Question1&2

```
MySQL Client (MariaDB 10.2 (x64)) - "C:\Program Files\MariaDB 10.2\bin\mysql.exe" "--defaults-file=C:\Program Files\MariaDB 10.2\data\my.ini" -uroot -p
Enter password: ****
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 13
Server version: 10.2.8-MariaDB mariadb.org binary distribution

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database BidvestBank;
ERROR 1007 (HY000): Can't create database 'bidvestbank'; database exists
MariaDB [(none)]> use BidvestBank;
Database changed
MariaDB [BidvestBank]> create table BankBranch(
    -> branchName varchar(20) not null,
    -> branchCity varchar(20) not null,
    -> assets double not null,
    -> primary key(branchName)
    -> );
Query OK, 0 rows affected (0.80 sec)

MariaDB [BidvestBank]> create table Customer(
    -> customerName varchar(20) not null,
    -> customerStreet varchar(20) not null,
    -> customerCity varchar(20) not null
    -> );
Query OK, 0 rows affected (0.81 sec)

MariaDB [BidvestBank]> create table Loan(
    -> loanNumber varchar(5) not null,
    -> branchName varchar(20) not null,
    -> amount double not null,
    -> primary key(loanNumber)
    -> );
Query OK, 0 rows affected (1.37 sec)

MariaDB [BidvestBank]> create table Depositer(
    -> customerName varchar(20) not null,
    -> accountNumber varchar(20) not null
    -> );
Query OK, 0 rows affected (0.62 sec)

MariaDB [BidvestBank]> create table Borrower(
    -> customerName varchar(20) not null,
    -> loanNumber varchar(5) not null
    -> );
```

```
    -> assets double not null,
    -> primary key(branchName)
    -> );
Query OK, 0 rows affected (0.80 sec)

MariaDB [BidvestBank]> create table Customer(
    -> customerName varchar(20) not null,
    -> customerStreet varchar(20) not null,
    -> customerCity varchar(20) not null
    -> );
Query OK, 0 rows affected (0.81 sec)

MariaDB [BidvestBank]> create table Loan(
    -> loanNumber varchar(5) not null,
    -> branchName varchar(20) not null,
    -> amount double not null,
    -> primary key(loanNumber)
    -> );
Query OK, 0 rows affected (1.37 sec)

MariaDB [BidvestBank]> create table Depositer(
    -> customerName varchar(20) not null,
    -> accountNumber varchar(20) not null
    -> );
Query OK, 0 rows affected (0.62 sec)

MariaDB [BidvestBank]> create table Borrower(
    -> customerName varchar(20) not null,
    -> loanNumber varchar(5) not null
    -> );
Query OK, 0 rows affected (0.42 sec)

MariaDB [BidvestBank]> create table CustomerAccount(
    -> accountNumber varchar(10) not null,
    -> branchName varchar(20) not null,
    -> balance double not null,
    -> primary key(accountNumber)
    -> );
Query OK, 0 rows affected (0.48 sec)

MariaDB [BidvestBank]> create table Employee(
    -> employeeName varchar(20) not null,
    -> branchName varchar(20) not null,
    -> salary double not null
    -> );
Query OK, 0 rows affected (0.43 sec)
```

Question3

```
MariaDB [BidvestBank]> insert into CustomerAccount values("A-5324","Newtown",500);
Query OK, 1 row affected (0.55 sec)

MariaDB [BidvestBank]> insert into CustomerAccount values("A-5624","Sunnyside",400);
Query OK, 1 row affected (0.07 sec)

MariaDB [BidvestBank]> insert into CustomerAccount values("A-7794","Midrand",900);
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> insert into CustomerAccount values("A-4467","Mabopane",700);
Query OK, 1 row affected (0.15 sec)

MariaDB [BidvestBank]> insert into CustomerAccount values("A-3546","Midrand",750);
Query OK, 1 row affected (0.07 sec)

MariaDB [BidvestBank]> insert into CustomerAccount values("A-3453","Universitas",700);
Query OK, 1 row affected (0.14 sec)

MariaDB [BidvestBank]> insert into CustomerAccount values("A-2542","Mamelodi",350);
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> show CustomerAccount;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'CustomerAcc
ount' at line 1
MariaDB [BidvestBank]> Select * from CustomerAccount;
+---------------+-------------+---------+
| accountNumber | branchName  | balance |
+---------------+-------------+---------+
| A-2542        | Mamelodi    |     350 |
| A-3453        | Universitas |     700 |
| A-3546        | Midrand     |     750 |
| A-4467        | Mabopane    |     700 |
| A-5324        | Newtown     |     500 |
| A-5624        | Sunnyside   |     400 |
| A-7794        | Midrand     |     900 |
+---------------+-------------+---------+
7 rows in set (0.04 sec)

MariaDB [BidvestBank]>
```

