

# Patrick Goddard – Database Phase II

## Part I

### Customer

#### Functional Dependencies:

CustomerID  $\longrightarrow$  FirstName

CustomerID  $\longrightarrow$  LastName

CustomerID  $\longrightarrow$  Phone

CustomerID  $\longrightarrow$  Email

The following table has been normalized to BCNF:

```
MariaDB [prgodda]> describe Customer;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerID | int(8)     | NO   | PRI | NULL    | auto_increment |
| FirstName  | varchar(20)| NO   |     | NULL    |               |
| LastName   | varchar(20)| NO   |     | NULL    |               |
| Phone      | varchar(22)| YES  |     | NULL    |               |
| Email      | varchar(100)| YES  |     | NULL    |               |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

### Product

#### Functional Dependencies:

ModelNumber  $\longrightarrow$  Manufacturer

ModelNumber  $\longrightarrow$  Price

The following table has been normalized to BCNF:

```
MariaDB [prgodda]> describe Product;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ModelNumber | varchar(32)| NO   | PRI | NULL    |               |
| Manufacturer | varchar(32)| NO   |     | NULL    |               |
| Price       | varchar(20)| NO   |     | NULL    |               |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

## Monitor

### Functional Dependencies:

ModelNumber  $\longrightarrow$  Resolution

ModelNumber  $\longrightarrow$  RefreshRate

ModelNumber  $\longrightarrow$  Latency

The following table has been normalized to BCNF:

```
MariaDB [prgodda]> describe Monitor;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ModelNumber | varchar(32) | NO   | PRI | NULL    |       |
| Manufacturer | varchar(32) | NO   |     | NULL    |       |
| Price       | varchar(20) | NO   |     | NULL    |       |
| Resolution  | char(9)     | NO   |     | NULL    |       |
| RefreshRate | varchar(5)  | NO   |     | NULL    |       |
| Latency     | varchar(4)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

## Laptop

### Functional Dependencies:

ModelNumber  $\longrightarrow$  Convertible

ModelNumber  $\longrightarrow$  Webcam

ModelNumber  $\longrightarrow$  SizeInInches

The following table has been normalized to BCNF:

```
MariaDB [prgodda]> describe Laptop;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ModelNumber | varchar(32) | NO   | PRI | NULL    |       |
| Manufacturer | varchar(32) | NO   |     | NULL    |       |
| Price       | varchar(20) | NO   |     | NULL    |       |
| Convertible | varchar(3)  | NO   |     | NULL    |       |
| Webcam      | varchar(3)  | NO   |     | NULL    |       |
| SizeInInches | char(3)     | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

## Desktop

### Functional Dependencies:

ModelNumber  $\longrightarrow$  CPUClock

ModelNumber  $\longrightarrow$  MemorySize

ModelNumber  $\longrightarrow$  DiskSize

ModelNumber  $\longrightarrow$  DedicatedGPU

The following table has been normalized to BCNF:

```
MariaDB [prgodda]> describe Desktop;
```

Field	Type	Null	Key	Default	Extra
ModelNumber	varchar(32)	NO	PRI	NULL	
Manufacturer	varchar(32)	NO		NULL	
Price	varchar(20)	NO		NULL	
CPUClock	char(6)	NO		NULL	
MemorySize	char(4)	NO		NULL	
DiskSize	varchar(15)	YES		NULL	
DedicatedGPU	varchar(3)	NO		NULL	

7 rows in set (0.00 sec)

## CellPhone

### Functional Dependencies:

ModelNumber  $\longrightarrow$  Operating System

ModelNumber  $\longrightarrow$  4GCompatible

ModelNumber  $\longrightarrow$  SizeInInches

The following table has been normalized to BCNF:

```
MariaDB [prgodda]> describe CellPhone;
```

