

Java Programming

Lab.Ex (database connection)

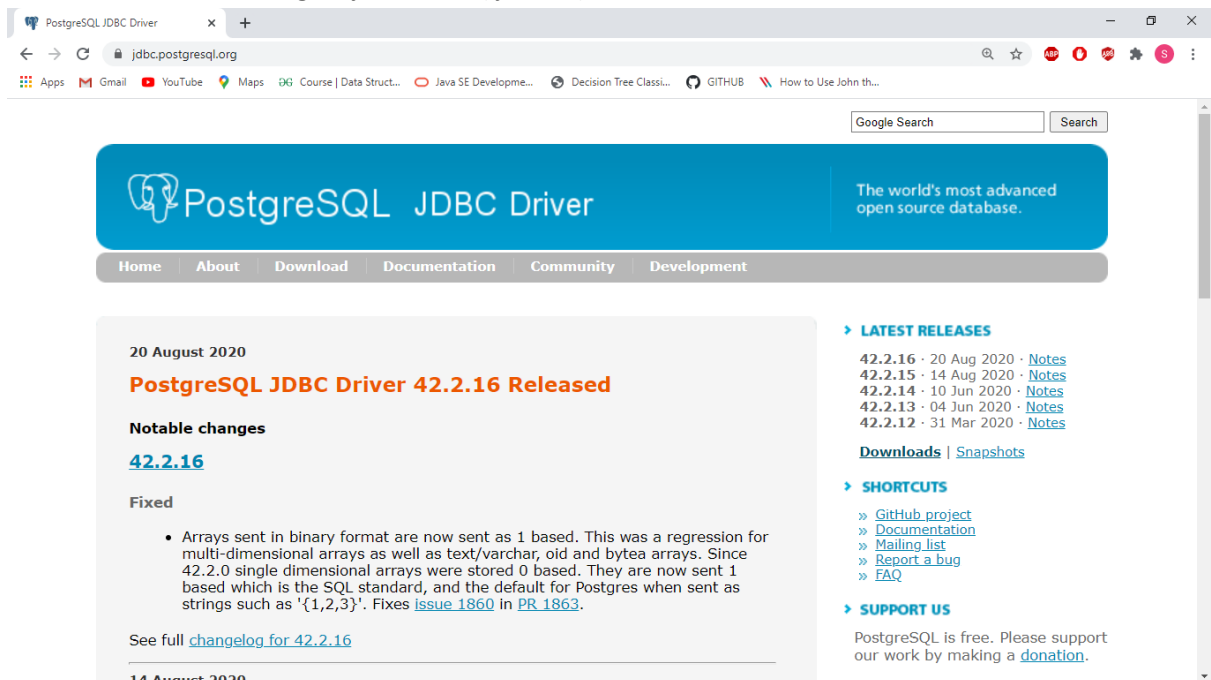
07-oct-2020

Submitted by:

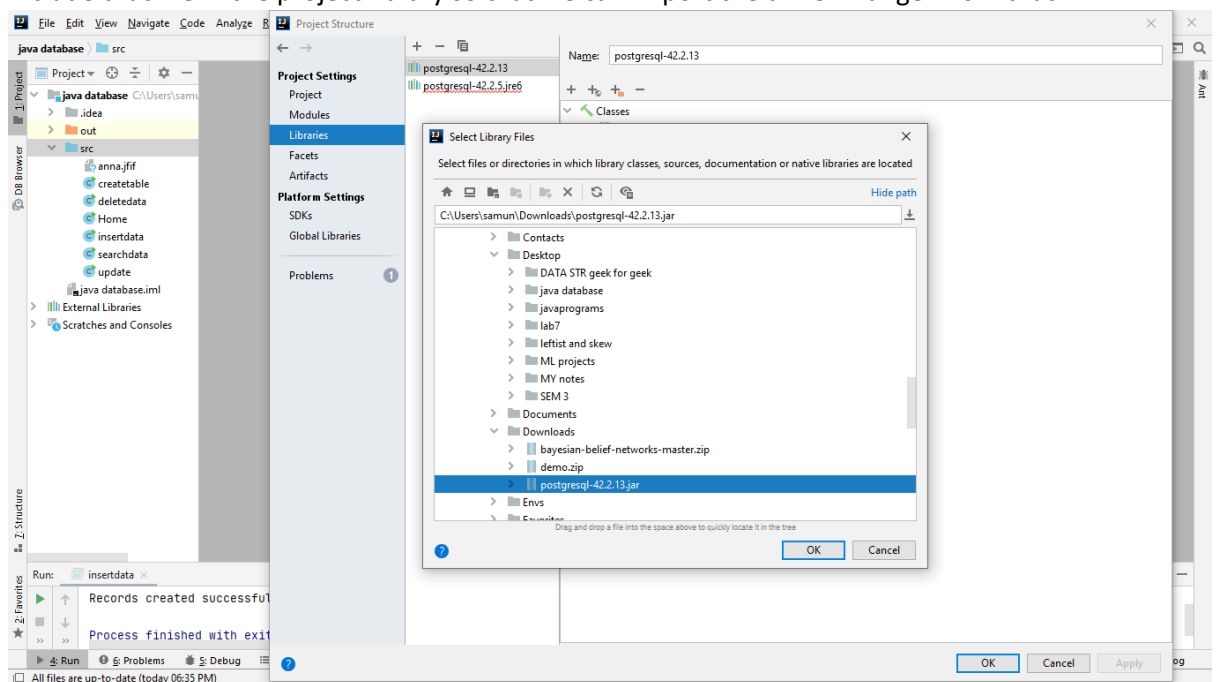
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2019272033**