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```
| A-5324          | Newtown        |     500 |
| A-5624          | Sunnyside      |     400 |
| A-7794          | Midrand        |     900 |
+-----------------+----------------+---------+
7 rows in set (0.04 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Midrand","Johannesburg",7100000);
Query OK, 1 row affected (0.34 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Newtown","Johannesburg",9000000);
Query OK, 1 row affected (0.12 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Mapobane","Pretoria",4000000);
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Belgravia","Kimberly",3700000);
Query OK, 1 row affected (0.07 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Sunnyside","Pretoria",1700000);
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Amanzintoti","Durban",300000);
Query OK, 1 row affected (0.19 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Universitas","Bloemfontein",2100000);
Query OK, 1 row affected (0.10 sec)

MariaDB [BidvestBank]> insert into BankBranch values("Mamelodi","Pretoria",8000000);
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> Select * from BankBranch;
+-------------+--------------+---------+
| branchName  | branchCity   | assets  |
+-------------+--------------+---------+
| Amanzintoti | Durban       |  300000 |
| Belgravia   | Kimberly     | 3700000 |
| Mamelodi    | Pretoria     | 8000000 |
| Mapobane    | Pretoria     | 4000000 |
| Midrand     | Johannesburg | 7100000 |
| Newtown     | Johannesburg | 9000000 |
| Sunnyside   | Pretoria     | 1700000 |
| Universitas | Bloemfontein | 2100000 |
+-------------+--------------+---------+
8 rows in set (0.00 sec)

MariaDB [BidvestBank]> insert into Customer values("Modise","Spring","George");
```

```
| Universitas   | Bloemfontein  | 2100000 |
+---------------+---------------+---------+
8 rows in set (0.00 sec)

MariaDB [BidvestBank]> insert into Customer values("Modise","Spring","George");
Query OK, 1 row affected (0.40 sec)

MariaDB [BidvestBank]> insert into Customer values("Brooks","Senator","Johannesburg");
Query OK, 1 row affected (0.10 sec)

MariaDB [BidvestBank]> insert into Customer values("Jooste","North","Kimberly");
Query OK, 1 row affected (0.12 sec)

MariaDB [BidvestBank]> insert into Customer values("Lombard","Sand Hill","Nelspruit");
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into Customer values("Mokwena","Walnut","Port-Elizabeth");
Query OK, 1 row affected (0.15 sec)

MariaDB [BidvestBank]> insert into Customer values("Johnson","Mmabatho","Mafikeng");
Query OK, 1 row affected (0.07 sec)

MariaDB [BidvestBank]> insert into Customer values("Johnson","Alma","Bloemfontein");
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> insert into Customer values("Zwane","Main","Mafikeng");
Query OK, 1 row affected (0.10 sec)

MariaDB [BidvestBank]> insert into Customer values("Lindsay","Park","George");
Query OK, 1 row affected (0.18 sec)

MariaDB [BidvestBank]> insert into Customer values("Smith","North","Kimberly");
Query OK, 1 row affected (0.05 sec)

MariaDB [BidvestBank]> insert into Customer values("Dlamini","Putnam","Port-Elizabeth");
Query OK, 1 row affected (0.10 sec)

MariaDB [BidvestBank]> insert into Customer values("Williams","Nassau","Giyane");
Query OK, 1 row affected (0.05 sec)

MariaDB [BidvestBank]> Select * from Customer;
+--------------+----------------+----------------+
| customerName | customerStreet | customerCity   |
+--------------+----------------+----------------+
| Modise       | Spring         | George         |
| Brooks       | Senator        | Johannesburg   |
```

```
MariaDB [BidvestBank]> Select * from Customer;
+--------------+----------------+----------------+
| customerName | customerStreet | customerCity   |
+--------------+----------------+----------------+
| Modise       | Spring         | George         |
| Brooks       | Senator        | Johannesburg   |
| Jooste       | North          | Kimberly       |
| Lombard      | Sand Hill      | Nelspruit      |
| Mokwena      | Walnut         | Port-Elizabeth |
| Johnson      | Mmabatho       | Mafikeng       |
| Johnson      | Alma           | Bloemfontein   |
| Zwane        | Main           | Mafikeng       |
| Lindsay      | Park           | George         |
| Smith        | North          | Kimberly       |
| Dlamini      | Putnam         | Port-Elizabeth |
| Williams     | Nassau         | Giyane         |
+--------------+----------------+----------------+
12 rows in set (0.00 sec)

MariaDB [BidvestBank]>
```

```
| Williams      | Nassau         | Giyane         |
+---------------+----------------+----------------+
12 rows in set (0.00 sec)