Field	Type	Null	Key	Default	Extra
ModelNumber	varchar(32)	NO	PRI	NULL	
Manufacturer	varchar(32)	NO		NULL	
Price	varchar(20)	NO		NULL	
OperatingSystem	varchar(30)	NO		NULL	
4GCompatible	varchar(3)	YES		NULL	
SizeInInches	varchar(4)	NO		NULL	

6 rows in set (0.01 sec)

## AntiVirus

### Functional Dependencies:

ModelNumber, Software Version ———→ ActivationKey

The following table has been normalized to BCNF:

```
MariaDB [prgodda]> describe AntiVirus;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| SoftwareVersion | varchar(30)    | NO   | PRI | NULL     |       |
| ActivationKey   | varchar(62)    | NO   |     | NULL     |       |
| ModelNumber     | varchar(32)    | NO   | PRI |          |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.26 sec)
```

## Part II

### Adding data to the table:

```
MariaDB [prgodda]> INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('KSJF910', 'INTEL', '$199.00');
Query OK, 1 row affected (0.02 sec)

MariaDB [prgodda]> INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('DLKA394', 'DELL', '$299.00');
Query OK, 1 row affected (0.03 sec)

MariaDB [prgodda]> INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('FI30S9D', 'ASUS', '$400.00');
Query OK, 1 row affected (0.02 sec)

MariaDB [prgodda]> INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('DPOEWN4', 'QNIX', '$349.00');
Query OK, 1 row affected (0.02 sec)

MariaDB [prgodda]> INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('LG83948', 'LG', '$99.00');
Query OK, 1 row affected (0.01 sec)
```

### Retrieve data:

```
MariaDB [prgodda]> SELECT Manufacturer FROM Product;
+-----+
| Manufacturer |
+-----+
| ACER         |
| GOOGLE       |
| GOOGLE       |
| DELL         |
| QNIX         |
| ASUS        |
| HP          |
| HTC         |
| HTC         |
| ACER        |
| INTEL       |
| LG          |
| LG          |
| LENOVO      |
| APPLE       |
| MOTOROLA    |
| LENOVO      |
| CYBERPOWER  |
| ASUS        |
| DELL        |
+-----+
20 rows in set (0.00 sec)
```

Update data:

```
MariaDB [prgodda]> UPDATE Product SET Price='$599.00' where ModelNumber='NO90210';
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

Delete data:

```
MariaDB [prgodda]> DELETE FROM Product WHERE ModelNumber='NO90210';
Query OK, 1 row affected (0.02 sec)
```

Select and view a table:

```
MariaDB [prgodda]> SELECT * FROM Product;
+-----+-----+-----+
| ModelNumber | Manufacturer | Price  |
+-----+-----+-----+
| AC3910      | ACER         | $899.00 |
| CB872       | GOOGLE       | $1000.00 |
| CSD9201     | GOOGLE       | $900.00 |
| DLKA394     | DELL         | $299.00 |
| DPOEWN4     | QNIX         | $349.00 |
| FI30S9D     | ASUS         | $400.00 |
| HP93710     | HP           | $500.00 |
| HTC0245     | HTC          | $799.00 |
| HTC984      | HTC          | $400.00 |
| IVOD1       | ACER         | $3000.00 |
| KSJF910     | INTEL        | $199.00 |
| LG83948     | LG           | $99.00 |
| LGV10       | LG           | $699.00 |
| LN9234      | LENOVO       | $978.00 |
| MBA491      | APPLE        | $9999.00 |
| MJ39874     | MOTOROLA     | $299.00 |
| MN98830     | LENOVO       | $999.00 |
| PAIRU34     | CYBERPOWER   | $1999.00 |
| VI23        | ASUS         | $899.00 |
| XPS8100     | DELL         | $1499.00 |
+-----+-----+-----+
20 rows in set (0.00 sec)
```

Delete a table:

```
MariaDB [prgodda]> show tables;
+-----+
| Tables_in_prgodda |
+-----+
| AntiVirus          |
| CellPhone          |
| Customer           |
| CustomerProductIT |
| Desktop            |
| Laptop             |
| Monitor            |
| Product            |
+-----+
8 rows in set (0.00 sec)

MariaDB [prgodda]> drop tables AntiVirus;
Query OK, 0 rows affected, 1 warning (0.02 sec)

MariaDB [prgodda]> show tables;
+-----+
| Tables_in_prgodda |
+-----+
| CellPhone          |
| Customer           |
| CustomerProductIT |
| Desktop            |
| Laptop             |
| Monitor            |
| Product            |
+-----+
7 rows in set (0.00 sec)
```

# My SQL Code

```
1 CREATE TABLE Customer(  
2     CustomerID INT(8) AUTO_INCREMENT PRIMARY KEY,  
3     FirstName VARCHAR(20) NOT NULL,  
4     LastName VARCHAR(20) NOT NULL,  
5     Phone VARCHAR(22),  
6     Email VARCHAR(100)  
7 );  
8  
9 CREATE TABLE Product(  
10     ModelNumber VARCHAR(32) PRIMARY KEY,  
11     Manufacturer VARCHAR(32) NOT NULL,  
12     Price VARCHAR(20) NOT NULL  
13 );  
14  
15 CREATE TABLE Monitor(  
16     ModelNumber VARCHAR(32) PRIMARY KEY,  
17     Manufacturer VARCHAR(32) NOT NULL references Product(Manufacturer),  
18     Price VARCHAR(20) NOT NULL references Product(Price),  
19     Resolution CHAR(9) NOT NULL,  
20     RefreshRate VARCHAR(5) NOT NULL,  
21     Latency VARCHAR(4),  
22     FOREIGN KEY (ModelNumber) references Product(ModelNumber) ON DELETE CASCADE  
23 );  
24  
25 CREATE TABLE Desktop(  
26     ModelNumber VARCHAR(32) PRIMARY KEY,  
27     Manufacturer VARCHAR(32) NOT NULL references Product(Manufacturer),  
28     Price VARCHAR(20) NOT NULL references Product(Price),  
29     CPUClock CHAR(6) NOT NULL,  
30     MemorySize CHAR(4) NOT NULL,  
31     DiskSize VARCHAR(15),  
32     DedicatedGPU VARCHAR(3) NOT NULL,  
33     FOREIGN KEY (ModelNumber) references Product(ModelNumber) ON DELETE CASCADE  
34 );  
35  
36 CREATE TABLE Laptop(  
37     ModelNumber VARCHAR(32) PRIMARY KEY,  
38     Manufacturer VARCHAR(32) NOT NULL references Product(Manufacturer),  
39     Price VARCHAR(20) NOT NULL references Product(Price),  
40     Convertible VARCHAR(3) NOT NULL,  
41     Webcam VARCHAR(3) NOT NULL,  
42     SizeInInches char(3),  
43     FOREIGN KEY (ModelNumber) references Product(ModelNumber) ON DELETE CASCADE  
44 );
```

