

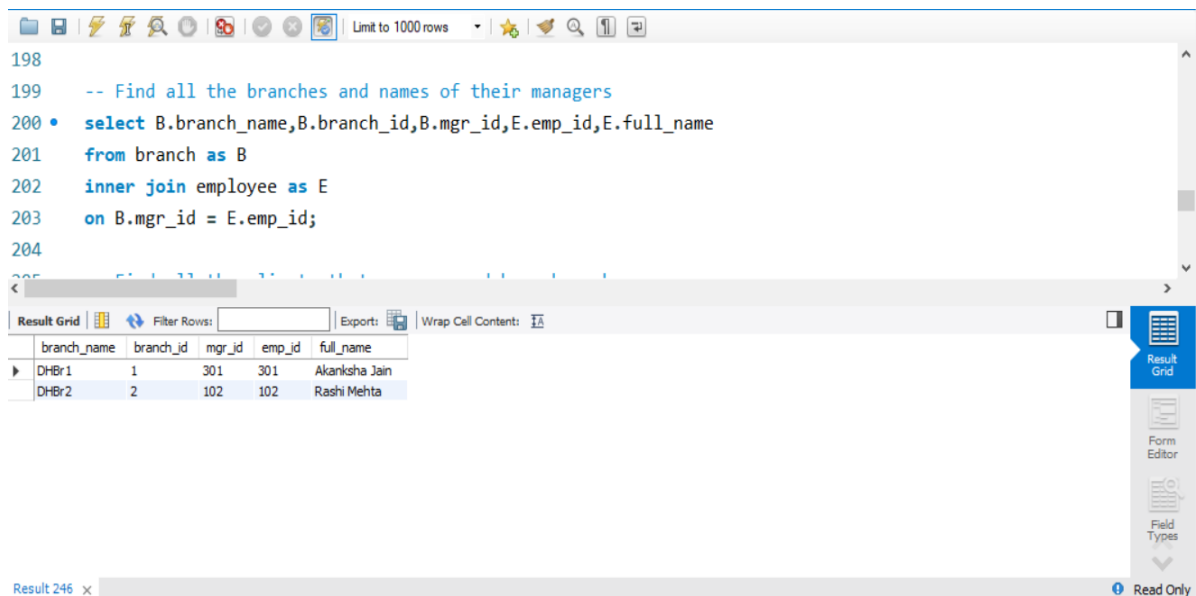
DBMS Assignment – 5

I. INNER JOIN

1. Query : -- Find all branches and names of their managers

```
select B.branch_name,B.branch_id,B.mgr_id,E.emp_id,E.full_name
from branch as B
inner join employee as E on B.mgr_id = E.emp_id;
```

Output :



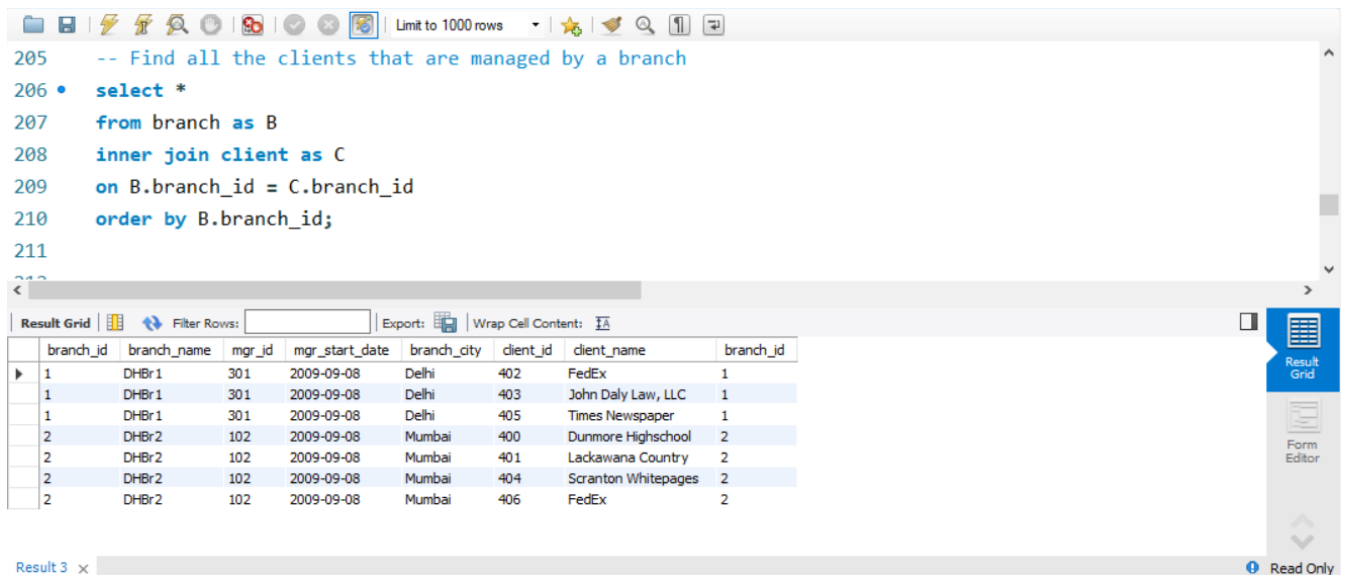
The screenshot shows a database query editor with a toolbar at the top. The query is entered in a text area, and the results are displayed in a table below. The table has five columns: branch_name, branch_id, mgr_id, emp_id, and full_name. There are two rows of data.

branch_name	branch_id	mgr_id	emp_id	full_name
DHBr1	1	301	301	Akanksha Jain
DHBr2	2	102	102	Rashi Mehta

2. Query : -- Find all the clients that are managed by a branch

```
select *
from branch as B
inner join client as C
on B.branch_id = C.branch_id
Order by B.branch_id;
```

Output :