MariaDB [BidvestBank]> insert into Depositer values("Johnson","A-5624");
Query OK, 1 row affected (0.89 sec)

MariaDB [BidvestBank]> insert into Depositer values("Johnson","A-5624");
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into Depositer values("Johnson","A-7794");
Query OK, 1 row affected (0.07 sec)

MariaDB [BidvestBank]> insert into Depositer values("Zwane","A-3546");
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into Depositer values("Lindsay","A-3453");
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> insert into Depositer values("Smith","A-4467");
Query OK, 1 row affected (0.14 sec)

MariaDB [BidvestBank]> insert into Depositer values("Dlamini","A-2542");
Query OK, 1 row affected (0.12 sec)

MariaDB [BidvestBank]> Select * from Depositer;
+--------------+---------------+
| customerName | accountNumber |
+--------------+---------------+
| Johnson      | A-5624        |
| Johnson      | A-5624        |
| Johnson      | A-7794        |
| Zwane        | A-3546        |
| Lindsay      | A-3453        |
| Smith        | A-4467        |
| Dlamini      | A-2542        |
+--------------+---------------+
7 rows in set (0.00 sec)

MariaDB [BidvestBank]>
```

```
| Dlamini       | A-2542         |
+---------------+----------------+
7 rows in set (0.00 sec)

MariaDB [BidvestBank]> insert into Loan values("L-11","Mamelodi",900);
Query OK, 1 row affected (0.24 sec)

MariaDB [BidvestBank]> insert into Loan values("L-14","Newtown",1500);
Query OK, 1 row affected (0.05 sec)

MariaDB [BidvestBank]> insert into Loan values("L-15","Sunnyside",1500);
Query OK, 1 row affected (0.05 sec)

MariaDB [BidvestBank]> insert into Loan values("L-16","Sunnyside",1300);
Query OK, 1 row affected (0.08 sec)

MariaDB [BidvestBank]> insert into Loan values("L-17","Newtown",1000);
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> insert into Loan values("L-23","Universitas",2000);
Query OK, 1 row affected (0.51 sec)

MariaDB [BidvestBank]> insert into Loan values("L-93","Mabopane",500);
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> Select * from Loan;
+------------+-------------+--------+
| loanNumber | branchName  | amount |
+------------+-------------+--------+
| L-11       | Mamelodi    |    900 |
| L-14       | Newtown     |   1500 |
| L-15       | Sunnyside   |   1500 |
| L-16       | Sunnyside   |   1300 |
| L-17       | Newtown     |   1000 |
| L-23       | Universitas |   2000 |
| L-93       | Mabopane    |    500 |
+------------+-------------+--------+
7 rows in set (0.00 sec)

MariaDB [BidvestBank]>
```

```
| L-17        | Newtown      |  1000 |
| L-23        | Universitas  |  2000 |
| L-93        | Mabopane     |   500 |
+-------------+--------------+-------+
7 rows in set (0.00 sec)

MariaDB [BidvestBank]> insert into Borrower values("Modise","L-16");
Query OK, 1 row affected (0.10 sec)

MariaDB [BidvestBank]> insert into Borrower values("Jooste","L-93");
Query OK, 1 row affected (0.10 sec)

MariaDB [BidvestBank]> insert into Borrower values("Johnson","L-15");
Query OK, 1 row affected (0.05 sec)

MariaDB [BidvestBank]> insert into Borrower values("Jackson","L-14");
Query OK, 1 row affected (0.05 sec)

MariaDB [BidvestBank]> insert into Borrower values("Zwane","L-17");
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> insert into Borrower values("Smith","L-11");
Query OK, 1 row affected (0.05 sec)

MariaDB [BidvestBank]> insert into Borrower values("Smith","L-23");
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into Borrower values("Williams","L-17");
Query OK, 1 row affected (0.11 sec)

MariaDB [BidvestBank]> Select * from Borrower;
+--------------+------------+
| customerName | loanNumber |
+--------------+------------+
| Modise       | L-16       |
| Jooste       | L-93       |
| Johnson      | L-15       |
| Jackson      | L-14       |
| Zwane        | L-17       |
| Smith        | L-11       |
| Smith        | L-23       |
| Williams     | L-17       |
+--------------+------------+
8 rows in set (0.00 sec)

MariaDB [BidvestBank]>
```

```
| Smith        | L-11       |
| Smith        | L-23       |
| Williams     | L-17       |
+--------------+------------+
8 rows in set (0.00 sec)

MariaDB [BidvestBank]> insert into Employee values("Modise","Sunnyside",1500);
Query OK, 1 row affected (0.28 sec)