1. How to establish connection of postgres with the java:

1. First install the Postgres jdbc driver(.jar file) file from the official website;



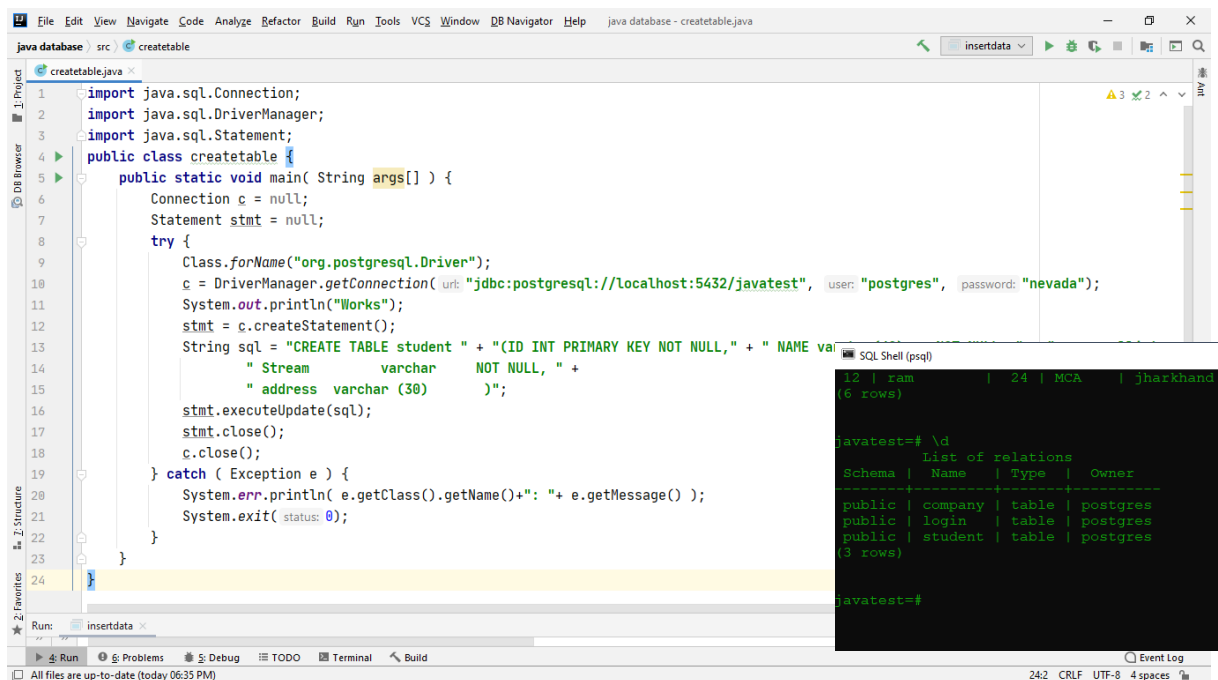
2. Include that file in the project library so that we can import the driver manger from that. .



After clicking apply we are ready to use the postgres database in our project

2. Creating the table in the Postgres from java command.

Code:



```
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.Statement;
4 public class createtable {
5     public static void main( String args[] ) {
6         Connection c = null;
7         Statement stmt = null;
8         try {
9             Class.forName("org.postgresql.Driver");
10            c = DriverManager.getConnection( url: "jdbc:postgresql://localhost:5432/javatest", user: "postgres", password: "nevada");
11            System.out.println("Works");
12            stmt = c.createStatement();
13            String sql = "CREATE TABLE student " + "(ID INT PRIMARY KEY NOT NULL," + " NAME va
14                " Stream          varchar          NOT NULL, " +
15                " address varchar (30)          )";
16            stmt.executeUpdate(sql);
17            stmt.close();
18            c.close();
19        } catch ( Exception e ) {
20            System.err.println( e.getClass().getName()+" : " + e.getMessage() );
21            System.exit( status: 0);
22        }
23    }
24 }
```