The screenshot shows a database query editor with a toolbar at the top. The SQL query is as follows:

```
205 -- Find all the clients that are managed by a branch
206 • select *
207 from branch as B
208 inner join client as C
209 on B.branch_id = C.branch_id
210 order by B.branch_id;
211
```

Below the query, the results are displayed in a grid. The grid has columns: branch_id, branch_name, mgr_id, mgr_start_date, branch_city, client_id, client_name, and branch_id. The results are as follows:

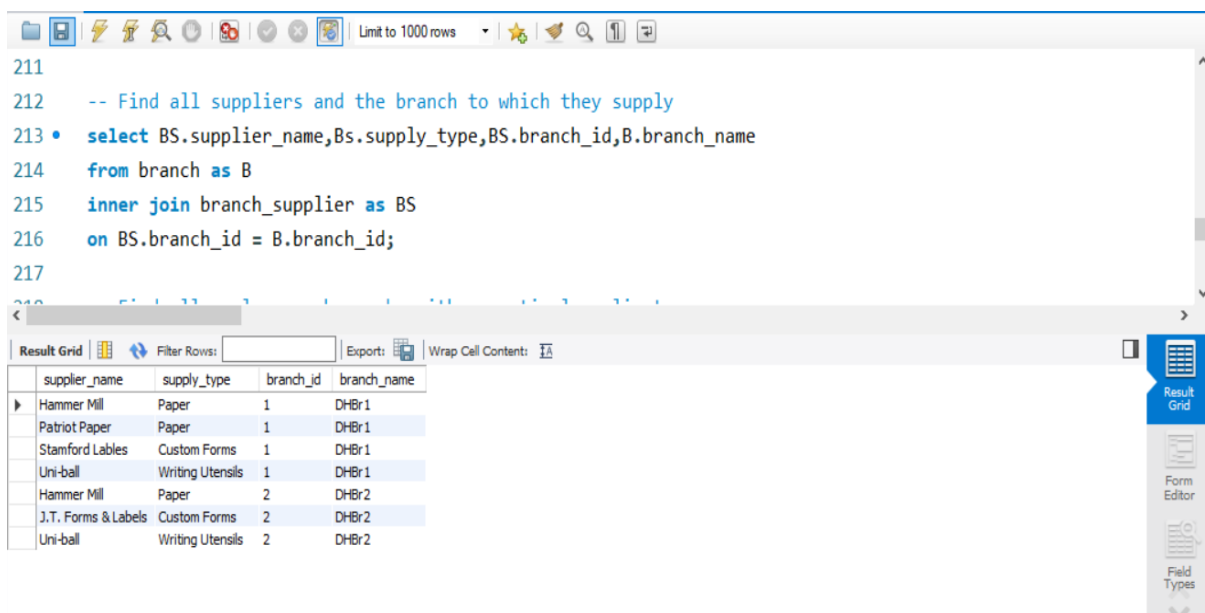
branch_id	branch_name	mgr_id	mgr_start_date	branch_city	client_id	client_name	branch_id
1	DHBr1	301	2009-09-08	Delhi	402	FedEx	1
1	DHBr1	301	2009-09-08	Delhi	403	John Daly Law, LLC	1
1	DHBr1	301	2009-09-08	Delhi	405	Times Newspaper	1
2	DHBr2	102	2009-09-08	Mumbai	400	Dunmore Highschool	2
2	DHBr2	102	2009-09-08	Mumbai	401	Lackawana Country	2
2	DHBr2	102	2009-09-08	Mumbai	404	Scranton Whitepages	2
2	DHBr2	102	2009-09-08	Mumbai	406	FedEx	2

The interface includes a 'Result Grid' button on the right and a 'Read Only' status at the bottom right.

3. Query : -- Find all suppliers and the branch to which they supply

```
select BS.supplier_name,BS.supply_type,BS.branch_id,B.branch_name from branch as B
inner join branch_supplier as BS
on BS.branch_id = B.branch_id;
```

Output :



The screenshot shows a database query editor with a toolbar at the top. The SQL query is as follows:

```
211
212 -- Find all suppliers and the branch to which they supply
213 • select BS.supplier_name,Bs.supply_type,BS.branch_id,B.branch_name
214 from branch as B
215 inner join branch_supplier as BS
216 on BS.branch_id = B.branch_id;
217
```

Below the query, the results are displayed in a grid. The grid has columns: supplier_name, supply_type, branch_id, and branch_name. The results are as follows:

supplier_name	supply_type	branch_id	branch_name
Hammer Mill	Paper	1	DHBr1
Patriot Paper	Paper	1	DHBr1
Stamford Lables	Custom Forms	1	DHBr1
Uni-ball	Writing Utensils	1	DHBr1
Hammer Mill	Paper	2	DHBr2
J.T. Forms & Labels	Custom Forms	2	DHBr2
Uni-ball	Writing Utensils	2	DHBr2

The interface includes a 'Result Grid' button on the right and a 'Field Types' button at the bottom right.

