

Lab 2

Question:

Consider the following database for a banking enterprise.

BRANCH (branch-name: String, branch-city: String, assets: real)

ACCOUNTS (accno: int, branch-name: String, balance: real)

DEPOSITOR (customer-name: String, customer-street: String, customer-city: String)

LOAN (loan-number: int, branch-name: String, amount: real)

BORROWER (customer-name: String, loan-number: int)

Queries:

- i. Create the above tables by properly specifying the primary keys and the foreign keys.

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2369 seconds.)

```
create table Branch(branchname varchar(30),branchcity varchar(30),assests real,primary key(branchname))
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

Your SQL query has been executed successfully.

```
desc Branch
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

+ Options

Field	Type	Null	Key	Default	Extra
branchname	varchar(30)	NO	PRI	NULL	
branchcity	varchar(30)	YES		NULL	
assests	double	YES		NULL	

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.3935 seconds.)

```
create table BankAccount(accno integer, branchname varchar(30), balance real, primary key(accno),foreign key(branchname) references Branch(branchname))
```

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Your SQL query has been executed successfully.

```
desc BankAccount
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

+ Options

Field	Type	Null	Key	Default	Extra
accno	int(11)	NO	PRI	NULL	
branchname	varchar(30)	YES	MUL	NULL	
balance	double	YES		NULL	

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.3600 seconds.)

```
create table BankCustomer(customername varchar(30),customerstreet varchar(30),customercity varchar(30), primary key(customername))
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

Your SQL query has been executed successfully.

```
desc BankCustomer
```

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+ Options

Field	Type	Null	Key	Default	Extra
customername	varchar(30)	NO	PRI	NULL	
customerstreet	varchar(30)	YES		NULL	
customercity	varchar(30)	YES		NULL	

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.3067 seconds.)

```
create table Depositor(customername varchar(30),accno integer, primary key(customername,accno),foreign key(customername) references BankCustomer(customername), foreign key(accno) references BankAccount(accno))
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

Your SQL query has been executed successfully.

```
desc Depositor
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

+ Options

Field	Type	Null	Key	Default	Extra
customername	varchar(30)	NO	PRI	NULL	
accno	int(11)	NO	PRI	NULL	

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.3609 seconds.)

```
create table loan(loannumber integer,branchname varchar(30),amount real, primary key(loannumber), foreign key(branchname) references branch(branchname))
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

Your SQL query has been executed successfully.

```
desc loan
```

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+ Options

Field	Type	Null	Key	Default	Extra
loannumber	int(11)	NO	PRI	NULL	
branchname	varchar(30)	YES	MUL	NULL	
amount	double	YES		NULL	

ii. Enter at least five tuples for each relation.

Showing rows 0 - 4 (5 total, Query took 0.0136 seconds.)

```
select * from branch
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all

 | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

		branchname	branchcity	assests
<input type="checkbox"/>	Edit	ICICI_GandhiNagar	Delhi	20000
<input type="checkbox"/>	Edit	ICICI_Indiranagar	Bangalore	50000
<input type="checkbox"/>	Edit	ICICI_Koramangala	Bangalore	10000
<input type="checkbox"/>	Edit	ICICI_ParliamentRoad	Delhi	10000
<input type="checkbox"/>	Edit	ICICI_ShivajiRoad	Bombay	20000

Showing rows 0 - 4 (5 total, Query took 0.0015 seconds.)

```
select * from bankaccount
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all

 | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

		accno	branchname	balance
<input type="checkbox"/>	Edit	1	ICICI_Indiranagar	2000
<input type="checkbox"/>	Edit	2	ICICI_Koramangala	3000
<input type="checkbox"/>	Edit	3	ICICI_ShivajiRoad	4000
<input type="checkbox"/>	Edit	4	ICICI_ParliamentRoad	6000
<input type="checkbox"/>	Edit	5	ICICI_GandhiNagar	2000

Showing rows 0 - 4 (5 total, Query took 0.0033 seconds.) [accno: 5... - 1...]

```
select *from depositor ORDER BY `accno` DESC
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all

 | Number of rows: 25 | Filter rows: Search this table | Sort by key: accno (DESC)

+ Options

		customername	accno
<input type="checkbox"/>	Edit	Dharini	5
<input type="checkbox"/>	Edit	Sannidhi	4
<input type="checkbox"/>	Edit	Anjali	3
<input type="checkbox"/>	Edit	Bharat	2
<input type="checkbox"/>	Edit	Ajith	1

Showing rows 0 - 4 (5 total, Query took 0.0034 seconds.)

```
select * from bankcustomer
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	customername	customerstreet	customercity
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	Ajith	Church Street	Bangalore
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	Anjali	Frazer Town	Bombay
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	Bharat	New Thippasandra	Bangalore
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	Dharini	Lajpat Road	Delhi
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	Sannidhi	Gandhi Street	Delhi

Showing rows 0 - 4 (5 total, Query took 0.0030 seconds.)

```
select * from loan
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	loannumber	branchname	amount
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	ICICI_Indiranagar	1000
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	ICICI_Koramangala,	2000
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	ICICI_ShivajiNagar	3000
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	ICICI_ParliamentRoad	4000
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	ICICI_GandhiNagar	5000

iii. Find all the customers who have at least two accounts at the Main branch.

MySQL returned an empty result set (i.e. zero rows). (Query took 0.1173 seconds.)

```
select c.customername from bankcustomer c where exists(select d.customername,count(d.customername) from depositor d, bankaccount ba where d.accno=ba.accno and c.customername=d.customername and ba.branchname='ICICI_Indiranagar' group by d.customername having count(d.customername)>=2)
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

customername

iv. Find all the customers who have an account at all the branches located in a specific city.

Showing rows 0 - 1 (2 total, Query took 0.0354 seconds.)

```
select * from bankaccount where branchname in (select branchname from branch where branchcity='Delhi')
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	accno	branchname	balance
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	ICICI_ParliamentRoad	6000
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	ICICI_GandhiNagar	2000

- v. Demonstrate how you delete all account tuples at every branch located in a specific city.

✔ 2 rows affected. (Query took 0.1204 seconds.)

```
delete from bankaccount where branchname in (select branchname from branch where branchcity='Delhi')
```

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