

Assignment 4  
COMP 3005

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(note to TA: I sincerely tried my best to use the Oracle VM, but the network connection was broken and I was unable to get it fixed by Andrew Pullin as instructed. As a result, I did the best I could, and used an online Oracle DB, found at <https://livesql.oracle.com>  
It is the exact same as using the course's oracle DB, just online. Please take into consideration the fact that I tried to use the courses Oracle DB, but only because I was unable to do so, I used an equivalent tool)

- Thanks!

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SQL Worksheet

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Run

```
1 CREATE TABLE Bank (B# varchar(10) PRIMARY KEY, Name varchar(10), City varchar(10));
2 CREATE TABLE Customer (C# varchar(10) PRIMARY KEY, Name varchar(10), Age int, City varchar(10));
3 CREATE TABLE Account (C# varchar(10), B# varchar(10), Balance int, FOREIGN KEY (B#) REFERENCES Bank(B#), FOREIGN KEY (C#) REFERENCES Customer(C#), PRIMARY KEY(C#, B#));
4 INSERT INTO Bank VALUES ('B1', 'England', 'London');
5 INSERT INTO Bank VALUES ('B2', 'America', 'New York');
6 INSERT INTO Bank VALUES ('B3', 'Royal', 'Toronto');
7 INSERT INTO Bank VALUES ('B4', 'France', 'Paris');
8 INSERT INTO Customer VALUES ('C1', 'Adams', 20, 'London');
9 INSERT INTO Customer VALUES ('C2', 'Blake', 30, 'Paris');
10 INSERT INTO Customer VALUES ('C3', 'Clark', 25, 'Paris');
11 INSERT INTO Customer VALUES ('C4', 'Jones', 20, 'London');
12 INSERT INTO Customer VALUES ('C5', 'Smith', 30, 'Toronto');
13 INSERT INTO Account VALUES ('C1', 'B1', 1000);
14 INSERT INTO Account VALUES ('C1', 'B2', 2000);
15 INSERT INTO Account VALUES ('C1', 'B3', 3000);
16 INSERT INTO Account VALUES ('C1', 'B4', 4000);
17 INSERT INTO Account VALUES ('C2', 'B1', 2000);
18 INSERT INTO Account VALUES ('C2', 'B2', 3000);
19 INSERT INTO Account VALUES ('C2', 'B3', 4000);
20 INSERT INTO Account VALUES ('C3', 'B1', 3000);
21 INSERT INTO Account VALUES ('C3', 'B2', 4000);
22 INSERT INTO Account VALUES ('C4', 'B1', 4000);
23 INSERT INTO Account VALUES ('C4', 'B2', 5000);
```

Table created.

Table created.

Table created.








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SQL Worksheet

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1 select C.Name from Customer C








2 where exists

3 (select \* from Account A






4 where C.C# = A.C#);

NAME
Adams
Blake
Clark
Jones

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4 rows selected.

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SQL Worksheet

 Clear  View Session  Reset  Save  Run

1 select C.Name, B.Name from Customer C, Bank B

2 where not exists

3 (select \* from Account A

4 where C.C# = A.C# and A.B# = B.B#);

NAME	NAME
Smith	England
Smith	America
Clark	Royal
Jones	Royal
Smith	Royal
Blake	France
Clark	France
Jones	France
Smith	France

[Download CSV](#)  
9 rows selected.



Home



SQL Worksheet



My Session ▼



Schema



Design



My Scripts



Code Library

## SQL Worksheet

Clear

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Reset

Save








Run

```
1 select C.Name from Customer C
2 where not exists
3 (select * from Account A
4 where C.C# = A.C#);
```

NAME

Smith

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SQL Worksheet

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 Run

1

select B.Name from Bank B

2

where exists

3

(select \* from Account A, Customer C

4

where C.Name = 'Blake' and C.C# = A.C# and A.B# = B.B#)

5

union

6

select B.Name from Bank B

7

where exists

8

(select \* from Account A, Customer C

9

where C.Name = 'Clark' and C.C# = A.C# and A.B# = B.B#);

NAME

America

England

Royal

Download CSV

3 rows selected.