4. Query : -- Find all employees who works with a particular client

```
select C.client_name,C.client_id,E.emp_id,E.full_name
from ((employee as E
inner join works_with as W on E.emp_id = W.emp_id)
inner join client as C on W.client_id = C.client_id) where C.client_id = '403';
```

Output :

The screenshot displays a database query tool interface. The top section shows the SQL query being executed:

```
218 -- Find all employees who works with a particular client
219 • select C.client_name,C.client_id,E.emp_id,E.full_name
220 from ((employee as E
221     inner join works_with as W on E.emp_id = W.emp_id)
222     inner join client as C on W.client_id = C.client_id)
223     where C.client_id = '403';
224
```

Below the query editor, the "Result Grid" is visible, showing the results of the query:

client_name	client_id	emp_id	full_name
John Daly Law, LLC	403	107	Andy Bernard
John Daly Law, LLC	403	108	Jim Halpert

At the bottom, the "Action Output" section shows the execution log:

#	Time	Action	Message
245	18:44:09	select BS.supplier_name,Bs.supply_type,BS.branch_id,B.branch_name from branch as B inner join branch_sup...	7 row(s) returned
246	18:44:12	select BS.supplier_name,Bs.supply_type,BS.branch_id,B.branch_name from branch as B inner join branch_sup...	7 row(s) returned
247	18:48:56	select C.client_name,C.client_id,E.emp_id,E.full_name from ((employee as E inner join works_with as W on E.e...	2 row(s) returned
248	18:48:58	select C.client_name,C.client_id,E.emp_id,E.full_name from ((employee as E inner join works_with as W on E.e...	2 row(s) returned
249	18:49:00	select C.client_name,C.client_id,E.emp_id,E.full_name from ((employee as E inner join works_with as W on E.e...	2 row(s) returned
250	18:49:02	select C.client_name,C.client_id,E.emp_id,E.full_name from ((employee as E inner join works_with as W on E.e...	2 row(s) returned

II . LEFT OUTER JOIN

1. Query : -- Find all the employees who are managers

```
select * from employee as E  
  
left outer join branch as B  
  
on B.mgr_id = E.emp_id;
```

Output :

The screenshot shows a database query editor with a SQL query and its results. The query is as follows:

```
225 -- LEFT OUTER JOIN  
226  
227 -- Find all the employees who are managers  
228 • select *  
229 from employee as E  
230 left outer join branch as B  
231 on B.mgr_id = E.emp_id;
```

The results are displayed in a table with the following columns: emp_id, first_name, last_name, sex, salary, super_id, branch_id, full_name, birth_day, Yearly_income, branch_id, branch_name, mgr_id, mgr_start_date. The table shows 176 rows of data, including employees like Rashi Mehta, Angela Martin, Kelly Kapoor, Stanley Hudson, Josh Porter, Andy Bernard, Jim Halpert, Boni Kapoor, Robert Downey, and Alphonse Jojo.

Below the table, the 'Action Output' section shows the execution of the query, indicating that 10 row(s) were returned for the query.

2. Query : -- Find all the branches that deal with the client FedEx

```
select *  
  
from client as C  
  
left outer join branch as B
```

on B.branch_id = C.branch_id where C.client_name = 'FedEx';

Output :

The screenshot shows a database query editor with a SQL query and its results. The query is as follows:

```
232
233 -- Find all the branches that deal with the client FedEx
234 • select *
235 from client as C
236 left outer join branch as B
237 on B.branch_id = C.branch_id where C.client_name = 'FedEx';
238
```

The results are displayed in a table with the following columns: client_id, client_name, branch_id, branch_id, branch_name, mgr_id, mgr_start_date, and branch_city. The results are as follows:

client_id	client_name	branch_id	branch_id	branch_name	mgr_id	mgr_start_date	branch_city
402	FedEx	1	1	DHBr1	301	2009-09-08	Delhi
406	FedEx	2	2	DHBr2	102	2009-09-08	Mumbai

The bottom of the screenshot shows the 'Output' tab with a table of actions and messages. The actions are as follows:

#	Time	Action	Message
255	18:58:16	select * from client as C left outer join branch as B on B.branch_id = C.branch_id and C.client_name = 'FedEx' ...	7 row(s) returned
256	18:58:18	select * from client as C left outer join branch as B on B.branch_id = C.branch_id and C.client_name = 'FedEx' ...	7 row(s) returned
257	18:59:02	select * from employee as E left outer join branch as B on B.mgr_id = E.emp_id LIMIT 0, 1000	10 row(s) returned
258	18:59:05	select * from client as C left outer join branch as B on B.branch_id = C.branch_id where C.client_name = 'FedEx' ...	2 row(s) returned
259	18:59:08	select * from client as C left outer join branch as B on B.branch_id = C.branch_id where C.client_name = 'FedEx' ...	2 row(s) returned
260	18:59:14	select * from client as C left outer join branch as B on B.branch_id = C.branch_id where C.client_name = 'FedEx' ...	2 row(s) returned

Verification :

The screenshot shows a database query editor with a SQL query and its results. The query is as follows:

```
232
233 -- Find all the branches that deal with the client FedEx
234 • select *
235 from client as C
236 left outer join branch as B
237 on B.branch_id = C.branch_id and C.client_name = 'FedEx';
238
```

The results are displayed in a table with the following columns: client_id, client_name, branch_id, branch_id, branch_name, mgr_id, mgr_start_date, and branch_city. The results are as follows:

client_id	client_name	branch_id	branch_id	branch_name	mgr_id	mgr_start_date	branch_city
400	Dunmore Highschool	2	NULL	NULL	NULL	NULL	NULL
401	Ladkavana Country	2	NULL	NULL	NULL	NULL	NULL
402	FedEx	1	1	DHBr1	301	2009-09-08	Delhi
403	John Daly Law, LLC	1	NULL	NULL	NULL	NULL	NULL
404	Scranton Whitepages	2	NULL	NULL	NULL	NULL	NULL
405	Times Newspaper	1	NULL	NULL	NULL	NULL	NULL
406	FedEx	2	2	DHBr2	102	2009-09-08	Mumbai