```

46 CREATE TABLE CellPhone(
47     ModelNumber VARCHAR(32) PRIMARY KEY,
48     Manufacturer VARCHAR(32) NOT NULL references Product(Manufacturer),
49     Price VARCHAR(20) NOT NULL references Product(Price),
50     OperatingSystem VARCHAR(30) NOT NULL,
51     4GCompatible VARCHAR(3),
52     SizeInInches VARCHAR(4) NOT NULL,
53     FOREIGN KEY (ModelNumber) references Product(ModelNumber) ON DELETE CASCADE
54 );
55
56 CREATE TABLE AntiVirus (
57     SoftwareVersion VARCHAR(30) NOT NULL,
58     ActivationKey VARCHAR(62) NOT NULL,
59     ModelNumber VARCHAR(32),
60     FOREIGN KEY (ModelNumber) references Product(ModelNumber),
61     PRIMARY KEY (ModelNumber, SoftwareVersion)
62 );
63
64 CREATE TABLE CustomerProductIT (
65     CustomerID INT(8) NOT NULL,
66     ModelNumber VARCHAR(32) NOT NULL,
67     PRIMARY KEY (CustomerID, ModelNumber),
68     FOREIGN KEY (CustomerID) references Customer(CustomerID),
69     FOREIGN KEY (ModelNumber) references Product(ModelNumber)
70 );
71
72 /* Inserting Monitor attributes into the parent Product */
73 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('KSJF910', 'INTEL', '$199.00');
74 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('DLKA394', 'DELL', '$299.00');
75 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('FI30S9D', 'ASUS', '$400.00');
76 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('DPOEWN4', 'QNIX', '$349.00');
77 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('LG83948', 'LG', '$99.00');
78
79 /* Inserting Desktop attributes into the parent Product */
80 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('PAIRU34', 'CYBERPOWER', '$1999.00');
81 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('IVOD1', 'ACER', '$3000.00');
82 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('VI23', 'ASUS', '$899.00');
83 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('MN98830', 'LENOVO', '$999.00');
84 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('XPS8100', 'DELL', '$1499.00');
85
86 /* Inserting Laptop attributes into the parent Product */
87 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('AC3910', 'ACER', '$899.00');
88 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('MBA491', 'APPLE', '$9999.00');
89 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('HP93710', 'HP', '$500.00');
90 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('LN9234', 'LENOVO', '$978.00');
91 INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('CB872', 'GOOGLE', '$1000.00');

```