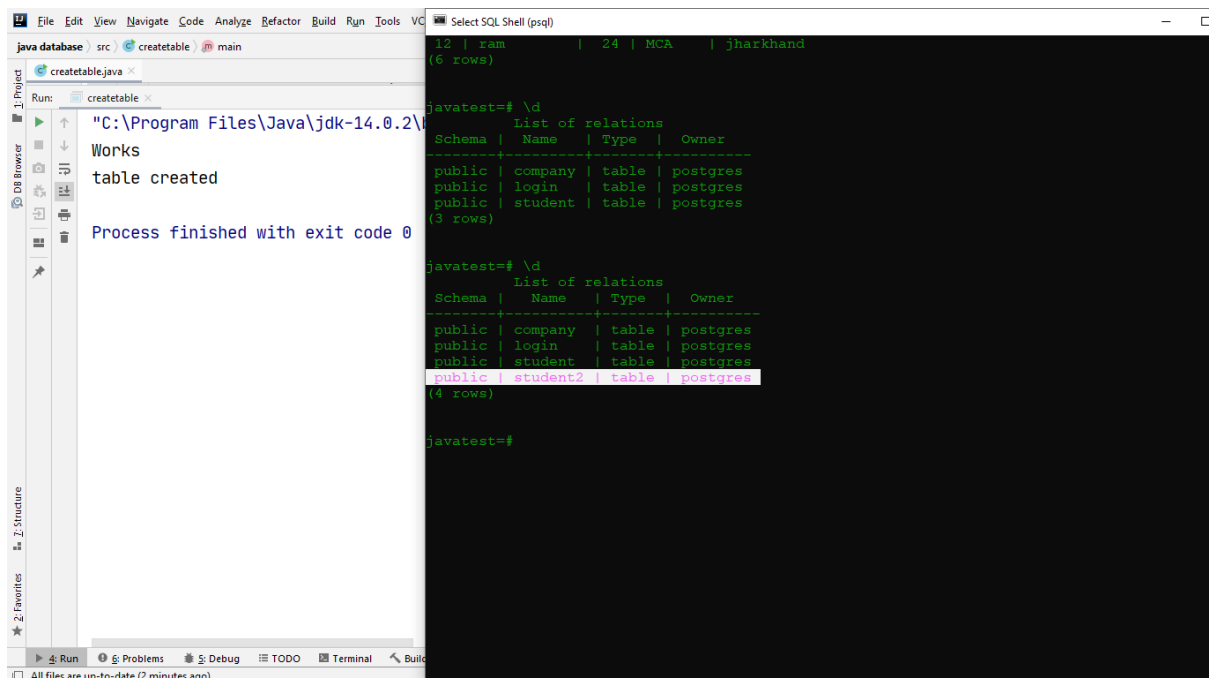
SQL Shell (psql)

```
12 | ram | 24 | MCA | jharkhand
(6 rows)

javatest=# \d
          List of relations
Schema | Name | Type | Owner
-----+-----+-----+-----
public | company | table | postgres
public | login | table | postgres
public | student | table | postgres
(3 rows)

javatest=#
```

Output:



```
"C:\Program Files\Java\jdk-14.0.2\
Works
table created
Process finished with exit code 0
```

Select SQL Shell (psql)