3. Query : -- Find all the branches that take in the Paper supply

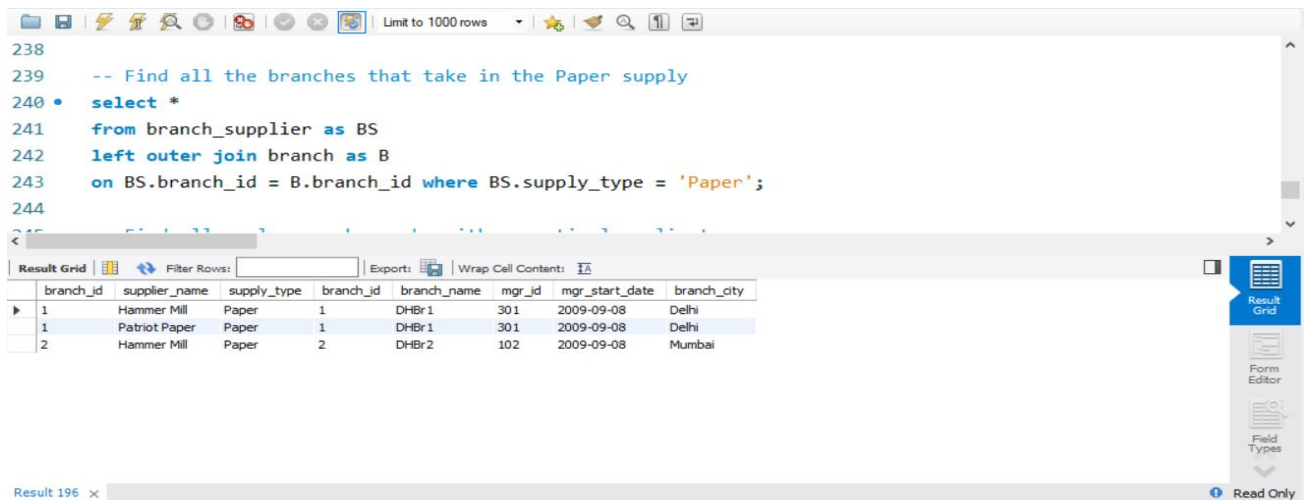
select *

from branch_supplier as BS

left outer join branch as B

on BS.branch_id = B.branch_id where BS.supply_type = 'Paper';

Output :



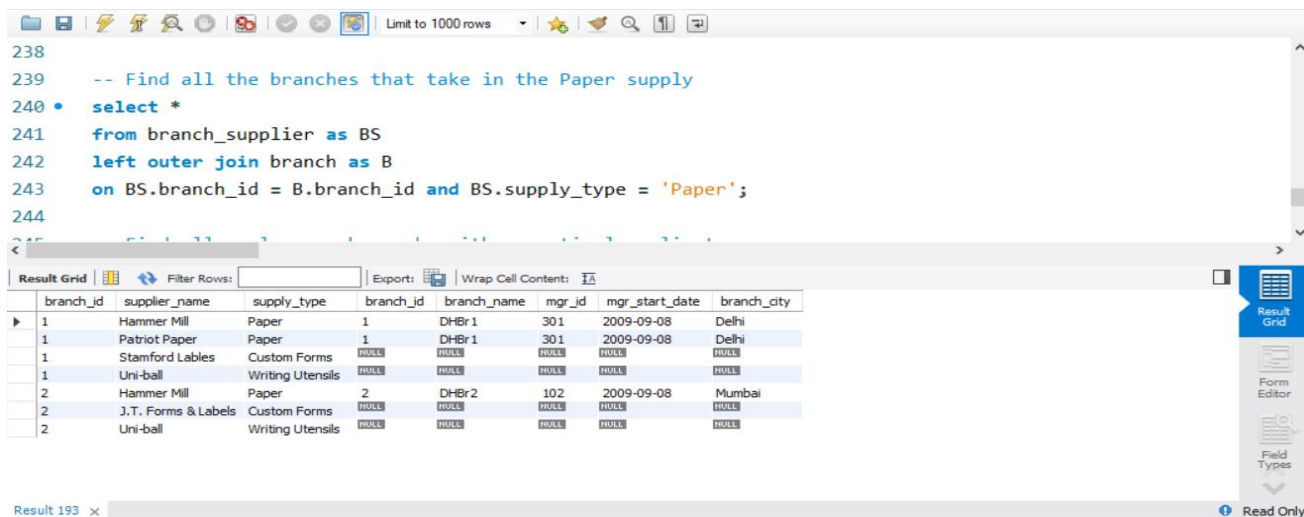
The screenshot shows a database query editor with the following SQL query:

```
238
239 -- Find all the branches that take in the Paper supply
240 • select *
241 from branch_supplier as BS
242 left outer join branch as B
243 on BS.branch_id = B.branch_id where BS.supply_type = 'Paper';
244
```

The results are displayed in a table grid with the following data:

branch_id	supplier_name	supply_type	branch_id	branch_name	mgr_id	mgr_start_date	branch_city
1	Hammer Mill	Paper	1	DHBr1	301	2009-09-08	Delhi
1	Patriot Paper	Paper	1	DHBr1	301	2009-09-08	Delhi
2	Hammer Mill	Paper	2	DHBr2	102	2009-09-08	Mumbai

Verification :



The screenshot shows a database query editor with the following SQL query:

```
238
239 -- Find all the branches that take in the Paper supply
240 • select *
241 from branch_supplier as BS
242 left outer join branch as B
243 on BS.branch_id = B.branch_id and BS.supply_type = 'Paper';
244
```

The results are displayed in a table grid with the following data:

branch_id	supplier_name	supply_type	branch_id	branch_name	mgr_id	mgr_start_date	branch_city
1	Hammer Mill	Paper	1	DHBr1	301	2009-09-08	Delhi
1	Patriot Paper	Paper	1	DHBr1	301	2009-09-08	Delhi
1	Stamford Lables	Custom Forms	NULL	NULL	NULL	NULL	NULL
1	Uni-ball	Writing Utensils	NULL	NULL	NULL	NULL	NULL
2	Hammer Mill	Paper	2	DHBr2	102	2009-09-08	Mumbai
2	J.T. Forms & Labels	Custom Forms	NULL	NULL	NULL	NULL	NULL
2	Uni-ball	Writing Utensils	NULL	NULL	NULL	NULL	NULL