```

93  /* Inserting CellPhone attributes into the Parent Product */
94  INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('MJ39874', 'MOTOROLA', '$299.00');
95  INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('HTC0245', 'HTC', '$799.00');
96  INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('LGV10', 'LG', '$699.00');
97  INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('HTC984', 'HTC', '$400.00');
98  INSERT INTO Product (ModelNumber, Manufacturer, Price) VALUES ('CSD9201', 'GOOGLE', '$900.00');
99
100
101  /* Inserting Customer entity instances into Customer */
102  INSERT INTO Customer (FirstName, LastName, Phone, Email) VALUES ('John', 'Williams', '940-879-5642', 'j.williams@gmail.com');
103  INSERT INTO Customer (FirstName, LastName, Phone, Email) VALUES ('Linus', 'Torvalds', '214-678-2365', 'linus.torvalds@gmail.com');
104  INSERT INTO Customer (FirstName, LastName, Phone, Email) VALUES ('Larry', 'Page', '623-501-4832', 'lpage@yahoo.com');
105  INSERT INTO Customer (FirstName, LastName, Phone, Email) VALUES ('Sergey', 'Brin', '518-845-6495', 'sergeyb@aol.com');
106  INSERT INTO Customer (FirstName, LastName, Phone, Email) VALUES ('Gordon', 'Moore', '316-549-2134', 'gmoore@gmail.com');
107
108  /* Inserting Monitor entity instances into the Product SUB TYPE Monitor */
109  INSERT INTO Monitor (ModelNumber, Manufacturer, Price, Resolution, RefreshRate, Latency) VALUES ('KSJF910', 'Intel', '$199.00', '1920x1080', '60Hz', '1ms');
110  INSERT INTO Monitor (ModelNumber, Manufacturer, Price, Resolution, RefreshRate, Latency) VALUES ('DLKA394', 'DELL', '$299.00', '2560x1440', '60Hz', '4ms');
111  INSERT INTO Monitor (ModelNumber, Manufacturer, Price, Resolution, RefreshRate, Latency) VALUES ('FI30S9D', 'ASUS', '$400.00', '3840x2160', '96Hz', '3ms');
112  INSERT INTO Monitor (ModelNumber, Manufacturer, Price, Resolution, RefreshRate, Latency) VALUES ('DPOEWN4', 'QNIX', '$349.00', '2460x1440', '144Hz', '2ms');
113  INSERT INTO Monitor (ModelNumber, Manufacturer, Price, Resolution, RefreshRate, Latency) VALUES ('LG83948', 'LG', '$99.00', '1280x0720', '60Hz', '7ms');
114
115  /* Inserting Desktop entity instances into the Product SUB TYPE Desktop */
116  INSERT INTO Desktop (ModelNumber, Manufacturer, Price, CPUClock, MemorySize, DiskSize, DedicatedGPU) VALUES ('PAIRU34', 'CYBERPOWER', '$1999.00', '3.8GHz', '16GB', '2.5 TB', 'YES');
117  INSERT INTO Desktop (ModelNumber, Manufacturer, Price, CPUClock, MemorySize, DiskSize, DedicatedGPU) VALUES ('IVOD1', 'ACER', '$3000.00', '4.6GHz', '32GB', '4.0 TB', 'YES');
118  INSERT INTO Desktop (ModelNumber, Manufacturer, Price, CPUClock, MemorySize, DiskSize, DedicatedGPU) VALUES ('VI23', 'ASUS', '$899.00', '3.7GHz', '08GB', '800 GB', 'NO');
119  INSERT INTO Desktop (ModelNumber, Manufacturer, Price, CPUClock, MemorySize, DiskSize, DedicatedGPU) VALUES ('MN98830', 'LENOVO', '$999.00', '4.2GHz', '12GB', '900 GB', 'NO');
120  INSERT INTO Desktop (ModelNumber, Manufacturer, Price, CPUClock, MemorySize, DiskSize, DedicatedGPU) VALUES ('XPS8100', 'DELL', '$1499.00', '4.5GHz', '16GB', '2.0 TB', 'YES');
121
122  /* Inserting Laptop entity instances into the Product SUB TYPE Laptop */
123  INSERT INTO Laptop (ModelNumber, Manufacturer, Price, Convertible, Webcam, SizeInInches) VALUES ('AC3910', 'ACER', '$899.00', 'YES', 'NO', '15");
124  INSERT INTO Laptop (ModelNumber, Manufacturer, Price, Convertible, Webcam, SizeInInches) VALUES ('MBA491', 'APPLE', '$9999.00', 'NO', 'YES', '11");
125  INSERT INTO Laptop (ModelNumber, Manufacturer, Price, Convertible, Webcam, SizeInInches) VALUES ('HP93710', 'HP', '$500.00', 'YES', 'YES', '17");
126  INSERT INTO Laptop (ModelNumber, Manufacturer, Price, Convertible, Webcam, SizeInInches) VALUES ('LN9234', 'LENOVO', '$978.00', 'NO', 'NO', '15");
127  INSERT INTO Laptop (ModelNumber, Manufacturer, Price, Convertible, Webcam, SizeInInches) VALUES ('CB872', 'GOOGLE', '$1000.00', 'YES', 'YES', '12");
128
129  /* Inserting CellPhone entity instances into the Product SUB TYPE CellPhone */
130  INSERT INTO CellPhone (ModelNumber, Manufacturer, Price, OperatingSystem, 4GCompatible, SizeInInches) VALUES ('MJ39874', 'MOTOROLA', '$299.00', 'Android KitKat', 'YES', '7.0");
131  INSERT INTO CellPhone (ModelNumber, Manufacturer, Price, OperatingSystem, 4GCompatible, SizeInInches) VALUES ('HTC0245', 'HTC', '$799.00', 'LineageOS', 'YES', '5.5");
132  INSERT INTO CellPhone (ModelNumber, Manufacturer, Price, OperatingSystem, 4GCompatible, SizeInInches) VALUES ('LGV10', 'LG', '$699.00', 'Android Jellybean', 'YES', '6.1");
133  INSERT INTO CellPhone (ModelNumber, Manufacturer, Price, OperatingSystem, 4GCompatible, SizeInInches) VALUES ('HTC984', 'HTC', '$400.00', 'CyanogenOS 12', 'YES', '5.7");
134  INSERT INTO CellPhone (ModelNumber, Manufacturer, Price, OperatingSystem, 4GCompatible, SizeInInches) VALUES ('CSD9201', 'GOOGLE', '$900.00', 'Android KitKat', 'YES', '4.9");
135
136  /* Inserting AntiVirus entity instances into AntiVirus */
137  INSERT INTO AntiVirus (SoftwareVersion, ActivationKey, ModelNumber) VALUES ('Kaspersky 11.2', 'AGDF8-NDWER-BR456-DFDS9-S9DF7', 'XPS8100');
138  INSERT INTO AntiVirus (SoftwareVersion, ActivationKey, ModelNumber) VALUES ('AVG 14.6', 'HOFDI-DUJF8-IER38-FUDS8-DFHG8', 'MN98830');
139  INSERT INTO AntiVirus (SoftwareVersion, ActivationKey, ModelNumber) VALUES ('Kaspersky 11.2', 'D2BE3-EC3D7-DA922-BB344-B2EC7', 'LN9234');
140  INSERT INTO AntiVirus (SoftwareVersion, ActivationKey, ModelNumber) VALUES ('ESET 9.8', '672DA-6818D-B98F7-16EAC-C33C2', 'MBA491');
141  INSERT INTO AntiVirus (SoftwareVersion, ActivationKey, ModelNumber) VALUES ('ESET 9.8', '9DF2B-81985-6E3D2-BA4C6-4F2F9', 'AC3910');
142
143  /* Insert Customer-Product associations into Customer Product Intersection Table */
144  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (1, 'CSD9201');
145  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (2, 'CSD9201');
146  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (4, 'KSJF910');
147  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (5, 'CB872');
148  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (3, 'VI23');
149  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (2, 'LN9234');
150  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (4, 'LN9234');
151  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (5, 'HTC984');
152  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (2, 'FI30S9D');
153  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (1, 'PAIRU34');
154  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (1, 'XPS8100');
155  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (2, 'XPS8100');
156  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (4, 'HP93710');
157  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (4, 'HTC0245');
158  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (5, 'CSD9201');
159  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (3, 'DPOEWN4');
160  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (2, 'MBA491');
161  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (1, 'LGV10');
162  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (2, 'DLKA394');
163  INSERT INTO CustomerProductIIT (CustomerID, ModelNumber) VALUES (3, 'HP93710');

```



# My Database on CSX after data entry:

```
MariaDB [prgodda]> SELECT * FROM Customer;
```

CustomerID	FirstName	LastName	Phone	Email
1	John	Williams	940-879-5642	j.williams@gmail.com
2	Linus	Torvalds	214-678-2365	linus.torvalds@gmail.com
3	Larry	Page	623-501-4832	lpage@yahoo.com
4	Sergey	Brin	518-845-6495	sergeyb@aol.com
5	Gordon	Moore	316-549-2134	gmoore@gmail.com

```
5 rows in set (0.00 sec)
```

```
MariaDB [prgodda]> SELECT * FROM Product;
```

ModelNumber	Manufacturer	Price
AC3910	ACER	\$899.00
CB872	GOOGLE	\$1000.00
CSD9201	GOOGLE	\$900.00
DLKA394	DELL	\$299.00
DPOEWN4	QNIX	\$349.00
FI30S9D	ASUS	\$400.00
HP93710	HP	\$500.00
HTC0245	HTC	\$799.00
HTC984	HTC	\$400.00
IVOD1	ACER	\$3000.00
KSJF910	INTEL	\$199.00
LG83948	LG	\$99.00
LGV10	LG	\$699.00
LN9234	LENOVO	\$978.00
MBA491	APPLE	\$9999.00
MJ39874	MOTOROLA	\$299.00
MN98830	LENOVO	\$999.00
PAIRU34	CYBERPOWER	\$1999.00
VI23	ASUS	\$899.00
XPS8100	DELL	\$1499.00