Home



SQL Worksheet



My Session ▼



Schema



Design



My Scripts



Code Library

## SQL Worksheet

Clear

View Session

Reset

Save

Run

```
1 select C.Name from Customer C
2 where not exists
3 (select * from Bank B
4  where not exists
5      (select * from Account A
6       where C.C# = A.C# and A.B# = B.B#));
```

NAME

Adams

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# SQL Worksheet

Clear

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Save

Run

1
 select C.Name from Customer C where not exists

2
 (select \* from Bank B where

3
 (B.Name NOT IN ('Royal','France')

4
 OR EXISTS

5
 (select \* from Account A where C.C# = A.C# and A.B# = B.B#))

6
 and

7
 (B.Name IN ('Royal', 'France') or not exists

8
 (select \* from Account A where C.C# = A.C# and A.B# = B.B#));

NAME
Clark
Jones

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2 rows selected.



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Run

1

2

3

4

5

select C3.Name from Customer C3, Customer C

where C3.Name != 'Clark' and C.Name = 'Clark' and exists

(select \* from Bank B, Account A1, Account A

where C.C# = A.C# and A.B# = B.B#

and C3.C# = A1.C# and A1.B# = B.B#);

NAME








Adams

Blake

Jones

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3 rows selected.

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SQL Worksheet

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 Run

```
1 select C3.Name from Customer C3, Customer C
2 where C3.Name != 'Clark' and C.Name = 'Clark' and NOT exists
3     (select * FROM Bank B
4      WHERE EXISTS
5      (SELECT * FROM Account A
6      where C.C# = A.C# and A.B# = B.B#)
7      and not exists
8      (select * from Account A1, Account A
9      where C.C# = A.C# and A.B# = B.B#
10     and C3.C# = A1.C# and A1.B# = B.B#));
```

NAME
Adams
Blake
Jones

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3 rows selected.



Home



SQL Worksheet



My Session ▼



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## SQL Worksheet

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Run

```
1 select distinct C.Name
2 from Customer C, Account A1, Account A2
3 where C.C# = A1.C#
4 and C.C# = A2.C#
5 and A1.B# !=A2.B#;
```

NAME

Adams

Blake

Clark

Jones

[Download CSV](#)

4 rows selected.

4 rows selected.

# SQL Worksheet

```

1 select *
2 from Customer FULL OUTER JOIN Account USING (C#)
3 FULL OUTER JOIN Bank USING(B#);
4 union
5 select C.Name
6 from Customer C, Account A1 where C.C# = A1.C#
7 group by C.Name Having count(A1.B#)=1;
8
    
```

B#	C#	NAME	AGE	CITY	BALANCE	NAME	CITY
B1	C1	Adams	20	London	1000	England	London
B2	C1	Adams	20	London	2000	America	New York
B3	C1	Adams	20	London	3000	Royal	Toronto
B4	C1	Adams	20	London	4000	France	Paris
B1	C2	Blake	30	Paris	2000	England	London
B2	C2	Blake	30	Paris	3000	America	New York
B3	C2	Blake	30	Paris	4000	Royal	Toronto
B1	C3	Clark	25	Paris	3000	England	London
B2	C3	Clark	25	Paris	4000	America	New York
B1	C4	Jones	20	London	4000	England	London
B2	C4	Jones	20	London	5000	America	New York
-	C5	Smith	30	Toronto	-	-	-

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Live SQL

Part 1: NUMBER 12

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Run

1select Name, SUM(Balance)

2from Customer FULL OUTER JOIN Account USING (C#)

3group by C#, Name;

NAME	SUM(BALANCE)
Clark	7000
Adams	10000
Blake	9000
Jones	9000
Smith	-

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5 rows selected.