4. Query : -- Find all employees who works with a particular client

```
select *
```

```
from (( client as C
```

```
left outer join works_with as W on C.client_id = W.client_id)
```

```
left outer join employee as E on W.emp_id = E.emp_id ) where C.client_id = '403';
```

Output :

Result Grid
Filter Rows:
Export:
Wrap Cell Content:

Result Grid
Form Editor
Field Types

client_id	client_name	branch_id	emp_id	client_id	total_sales	emp_id	first_name	last_name	sex	salary	super_id	branch_id	full_name	birth_day
403	John Daly Law, LLC	1	107	403	5000	107	Andy	Bernard	M	65000	301	1	Andy Bernard	1973-07-22 08:43
403	John Daly Law, LLC	1	108	403	12000	108	Jim	Halpert	M	71000	301	1	Jim Halpert	1978-10-01 10:44

Verification :

```

244
245 -- Find all employees who works with a particular client
246 • select *
247 from (( client as C
248      left outer join works_with as W on C.client_id = W.client_id and C.client_id = '403')
249      left outer join employee as E on W.emp_id = E.emp_id );
250
251 RIGHT OUTER JOIN

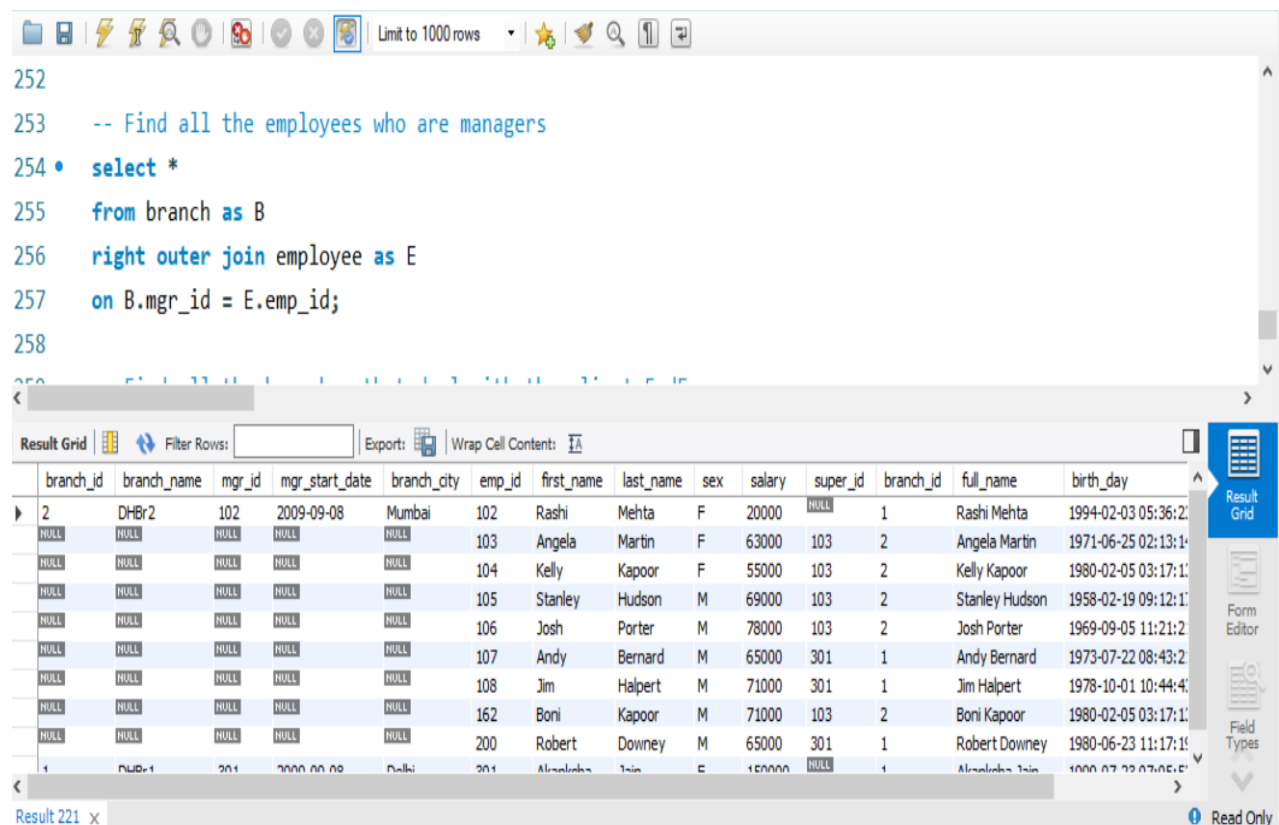
```


III . RIGHT OUTER JOIN

1. Query : -- Find all the employees who are managers

```
select * from branch as B
right outer join employee as E
on B.mgr_id = E.emp_id;
```

Output :



The screenshot shows a database query editor with a toolbar at the top. The query is as follows:

```
252
253 -- Find all the employees who are managers
254 • select *
255 from branch as B
256 right outer join employee as E
257 on B.mgr_id = E.emp_id;
258
```