```
20 rows in set (0.00 sec)
```

```
MariaDB [prgodda]> SELECT * FROM Monitor;
```

ModelNumber	Manufacturer	Price	Resolution	RefreshRate	Latency
DLKA394	DELL	\$299.00	2560x1440	60Hz	4ms
DPOEWN4	QNIX	\$349.00	2460x1440	144Hz	2ms
FI30S9D	ASUS	\$400.00	3840x2160	96Hz	3ms
KSJF910	Intel	\$199.00	1920x1080	60Hz	1ms
LG83948	LG	\$99.00	1280x0720	60Hz	7ms

```
5 rows in set (0.00 sec)
```

```
MariaDB [prgodda]> SELECT * FROM Desktop;
```

ModelNumber	Manufacturer	Price	CPUClock	MemorySize	DiskSize	DedicatedGPU
IVOD1	ACER	\$3000.00	4.6GHz	32GB	4.0 TB	YES
MN98830	LENOVO	\$999.00	4.2GHz	12GB	900 GB	NO
PAIRU34	CYBERPOWER	\$1999.00	3.8GHz	16GB	2.5 TB	YES
VI23	ASUS	\$899.00	3.7GHz	08GB	800 GB	NO
XPS8100	DELL	\$1499.00	4.5GHz	16GB	2.0 TB	YES

```
5 rows in set (0.00 sec)
```

```
MariaDB [prgodda]> SELECT * FROM Laptop;
```

ModelNumber	Manufacturer	Price	Convertible	Webcam	SizeInInches
AC3910	ACER	\$899.00	YES	NO	15"
CB872	GOOGLE	\$1000.00	YES	YES	12"
HP93710	HP	\$500.00	YES	YES	17"
LN9234	LENOVO	\$978.00	NO	NO	15"
MBA491	APPLE	\$9999.00	NO	YES	11"

```
5 rows in set (0.00 sec)
```

MariaDB [prgodda]> SELECT \* FROM CellPhone;

ModelNumber	Manufacturer	Price	OperatingSystem	4GCompatible	SizeInInches
CSD9201	GOOGLE	\$900.00	Android KitKat	YES	4.9"
HTC0245	HTC	\$799.00	LineageOS	YES	5.5"
HTC984	HTC	\$400.00	CyanogenOS 12	YES	5.7"
LGV10	LG	\$699.00	Android Jellybean	YES	6.1"
MJ39874	MOTOROLA	\$299.00	Android KitKat	YES	7.0"

5 rows in set (0.00 sec)

MariaDB [prgodda]> SELECT \* FROM AntiVirus;

SoftwareVersion	ActivationKey	ModelNumber
ESET 9.8	9DF2B-81985-6E3D2-BA4C6-4F2F9	AC3910
Kaspersky 11.2	D2BE3-EC3D7-DA922-BB344-B2EC7	LN9234
ESET 9.8	672DA-6818D-B98F7-16EAC-C33C2	MBA491
AVG 14.6	HOFDI-DUJF8-IER38-FUDS8-DFHG8	MN98830
Kaspersky 11.2	AGDF8-NDWER-BR456-DFDS9-S9DF7	XPS8100

5 rows in set (0.00 sec)

MariaDB [prgodda]> SELECT \* FROM CustomerProductIT;

CustomerID	ModelNumber
1	CSD9201
1	LGV10
1	PAIRU34
1	XPS8100
2	CSD9201
2	DLKA394
2	FI30S9D
2	LN9234
2	MBA491
2	XPS8100
3	DPOEWN4
3	HP93710
3	VI23
4	HP93710
4	HTC0245
4	KSJF910
4	LN9234
5	CB872
5	CSD9201
5	HTC984

20 rows in set (0.00 sec)