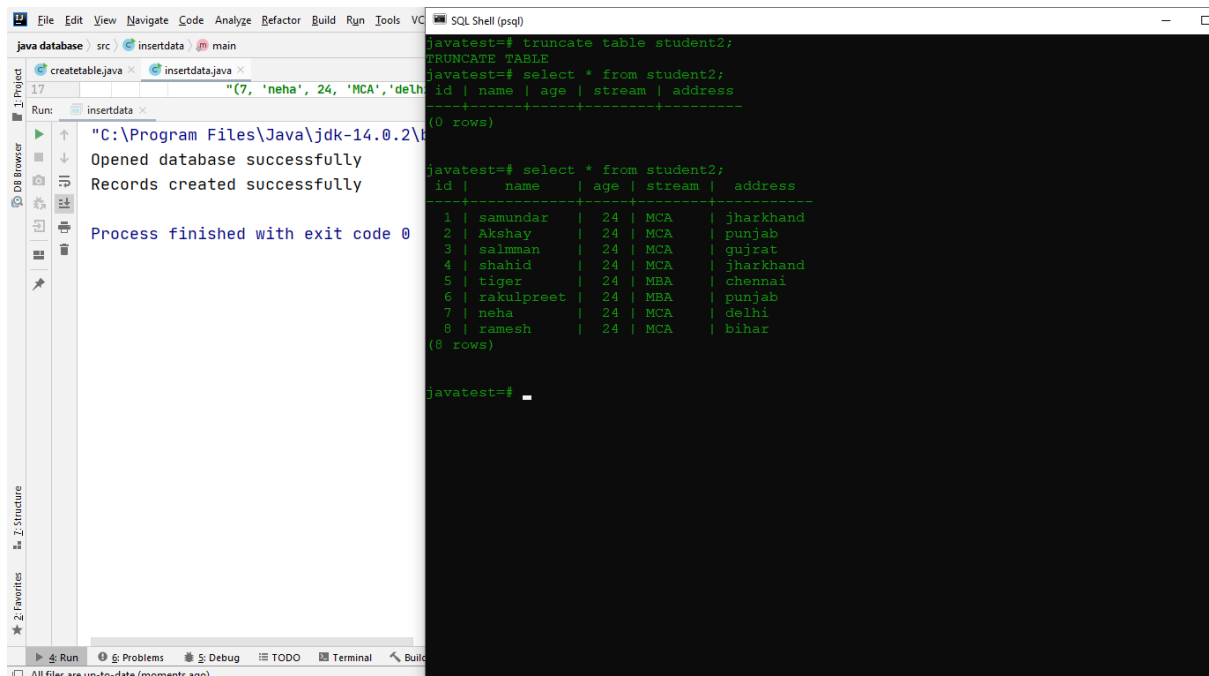
```
12 | ram | 24 | MCA | jharkhand
(6 rows)

javatest=# \d
          List of relations
Schema | Name | Type | Owner
-----+-----+-----+-----
public | company | table | postgres
public | login | table | postgres
public | student | table | postgres
(3 rows)

javatest=# \d
          List of relations
Schema | Name | Type | Owner
-----+-----+-----+-----
public | company | table | postgres
public | login | table | postgres
public | student | table | postgres
public | student2 | table | postgres
(4 rows)

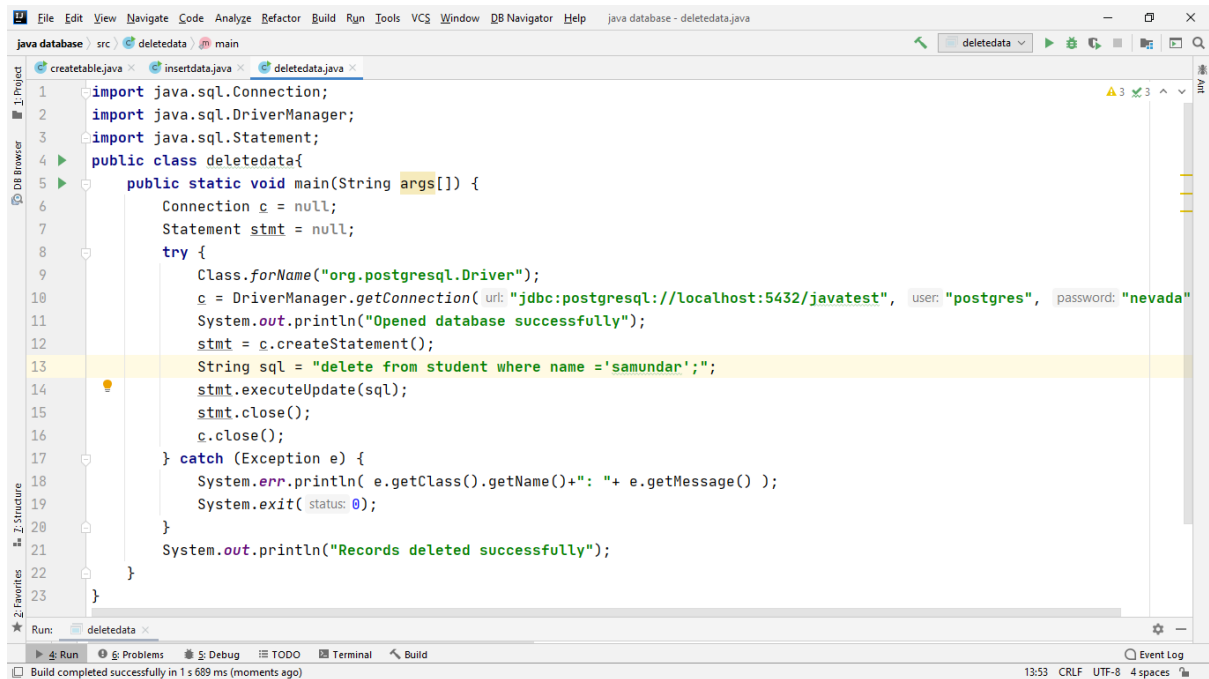
javatest=#
```

Code:



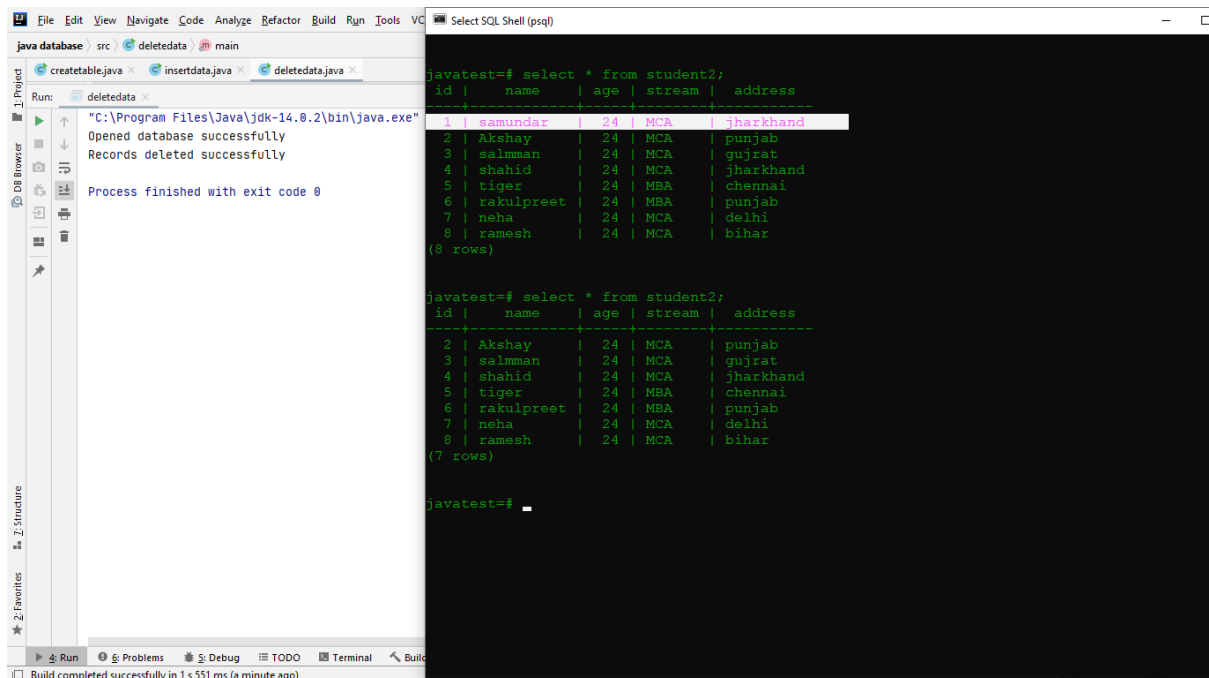
4. Delete the data from table in the Postgres from java command.

Code:



```
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.Statement;
4 public class deletedata{
5     public static void main(String args[]) {
6         Connection c = null;
7         Statement stmt = null;
8         try {
9             Class.forName("org.postgresql.Driver");
10            c = DriverManager.getConnection("jdbc:postgresql://localhost:5432/javatest", user: "postgres", password: "nevada");
11            System.out.println("Opened database successfully");
12            stmt = c.createStatement();
13            String sql = "delete from student where name ='samundar'";
14            stmt.executeUpdate(sql);
15            stmt.close();
16            c.close();
17        } catch (Exception e) {
18            System.err.println( e.getClass().getName()+": " + e.getMessage() );
19            System.exit( status: 0);
20        }
21        System.out.println("Records deleted successfully");
22    }
23 }
```

Output:



Run: deletedata

```
"C:\Program Files\Java\jdk-14.0.2\bin\java.exe"
Opened database successfully
Records deleted successfully
Process finished with exit code 0
```

Select SQL Shell (psql)