Below the query, the 'Result Grid' is displayed, showing the results of the query. The grid has 14 columns: branch_id, branch_name, mgr_id, mgr_start_date, branch_city, emp_id, first_name, last_name, sex, salary, super_id, branch_id, full_name, and birth_day. The results are as follows:

branch_id	branch_name	mgr_id	mgr_start_date	branch_city	emp_id	first_name	last_name	sex	salary	super_id	branch_id	full_name	birth_day
2	DHBR2	102	2009-09-08	Mumbai	102	Rashi	Mehta	F	20000	NULL	1	Rashi Mehta	1994-02-03 05:36:20
NULL	NULL	NULL	NULL	NULL	103	Angela	Martin	F	63000	103	2	Angela Martin	1971-06-25 02:13:14
NULL	NULL	NULL	NULL	NULL	104	Kelly	Kapoor	F	55000	103	2	Kelly Kapoor	1980-02-05 03:17:11
NULL	NULL	NULL	NULL	NULL	105	Stanley	Hudson	M	69000	103	2	Stanley Hudson	1958-02-19 09:12:11
NULL	NULL	NULL	NULL	NULL	106	Josh	Porter	M	78000	103	2	Josh Porter	1969-09-05 11:21:21
NULL	NULL	NULL	NULL	NULL	107	Andy	Bernard	M	65000	301	1	Andy Bernard	1973-07-22 08:43:21
NULL	NULL	NULL	NULL	NULL	108	Jim	Halpert	M	71000	301	1	Jim Halpert	1978-10-01 10:44:41
NULL	NULL	NULL	NULL	NULL	162	Boni	Kapoor	M	71000	103	2	Boni Kapoor	1980-02-05 03:17:11
NULL	NULL	NULL	NULL	NULL	200	Robert	Downey	M	65000	301	1	Robert Downey	1980-06-23 11:17:11
1	DHBR1	301	2000-09-08	Delhi	301	Alexander	Trin	F	150000	NULL	1	Alexander Trin	1980-07-22 07:05:11

2. Query : -- Find all the branches that deal with the client FedEx

```
select *
from branch as B
right outer join client as C
on B.branch_id = C.branch_id where C.client_name = 'FedEx';
```


Output :

The screenshot shows a database query editor with a toolbar at the top. The SQL query is as follows:

```
257 on B.mgr_id = E.emp_id;
258
259 -- Find all the branches that deal with the client FedEx
260 • select *
261 from branch as B
262 right outer join client as C
263 on B.branch_id = C.branch_id where C.client_name = 'FedEx';
```

Below the query, the results are displayed in a table with 8 columns: branch_id, branch_name, mgr_id, mgr_start_date, branch_city, client_id, client_name, and branch_id. The results are:

branch_id	branch_name	mgr_id	mgr_start_date	branch_city	client_id	client_name	branch_id
1	DHBr1	301	2009-09-08	Delhi	402	FedEx	1
2	DHBr2	102	2009-09-08	Mumbai	406	FedEx	2

The interface includes a 'Result Grid' button on the right and a 'Read Only' status at the bottom.

Verification :

The screenshot shows a database query editor with a toolbar at the top. The SQL query is as follows:

```
257 on B.mgr_id = E.emp_id;
258
259 -- Find all the branches that deal with the client FedEx
260 • select *
261 from branch as B
262 right outer join client as C
263 on B.branch_id = C.branch_id and C.client_name = 'FedEx';
```

Below the query, the results are displayed in a table with 8 columns: branch_id, branch_name, mgr_id, mgr_start_date, branch_city, client_id, client_name, and branch_id. The results are:

branch_id	branch_name	mgr_id	mgr_start_date	branch_city	client_id	client_name	branch_id
NULL	NULL	NULL	NULL	NULL	400	Dunmore Highschool	2
NULL	NULL	NULL	NULL	NULL	401	Lackawana Country	2
1	DHBr1	301	2009-09-08	Delhi	402	FedEx	1
NULL	NULL	NULL	NULL	NULL	403	John Daly Law, LLC	1
NULL	NULL	NULL	NULL	NULL	404	Scranton Whitepages	2
NULL	NULL	NULL	NULL	NULL	405	Times Newspaper	1
2	DHBr2	102	2009-09-08	Mumbai	406	FedEx	2

The interface includes a 'Result Grid' button on the right and a 'Read Only' status at the bottom.

3. Query : -- Find all the branches that take in the Paper supply

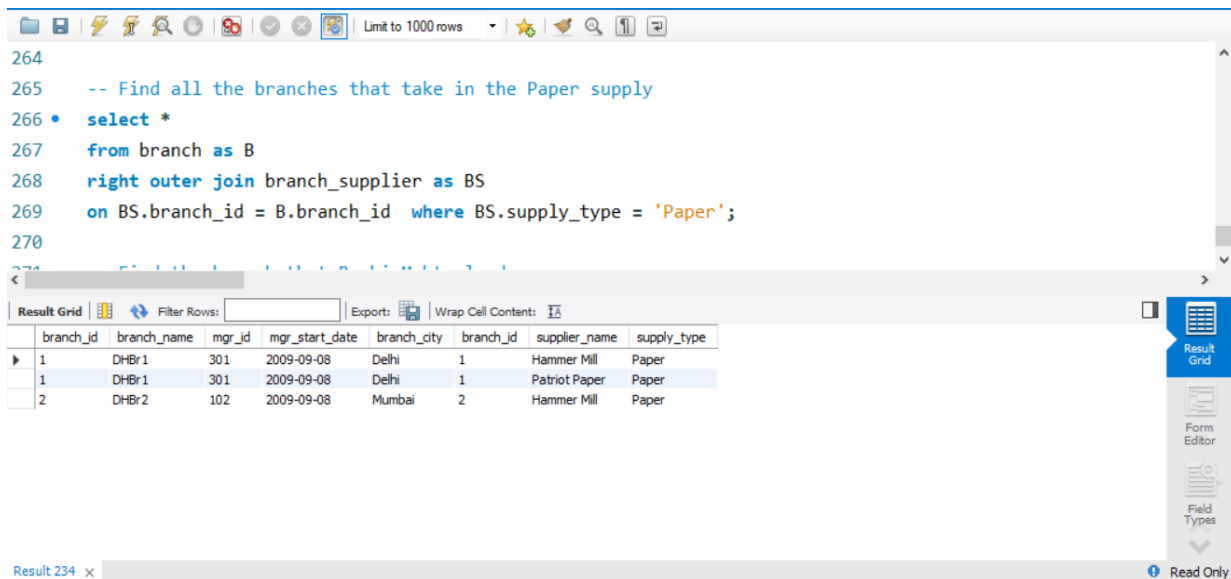
select *

from branch as B

right outer join branch_supplier as BS

on BS.branch_id = B.branch_id where BS.supply_type = 'Paper';