MariaDB [BidvestBank]> insert into Employee values("Brown","Sunnyside",1300);
Query OK, 1 row affected (0.12 sec)

MariaDB [BidvestBank]> insert into Employee values("Gopal","Sunnyside",5300);
Query OK, 1 row affected (0.15 sec)

MariaDB [BidvestBank]> insert into Employee values("Johnson","Newtown",1500);
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into Employee values("Loreena","Newtown",1300);
Query OK, 1 row affected (0.13 sec)

MariaDB [BidvestBank]> insert into Employee values("Peterson","Newtown",2500);
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> insert into Employee values("Rao","Austin",1500);
Query OK, 1 row affected (0.06 sec)

MariaDB [BidvestBank]> insert into Employee values("Sato","Austin",1600);
Query OK, 1 row affected (0.09 sec)

MariaDB [BidvestBank]> Select * from Employee;
+--------------+------------+--------+
| employeeName | branchName | salary |
+--------------+------------+--------+
| Modise       | Sunnyside  |   1500 |
| Brown        | Sunnyside  |   1300 |
| Gopal        | Sunnyside  |   5300 |
| Johnson      | Newtown    |   1500 |
| Loreena      | Newtown    |   1300 |
| Peterson     | Newtown    |   2500 |
| Rao          | Austin     |   1500 |
| Sato         | Austin     |   1600 |
+--------------+------------+--------+
8 rows in set (0.05 sec)

MariaDB [BidvestBank]>
```

Question4

```
1 row in set (0.05 sec)

MariaDB [BidvestBank]> Select * from CustomerAccount where balance < 700;
+---------------+------------+---------+
| accountNumber | branchName | balance |
+---------------+------------+---------+
| A-2542        | Mamelodi   |     350 |
| A-5324        | Newtown    |     500 |
| A-5624        | Sunnyside  |     400 |
+---------------+------------+---------+
3 rows in set (0.00 sec)

MariaDB [BidvestBank]> Select customerName from Customer where customerCity = "Johannesburg";
+--------------+
| customerName |
+--------------+
| Brooks       |
+--------------+
1 row in set (0.00 sec)

MariaDB [BidvestBank]> Select * from Employee where salary > 1500 and branchName != "Newtown";
+--------------+------------+--------+
| employeeName | branchName | salary |
+--------------+------------+--------+
| Gopal        | Sunnyside  |   5300 |
| Sato         | Austin     |   1600 |
+--------------+------------+--------+
2 rows in set (0.03 sec)

MariaDB [BidvestBank]> Select Avg(salary) from Employee;
+-------------+
| Avg(salary) |
+-------------+
|      2062.5 |
+-------------+
1 row in set (0.00 sec)

MariaDB [BidvestBank]> Select branchName, max(assets) from BankBranch ;
+------------+-------------+
| branchName | max(assets) |
+------------+-------------+
| Amanzintoti |     9000000 |
+------------+-------------+
1 row in set (0.00 sec)

MariaDB [BidvestBank]>
```

Question5

```
MySQL Client (MariaDB 10.2 (x64)) - "C:\Program Files\MariaDB 10.2\bin\mysql.exe" "--defaults-file=C:\Program Files\MariaDB 10.2\data\my.ini" -uroot -p                         —   □   X

MariaDB [BidvestBank]> Select employeeName from Employee where branchName = "Sunnyside";
+--------------+
| employeeName |
+--------------+
| Modise       |
| Brown        |
| Gopal        |
+--------------+
3 rows in set (0.00 sec)

MariaDB [BidvestBank]> Select * from Borrower;
+--------------+------------+
| customerName | loanNumber |
+--------------+------------+
| Modise       | L-16       |
| Jooste       | L-93       |
| Johnson      | L-15       |
| Jackson      | L-14       |
| Zwane        | L-17       |
| Smith        | L-11       |
| Smith        | L-23       |
| Williams     | L-17       |
+--------------+------------+
8 rows in set (0.00 sec)

MariaDB [BidvestBank]> Select accountNumber from CustomerAccount where balance > 900;
Empty set (0.00 sec)

MariaDB [BidvestBank]> Select accountNumber,balance from CustomerAccount where branchName="Newtown" and balance >600;
Empty set (0.00 sec)

MariaDB [BidvestBank]> Select branchName,assets from BankBranch;
+-------------+---------+
| branchName  | assets  |
+-------------+---------+
| Amanzintoti |  300000 |
| Belgravia   | 3700000 |
| Mamelodi    | 8000000 |
| Mapobane    | 4000000 |
| Midrand     | 7100000 |
| Newtown     | 9000000 |
| Sunnyside   | 1700000 |
| Universitas | 2100000 |
+-------------+---------+
8 rows in set (0.06 sec)
```