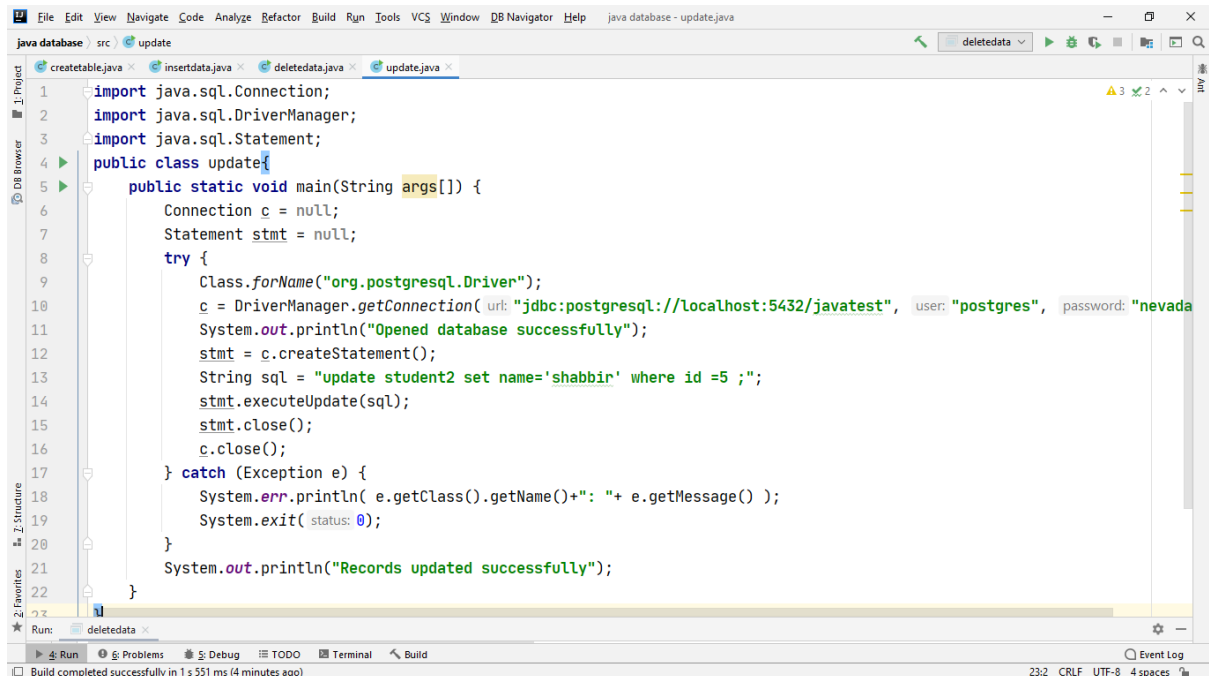
```
javatest=# select * from student2;
 id |  name  | age | stream | address
-----+-----+----+-----+-----
 1 | samundar | 24 | MCA    | jharkhand
 2 | Akshay  | 24 | MCA    | punjab
 3 | salman  | 24 | MCA    | gujrat
 4 | shahid  | 24 | MCA    | jharkhand
 5 | tiger   | 24 | MBA    | chennai
 6 | rakulpreet | 24 | MBA    | punjab
 7 | neha    | 24 | MCA    | delhi
 8 | ramesh  | 24 | MCA    | bihar
(8 rows)

javatest=# select * from student2;
 id |  name  | age | stream | address
-----+-----+----+-----+-----
 2 | Akshay  | 24 | MCA    | punjab
 3 | salman  | 24 | MCA    | gujrat
 4 | shahid  | 24 | MCA    | jharkhand
 5 | tiger   | 24 | MBA    | chennai
 6 | rakulpreet | 24 | MBA    | punjab
 7 | neha    | 24 | MCA    | delhi
 8 | ramesh  | 24 | MCA    | bihar
(7 rows)

javatest=#
```

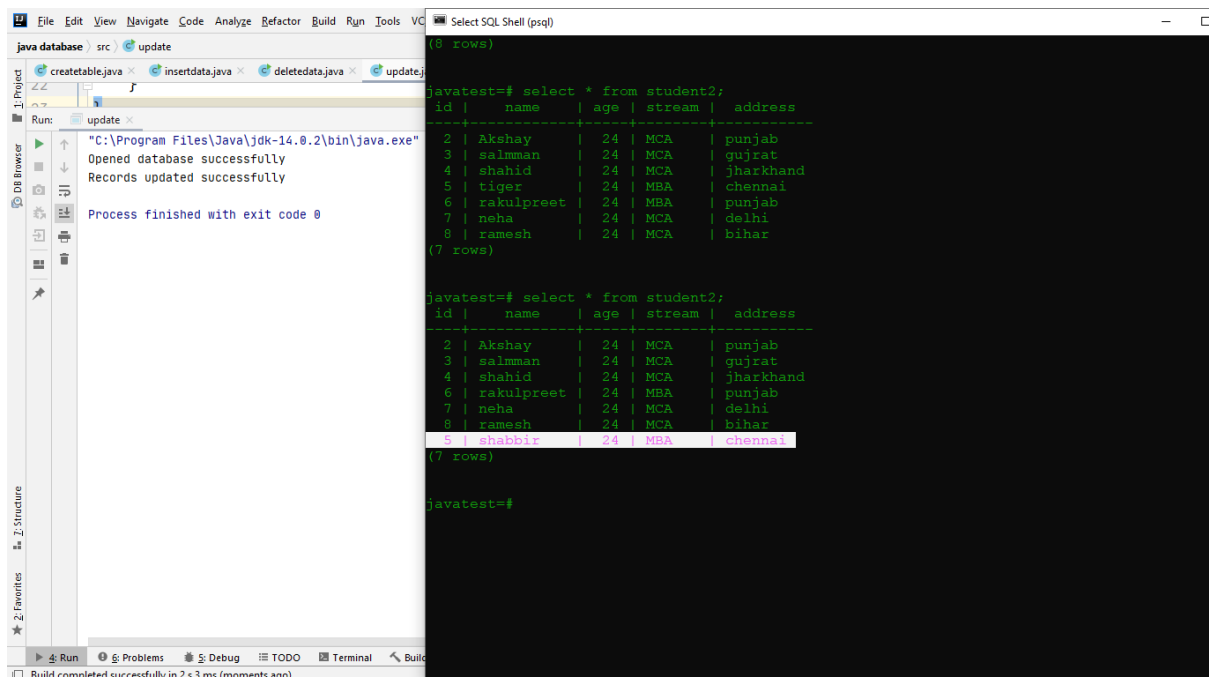
5. Update the data in the table in the Postgres from java command:

Code :



```
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.Statement;
4 public class update{
5     public static void main(String args[]) {
6         Connection c = null;
7         Statement stmt = null;
8         try {
9             Class.forName("org.postgresql.Driver");
10            c = DriverManager.getConnection("jdbc:postgresql://localhost:5432/javatest", user: "postgres", password: "nevada");
11            System.out.println("Opened database successfully");
12            stmt = c.createStatement();
13            String sql = "update student2 set name='shabbir' where id =5 ;";
14            stmt.executeUpdate(sql);
15            stmt.close();
16            c.close();
17        } catch (Exception e) {
18            System.err.println( e.getClass().getName()+" : "+ e.getMessage() );
19            System.exit( status: 0);
20        }
21        System.out.println("Records updated successfully");
22    }
23 }
```

Output:



Run: update

```
"C:\Program Files\Java\jdk-14.0.2\bin\java.exe"
Opened database successfully
Records updated successfully
Process finished with exit code 0
```

Select SQL Shell (psql)

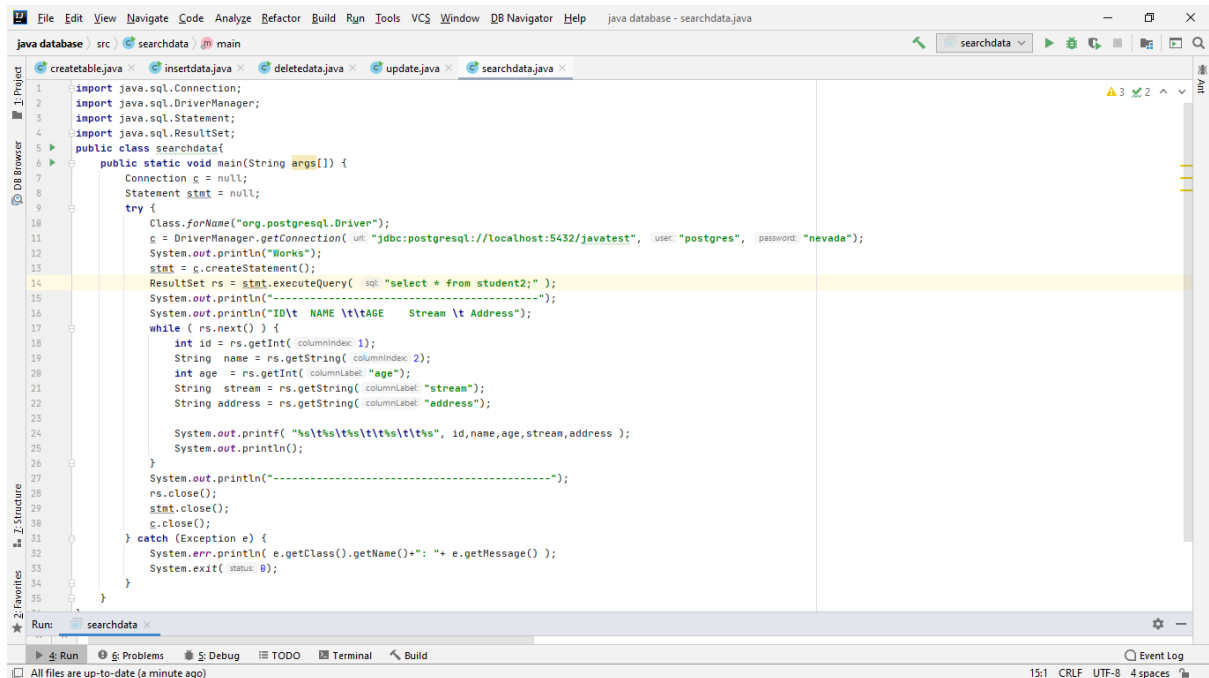
```
(0 rows)
javatest=# select * from student2;
 id |  name  | age | stream | address
-----+-----+----+-----+-----
 2 | Akshay | 24 | MCA    | punjab
 3 | salmaan | 24 | MCA    | gujrat
 4 | shahid | 24 | MCA    | jharkhand
 5 | tiger | 24 | MBA    | chennai
 6 | rakulpreet | 24 | MBA    | punjab
 7 | neha | 24 | MCA    | delhi
 8 | ramesh | 24 | MCA    | bihar
(7 rows)

javatest=# select * from student2;
 id |  name  | age | stream | address
-----+-----+----+-----+-----
 2 | Akshay | 24 | MCA    | punjab
 3 | salmaan | 24 | MCA    | gujrat
 4 | shahid | 24 | MCA    | jharkhand
 6 | rakulpreet | 24 | MBA    | punjab
 7 | neha | 24 | MCA    | delhi
 8 | ramesh | 24 | MCA    | bihar
 5 | shabbir | 24 | MBA    | chennai
(7 rows)

javatest=#
```