Output :



The screenshot shows a SQL query editor with a toolbar at the top. The query is as follows:

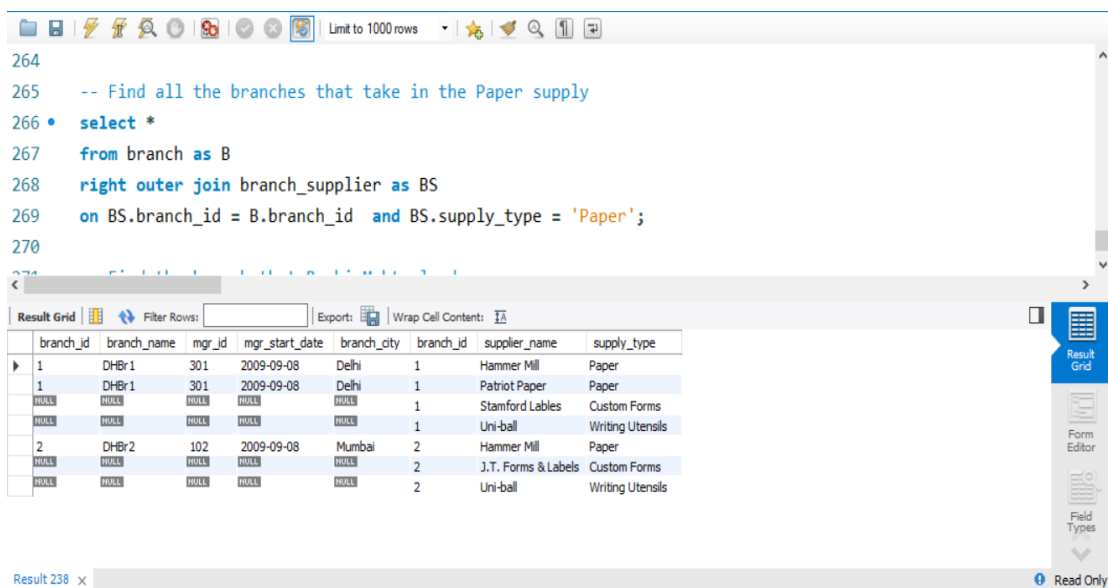
```
264
265 -- Find all the branches that take in the Paper supply
266 • select *
267 from branch as B
268 right outer join branch_supplier as BS
269 on BS.branch_id = B.branch_id where BS.supply_type = 'Paper';
270
```

Below the query, the 'Result Grid' is displayed with the following data:

branch_id	branch_name	mgr_id	mgr_start_date	branch_city	branch_id	supplier_name	supply_type
1	DHBr1	301	2009-09-08	Delhi	1	Hammer Mill	Paper
1	DHBr1	301	2009-09-08	Delhi	1	Patriot Paper	Paper
2	DHBr2	102	2009-09-08	Mumbai	2	Hammer Mill	Paper

The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Contents' checkbox. The status bar at the bottom indicates 'Result 234' and 'Read Only'.

Verification :



The screenshot shows a SQL query editor with a toolbar at the top. The query is as follows:

```
264
265 -- Find all the branches that take in the Paper supply
266 • select *
267 from branch as B
268 right outer join branch_supplier as BS
269 on BS.branch_id = B.branch_id and BS.supply_type = 'Paper';
270
```

Below the query, the 'Result Grid' is displayed with the following data:

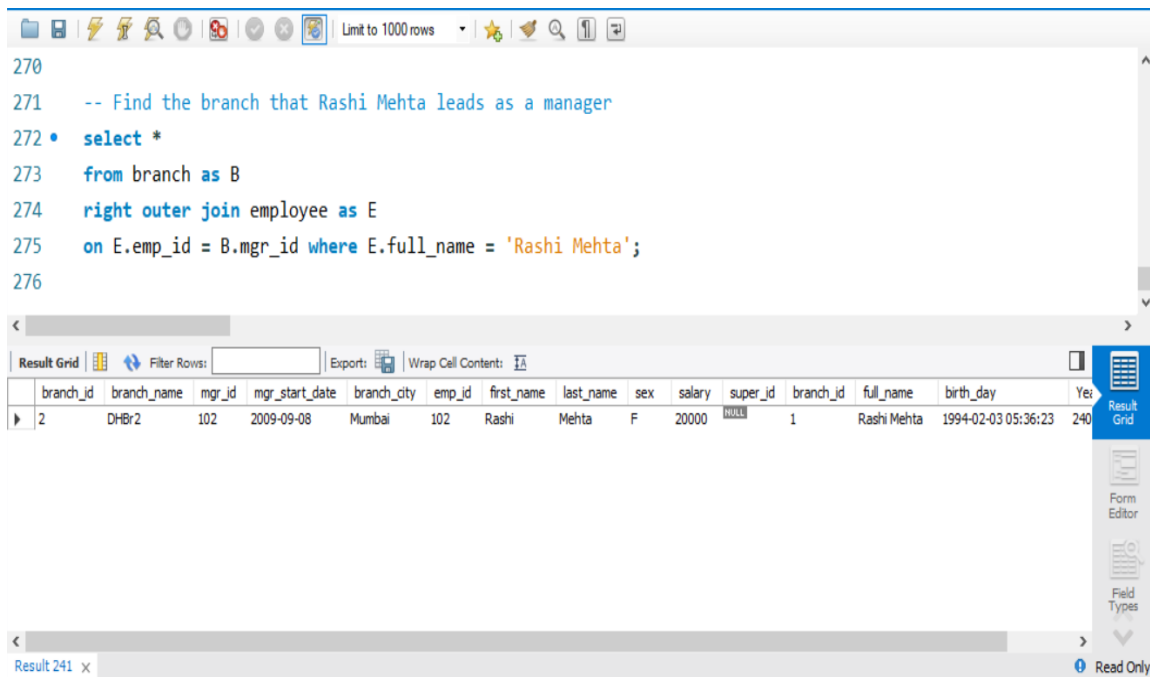
branch_id	branch_name	mgr_id	mgr_start_date	branch_city	branch_id	supplier_name	supply_type
1	DHBr1	301	2009-09-08	Delhi	1	Hammer Mill	Paper
1	DHBr1	301	2009-09-08	Delhi	1	Patriot Paper	Paper
NULL	NULL	NULL	NULL	NULL	1	Stamford Lables	Custom Forms
NULL	NULL	NULL	NULL	NULL	1	Uni-ball	Writing Utensils
2	DHBr2	102	2009-09-08	Mumbai	2	Hammer Mill	Paper
NULL	NULL	NULL	NULL	NULL	2	J.T. Forms & Labels	Custom Forms
NULL	NULL	NULL	NULL	NULL	2	Uni-ball	Writing Utensils

