Assessment 1 (Database file attached in the end)

Q1) Source Code:

```java
import java.sql.*;
public class App {

    static ResultSet rs = null;
    static Statement stmt = null;
    static Connection con = null;
    public static void main(String[] args) throws Exception {
        try {

            // Register JDBC driver
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Open a connection
            con = DriverManager.getConnection(
                    "jdbc:mysql://localhost:3306/mindtree_1", "root", "akshit@2000");

            stmt = con.createStatement();

            // Executing a query
            String query1 = "select * from Mobile where CAMERA = (select max(CAMERA) from
Mobile);";
            String query2 = "select * from Mobile where PRICE = (select min(PRICE) from
Mobile);";
            System.out.println("---- ANSWER : 1 ----");
            rs = stmt.executeQuery(query1);
            System.out.println("Attributes of mobile with highest camera:");
            displayResult(rs);
            rs = stmt.executeQuery(query2);
            System.out.println("Attributes of mobile with lowest price:");
            displayResult(rs);

                con.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }

    public static void displayResult(ResultSet rs){
        try {
            while (rs.next())
                System.out.println(rs.getString(1) + "   " + rs.getString(2) + "   " +
rs.getInt(3) + "   " + rs.getInt(4) + "   " + rs.getInt(5) + "   " + rs.getFloat(6));
        } catch (Exception e) {
            System.out.println(e);
        }
    }


}
```

Output:

```
PS C:\Users\akshi\OneDrive\Desktop\Mindtree\Assesment 1\MobilePhones>
ers\akshi\AppData\Local\Temp\cp_boh93r5a3tcjrwc8y6b9h8cxg.jar' 'App'
---- ANSWER : 1 ----
Attributes of mobile with highest camera:
Samsung  Note  37999  128  55  6.0
Attributes of mobile with lowest price:
Realme  Narzo  12499  128  50  5.5
PS C:\Users\akshi\OneDrive\Desktop\Mindtree\Assesment 1\MobilePhones>
```

Q2) Source Code:

```java
import java.sql.*;
public class App {

    static ResultSet rs = null;
    static Statement stmt = null;
    static Connection con = null;
    public static void main(String[] args) throws Exception {
        try {

            // Register JDBC driver
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Open a connection
            con = DriverManager.getConnection(
                    "jdbc:mysql://localhost:3306/mindtree_1", "root", "akshit@2000");

            stmt = con.createStatement();

            // Executing a query
            String query1 = "SELECT NAME, BRAND FROM Mobile WHERE DISPLAY = (SELECT
MAX(DISPLAY) FROM Mobile);";
            System.out.println("---- ANSWER : 2 ----");
            rs = stmt.executeQuery(query1);
            System.out.println("Name and brand of the mobile with the biggest screen
size:");
            while(rs.next()){
                System.out.println(rs.getString(1) + "   " + rs.getString(2));
            }

                con.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

Output:

Q3) Source Code:

```java
import java.sql.*;
public class App {

    static ResultSet rs = null;
    static Statement stmt = null;
    static Connection con = null;
    public static void main(String[] args) throws Exception {
        try {

            // Register JDBC driver
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Open a connection
            con = DriverManager.getConnection(
                    "jdbc:mysql://localhost:3306/mindtree_1", "root", "akshit@2000");

            stmt = con.createStatement();

            // Executing a query
            String query1 = "SELECT CAMERA, PRICE from Mobile where NAME = 'IPHONE 13';";
            System.out.println("---- ANSWER : 3 ----");
            rs = stmt.executeQuery(query1);
            System.out.println("Camera and Price of the mobile with name 'IPHONE 13'");
            while(rs.next()){
                System.out.println(rs.getInt(1) + "   " + rs.getInt(2));
            }

            con.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

Output:

```
PS C:\Users\akshi\OneDrive\Desktop\Mindtree\Assesment 1\MobilePhones>
ers\akshi\AppData\Local\Temp\cp_boh93r5a3tcjrwc8y6b9h8cxg.jar' 'App'
---- ANSWER : 3 ----
Camera and Price of the mobile with name 'IPHONE 13'
20  77999
PS C:\Users\akshi\OneDrive\Desktop\Mindtree\Assesment 1\MobilePhones>
```

