 223344
```

The Result Grid pane displays the results of the select query:

dnum	dname	mgrssn	MGRStart Date
10	DP1	223344	2005-01-01

In the SQL File 3* tab, the following update statements are shown:

```
1 update department
2 set mgrssn = 112233
3 where dnum = 10
```

The Output pane shows the results of the update operations:

#	Time	Action
1	09:59:23	update department set mgrssn = 112233 where dnum = 20
2	10:01:20	update employee set superssn = 112233 where ssn = 102660
3	10:08:00	select * from department where mgrssn = 223344 LIMIT 0, 1000
4	10:10:23	update department set mgrssn = 112233 where dnum = 10

Message pane: 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
1 row(s) returned
1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

Check if Mr. Kamel supervises any employees and take his position

Navigator

SCHEMAS

Tables

employee

Columns

fname, lname, ssn, bdate, address, gender, salary, superssn

SQL File 3*

1 select * from employee where superssn = 223344

Result Grid

fname	lname	ssn	bdate	address	gender	salary	superssn	dno
Ahmed	Ali	112233	1965-01-01	15 Ali Fahmy St.Giza	M	1300	223344	10
Hanaa	Sobhy	123456	1973-03-18	38 Abdel Khalek Tharwat St. Downtown.Cairo	F	800	223344	10
*								

employee 2

SQL File 3*

1 update employee
2 set superssn = 112233
3 where superssn = 223344

Result Grid

Check if he has dependents and delete them

Navigator

SCHEMAS

Tables

dependent

Columns

essn, dependent_name, gender, bdate

SQL File 3*

1 Select * from dependent where essn = 223344

Result Grid

essn	dependent_name	gender	bdate
223344	Ahmed Kamel Mohamed	M	1998-03-27
223344	Mona Adel Mohamed	F	1975-04-25

Form Editor

Navigator

SCHEMAS

Tables

dependent

Columns

SQL File 3*

1 delete from dependent
2 where essn = 223344

Check if Mr.Kamel works on any project and delete them

The screenshot shows a database interface with a left sidebar labeled "Navigator" containing "SCHEMAS" and "Tables" for the "iti" schema. Under "Tables", "works_on" is selected, showing its columns: essn, pno, and weekly_hours. A SQL editor tab titled "SQL File 3*" contains the query:

```
1 select * from works_on where essn = 223344
```

The result grid displays the following data:

essn	pno	weekly_hours
223344	100	10
223344	200	10
223344	300	10
223344	500	10
HULL	HULL	HULL

The screenshot shows a database interface with a left sidebar labeled "SCHEMAS" containing "Filter objects" and "Tables" for the "iti" schema. Under "Tables", "works_on" is selected. A SQL editor tab contains the following commands:

```
1 • delete from works_on  
2 where essn = 223344
```

6-

The screenshot shows a database interface with a left sidebar labeled "Navigator" containing "SCHEMAS" and "Tables" for the "iti" schema. Under "Tables", "employee" is selected, showing its columns: fname, lname, ssn, and bdate. A SQL editor tab titled "SQL File 3*" contains the query:

```
1 • update employee  
2 set salary = salary * 1.2  
3 where ssn = 112233
```

Write the following queries

1-

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' tree shows the 'iti' schema with tables: department, dependent, employee, project, and works_on. The 'employee' table is selected, and its columns (fname, lname, ssn, bdate, address, gender, salary, superssn, dno) are listed. A query window at the top contains the SQL command: 'select * from employee'. Below it is a 'Result Grid' showing the data for all employees. The grid has columns: fname, lname, ssn, bdate, address, gender, salary, superssn, and dno. The data includes rows for employees like kareem, mohamed, adham, khaled, Ahmed, Ali, Hanaa, Sobhy, Kamel, Mohamed, Amr, Omran, Edward, Hanna, Maged, Raoof, Mariam, Adel, Noha, Mohamed.

fname	lname	ssn	bdate	address	gender	salary	superssn	dno
kareem	mohamed	102660	2002-11-03	19 Ahmed Fakhry.Cairo	M	NULL	112233	30
adham	khaled	102672	2001-03-12	18 Hadayek El Kobra.cairo	M	2000	112233	30
Ahmed	Ali	112233	1965-01-01	15 Ali Fahmy St.Giza	M	1560	112233	10
Hanaa	Sobhy	123456	1973-03-18	38 Abdel Khalik Tharwat St. Downtown.Cairo	F	800	112233	10
Kamel	Mohamed	223341	1970-10-15	38 Mohy el din abo el Ezz St.Cairo	M	1800	321654	10
Amr	Omran	321654	1963-09-14	44 Ilipolis.Cairo	M	2500	NULL	NULL
Edward	Hanna	512463	1972-08-19	18 Abaa El Zakaad St. Nasr City.Cairo	M	1500	321654	30
Maged	Raoof	521634	1980-04-06	18 Khlosi st.Shobra.Cairo	M	1000	968574	30
Mariam	Adel	669955	1982-06-12	269 El-Haram st. Giza	F	750	512463	20
Noha	Mohamed	968574	1975-02-01	55 Orabi St. El Mohandiseen .Cairo	F	1600	321654	20

2-

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' tree shows the 'iti' schema with tables: department, dependent, employee, project, and works_on. The 'employee' table is selected, and its columns (fname, lname, salary, dno) are listed. A query window at the top contains the SQL command: 'select fname, lname, salary, dno from employee'. Below it is a 'Result Grid' showing the data for all employees. The grid has columns: fname, lname, salary, and dno. The data includes rows for employees like kareem, mohamed, adham, khaled, Ahmed, Ali, Hanaa, Sobhy, Kamel, Mohamed, Amr, Omran, Edward, Hanna, Maged, Raoof, Mariam, Adel, Noha, Mohamed.

fname	lname	salary	dno
kareem	mohamed	NULL	30
adham	khaled	2000	30
Ahmed	Ali	1560	10
Hanaa	Sobhy	800	10
Kamel	Mohamed	1800	10
Amr	Omran	2500	NULL
Edward	Hanna	1500	30
Maged	Raoof	1000	30
Mariam	Adel	750	20
Noha	Mohamed	1600	20

3-

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' tree shows the 'iti' schema with tables: department, dependent, employee, project, and works_on. The 'project' table is selected, and its columns (pname, pnumber, plocation, dnum) are listed. A query window at the top contains the SQL command: 'select pname, plocation, dnum from project'. Below it is a 'Result Grid' showing the data for all projects. The grid has columns: pname, plocation, and dnum. The data includes rows for projects like AL_Solimaniah, Cairo_Alex_Road, Al Rabwah, 6th of October City, Al Rawdah, Zaied City, Al Rowad, Cairo_Faiyom_Road, Al Rehab, Nasr City, Pitcho_american, Maady, and Ebad_El_Rahman, Ring_Road.

pname	plocation	dnum
AL_Solimaniah	Cairo_Alex Road	10
Al Rabwah	6th of October City	10
Al Rawdah	Zaied City	10
Al Rowad	Cairo_Faiyom Road	20
Al Rehab	Nasr City	30
Pitcho_american	Maady	30
Ebad_El_Rahman	Ring Road	20

4-

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' tree view is expanded to show the 'iti' schema, which contains tables like department, dependent, employee, and project. The 'project' table is selected, and its columns (pname, pnumber, plocation, city, dnum) are listed. On the right, a query editor window displays the following SQL code:

```
1 • select CONCAT(fname, ' ', lname) as full_name, (salary * 12 * 0.10) as annual_comm
2   from employee
```

Below the code is a 'Result Grid' showing the results of the query:

full_name	annual_comm
kareem mohamed	NULL
adham khaled	2400.00
Ahmed Ali	1872.00
Hanaa Sobhy	960.00
Kamel Mohamed	2160.00
Amr Omran	3000.00
Edward Hanna	1800.00
Maged Raoof	1200.00
Mariam Adel	900.00
Noha Mohamed	1920.00

5-

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' tree view is expanded to show the 'iti' schema, which contains tables like department, dependent, employee, and project. The 'employee' table is selected, and its columns (fname, lname, ssn, bdate, address, gender, salary, superssn, dno) are listed. On the right, a query editor window displays the following SQL code:

```
1 • select ssn, fname, lname
2   from employee
3  where salary > 1000
```

Below the code is a 'Result Grid' showing the results of the query:

ssn	fname	lname
102672	adham	khaled
112233	Ahmed	Ali
223344	Kamel	Mohamed
321654	Amr	Omran
512463	Edward	Hanna
968574	Noha	Mohamed
*	NULL	NULL

6-

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' tree view is expanded to show the 'iti' schema, which contains tables like department, dependent, employee, and project. The 'employee' table is selected, and its columns (fname, lname, ssn, bdate, address, gender, salary, superssn, dno) are listed. On the right, a query editor window displays the following SQL code:

```
1 • select ssn, fname, lname
2   from employee
3  where (salary * 12) > 10000
```

Below the code is a 'Result Grid' showing the results of the query:

ssn	fname	lname
102672	adham	khaled
112233	Ahmed	Ali
223344	Kamel	Mohamed
321654	Amr	Omran
512463	Edward	Hanna
521634	Maged	Raoof
968574	Noha	Mohamed
*	NULL	NULL

7-

The screenshot shows the MySQL Workbench interface. On the left, there's a tree view of database objects under 'Tables'. In the center, a query editor window displays the following SQL code:

```
1 • select fname, lname, salary
2   from employee
3   where gender = 'F'
```

Below the query editor is a 'Result Grid' window showing the results of the query:

	fname	lname	salary
▶	Hanaa	Sobhy	800
	Mariam	Adel	750
*	Noha	Mohamed	1600

8-

The screenshot shows the MySQL Workbench interface. On the left, there's a tree view of database objects under 'Tables'. In the center, a query editor window displays the following SQL code:

```
1 • select dnum, dname
2   from department
3   where mgrssn = 968574
```

Below the query editor is a 'Result Grid' window showing the results of the query:

	dnum	dname
▶	100	DEPT IT
*	NULL	NULL

9-

The screenshot shows the MySQL Workbench interface. On the left, there's a tree view of database objects under 'Tables'. In the center, a query editor window displays the following SQL code:

```
1 • select pnumber, pname, plocation
2   from project
3   where dnum = 10
```

Below the query editor is a 'Result Grid' window showing the results of the query:

	pnumber	pname	plocation
▶	100	AL Solimanah	Cairo_Alex Road
	200	Al Rabwah	6th of October City
*	300	Al Rawdah	Zaied City
	NULL	NULL	NULL