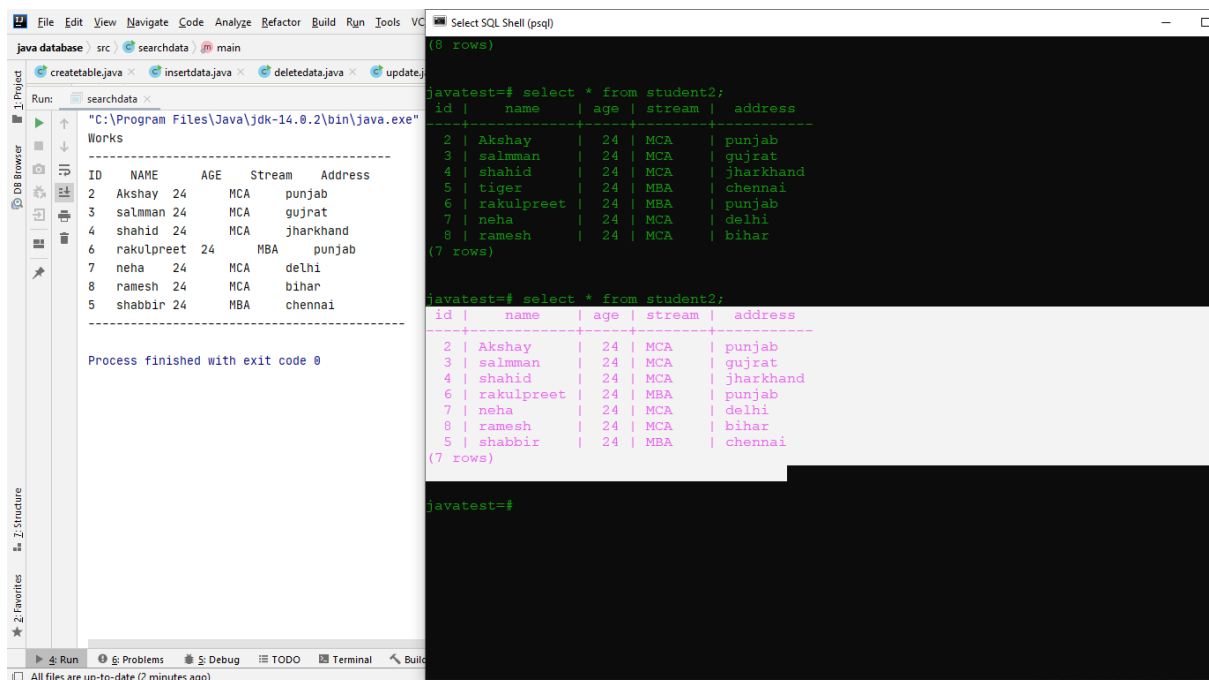
6. Fetch the data of the table in the Postgres from java command:

Code :



```
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.Statement;
4 import java.sql.ResultSet;
5 public class searchdata{
6     public static void main(String args[]) {
7         Connection c = null;
8         Statement stmt = null;
9         try {
10             Class.forName("org.postgresql.Driver");
11             c = DriverManager.getConnection("jdbc:postgresql://localhost:5432/javatest", "user", "password");
12             System.out.println("Works");
13             stmt = c.createStatement();
14             ResultSet rs = stmt.executeQuery( "select * from student2;" );
15             System.out.println("-----");
16             System.out.println("ID\t NAME \t\tAGE \t\tStream \t Address");
17             while ( rs.next() ) {
18                 int id = rs.getInt( columnIndex: 1);
19                 String name = rs.getString( columnIndex: 2);
20                 int age = rs.getInt( columnIndex: "age");
21                 String stream = rs.getString( columnIndex: "stream");
22                 String address = rs.getString( columnIndex: "address");
23
24                 System.out.printf( "%s\t%s\t%s\t\t%s\t\t%s", id,name,age,stream,address );
25                 System.out.println();
26             }
27             System.out.println("-----");
28             rs.close();
29             stmt.close();
30             c.close();
31         } catch (Exception e) {
32             System.err.println( e.getClass().getName()+" : "+ e.getMessage() );
33             System.exit( status: 0);
34         }
35     }
36 }
```

Output :



```
Run: searchdata
"C:\Program Files\Java\jdk-14.0.2\bin\java.exe"
Works
ID NAME AGE Stream Address
2 Akshay 24 MCA punjab
3 salman 24 MCA gujrat
4 shahid 24 MCA jharkhand
5 tiger 24 MBA chennai
6 rakulpreet 24 MBA punjab
7 neha 24 MCA delhi
8 ramesh 24 MCA bihar
5 shabbir 24 MBA chennai
-----
Process finished with exit code 0
```