Q4) Source Code:

```java
import java.sql.*;
public class App {

    static ResultSet rs = null;
    static Statement stmt = null;
    static Connection con = null;
    public static void main(String[] args) throws Exception {
        try {

            // Register JDBC driver
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Open a connection
            con = DriverManager.getConnection(
                    "jdbc:mysql://localhost:3306/mindtree_1", "root", "akshit@2000");

            stmt = con.createStatement();

            // Executing a query
            String query1 = "SELECT NAME, BRAND FROM Mobile WHERE price >=10000 AND
price<=20000 AND camera >=30 AND camera <=50; ";
            System.out.println("---- ANSWER : 4 ----");
            rs = stmt.executeQuery(query1);
            System.out.println("Names and brands of all the phones with price from 10000
to 20000 and camera from 30-50 MP from the mobile table:");
            while(rs.next()){
                System.out.println(rs.getString(1) + "   " + rs.getString(2));
            }

                con.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

Output:

```
PS C:\Users\akshi\OneDrive\Desktop\Mindtree\Assesment 1\MobilePhones>  & 'C:\Program Files\Java\jdk1.8.0_261\bin\java.exe
ers\akshi\AppData\Local\Temp\cp_boh93r5a3tcjrwc8y6b9h8cxg.jar' 'App'
---- ANSWER : 4 ----
Names and brands of all the phones with price from 10000 to 20000 and camera from 30-50 MP from the mobile table:
Note 10X  Xiaomi
G8  Motorola
A53  Oppo
Y33S  Vivo
Narzo  Realme
PS C:\Users\akshi\OneDrive\Desktop\Mindtree\Assesment 1\MobilePhones>
```

Database File:

```
DB_File ×
                                        Limit to 1000 rows

  1 •    CREATE DATABASE mindtree_1;

  2

  3 •    USE mindtree_1;

  4

  5 •    CREATE TABLE Mobile (BRAND VARCHAR(20), NAME VARCHAR(20), PRICE INT, MEMORY INT, CAMERA INT, DISPLAY FLOAT);

  6

  7 •    INSERT INTO
  8       Mobile(BRAND,NAME,PRICE,MEMORY,CAMERA,DISPLAY)
  9       VALUES
 10       ('Samsung', 'Note', 37999, 128, 55, 6 ),
 11       ('Apple',   'Iphone 13', 77999, 64, 20, 6),
 12       ('Nokia', '8.1', 12500, 64, 16, 5.5),
 13       ('Xiaomi', 'Note 10X', 16500, 128, 48, 5.8),
 14       ('Motorola', 'G8', 18999, 64, 48, 6),
 15       ('Oppo', 'A53', 16999, 128, 32, 6.25),
 16       ('Vivo', 'Y33S', 18990, 128, 50, 6.5),
 17       ('Asus', 'Zenfone', 12999, 32, 13, 5.5),
 18       ('Realme', 'Narzo', 12499, 128, 50, 5.5),
 19       ('BlackBerry', 'Evolve', 13950, 64, 13, 5);
```

Mobile Table:

BRAND	NAME	PRICE	MEMORY	CAMERA	DISPLAY
Samsung	Note	37999	128	55	6
Apple	Iphone 13	77999	64	20	6
Nokia	8.1	12500	64	16	5.5
Xiaomi	Note 10X	16500	128	48	5.8
Motorola	G8	18999	64	48	6
Oppo	A53	16999	128	32	6.25
Vivo	Y33S	18990	128	50	6.5
Asus	Zenfone	12999	32	13	5.5
Realme	Narzo	12499	128	50	5.5
BlackBerry	Evolve	13950	64	13	5