The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Contents' checkbox. The status bar at the bottom indicates 'Result 238' and 'Read Only'.

4. Query : -- Find the branch that Rashi Mehta leads as a manager

```
select *  
from branch as B  
right outer join employee as E  
on E.emp_id = B.mgr_id where E.full_name = 'Rashi Mehta';
```

Output :



The screenshot shows the SQL Developer interface with the following query:

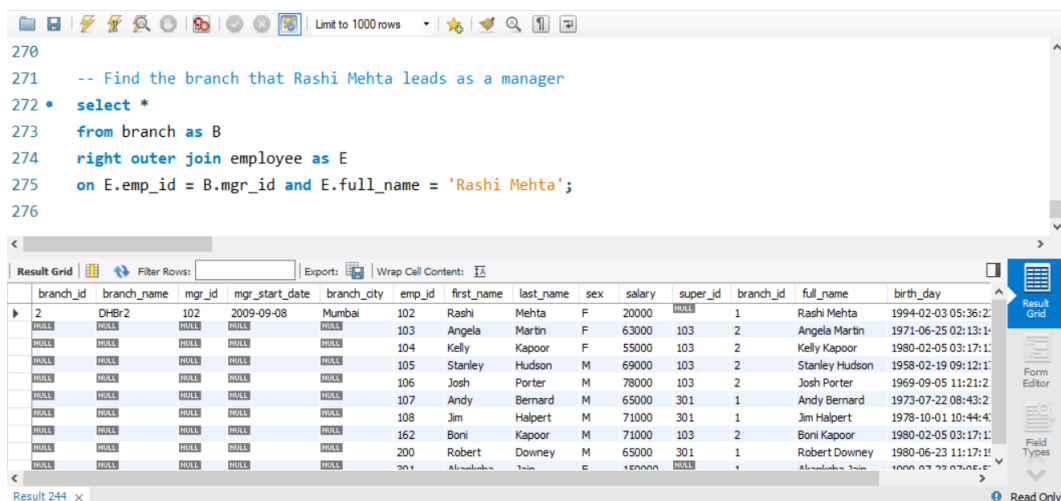
```
270  
271 -- Find the branch that Rashi Mehta leads as a manager  
272 • select *  
273 from branch as B  
274 right outer join employee as E  
275 on E.emp_id = B.mgr_id where E.full_name = 'Rashi Mehta';  
276
```

The results grid displays the following data:

branch_id	branch_name	mgr_id	mgr_start_date	branch_city	emp_id	first_name	last_name	sex	salary	super_id	branch_id	full_name	birth_day	Yes
2	DHBr2	102	2009-09-08	Mumbai	102	Rashi	Mehta	F	20000	1	1	Rashi Mehta	1994-02-03 05:36:23	240

The status bar at the bottom indicates "Result 241" and "Read Only".

Verification :



The screenshot shows the SQL Developer interface with the following query:

```
270  
271 -- Find the branch that Rashi Mehta leads as a manager  
272 • select *  
273 from branch as B  
274 right outer join employee as E  
275 on E.emp_id = B.mgr_id and E.full_name = 'Rashi Mehta';  
276
```

The results grid displays the following data:

branch_id	branch_name	mgr_id	mgr_start_date	branch_city	emp_id	first_name	last_name	sex	salary	super_id	branch_id	full_name	birth_day
2	DHBr2	102	2009-09-08	Mumbai	102	Rashi	Mehta	F	20000	1	1	Rashi Mehta	1994-02-03 05:36:23
					103	Angela	Martin	F	63000	103	2	Angela Martin	1971-06-25 02:13:11
					104	Kelly	Kapoor	F	55000	103	2	Kelly Kapoor	1980-02-05 03:17:11
					105	Stanley	Hudson	M	69000	103	2	Stanley Hudson	1958-02-19 09:12:11
					106	Josh	Porter	M	78000	103	2	Josh Porter	1969-09-05 11:21:12
					107	Andy	Bernard	M	65000	301	1	Andy Bernard	1973-07-22 08:43:21
					108	Jim	Halpert	M	71000	301	1	Jim Halpert	1978-10-01 10:44:44
					162	Boni	Kapoor	M	71000	103	2	Boni Kapoor	1980-02-05 03:17:11
					200	Robert	Downey	M	65000	301	1	Robert Downey	1980-06-23 11:17:11
					201	Alexander	Tain	E	10000	1	1	Alexander Tain	1980-07-23 07:05:11

The status bar at the bottom indicates "Result 244" and "Read Only".

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Trishul KS, 18bcs104