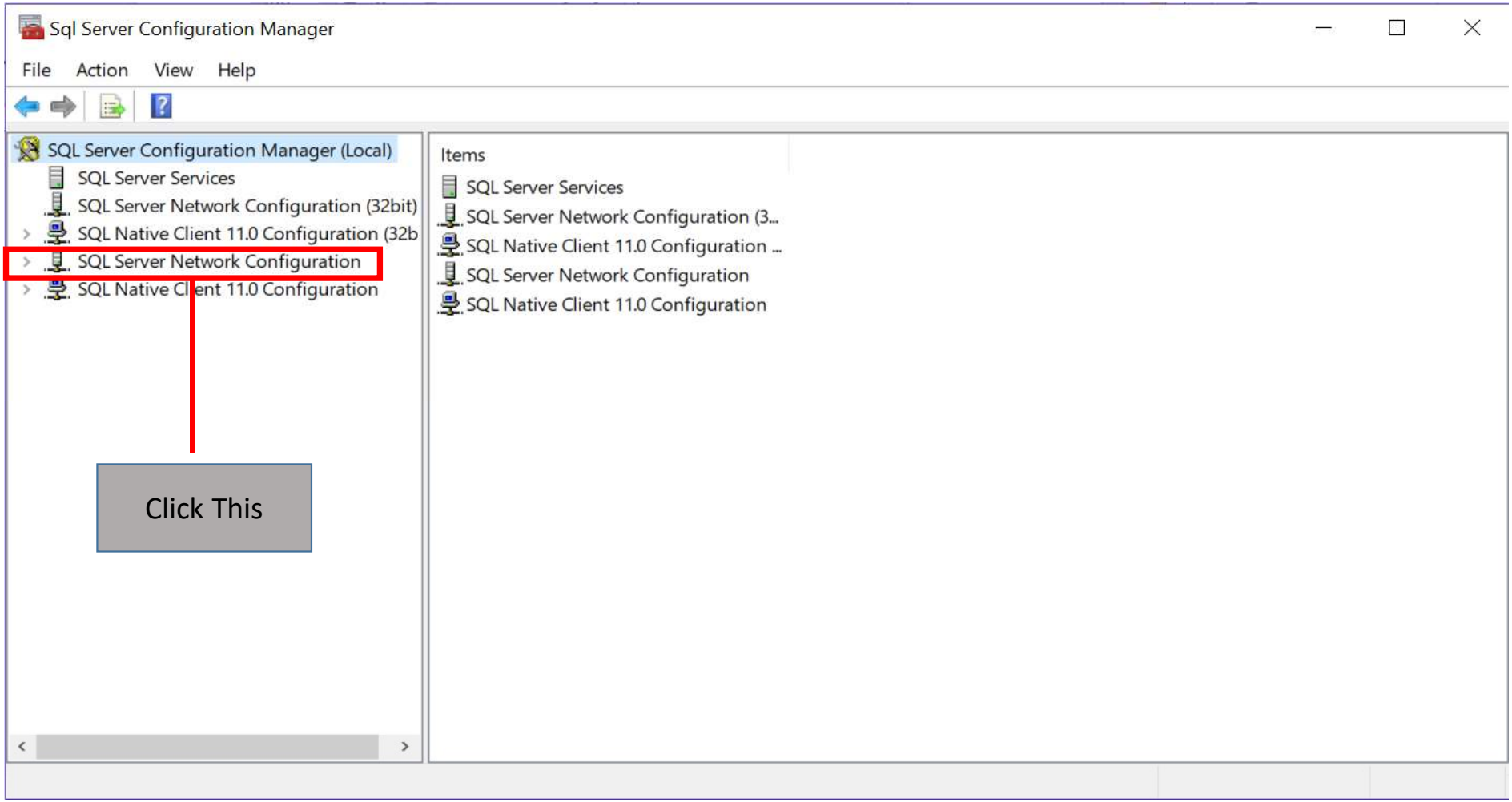
Database System Lab (CSE 3104)

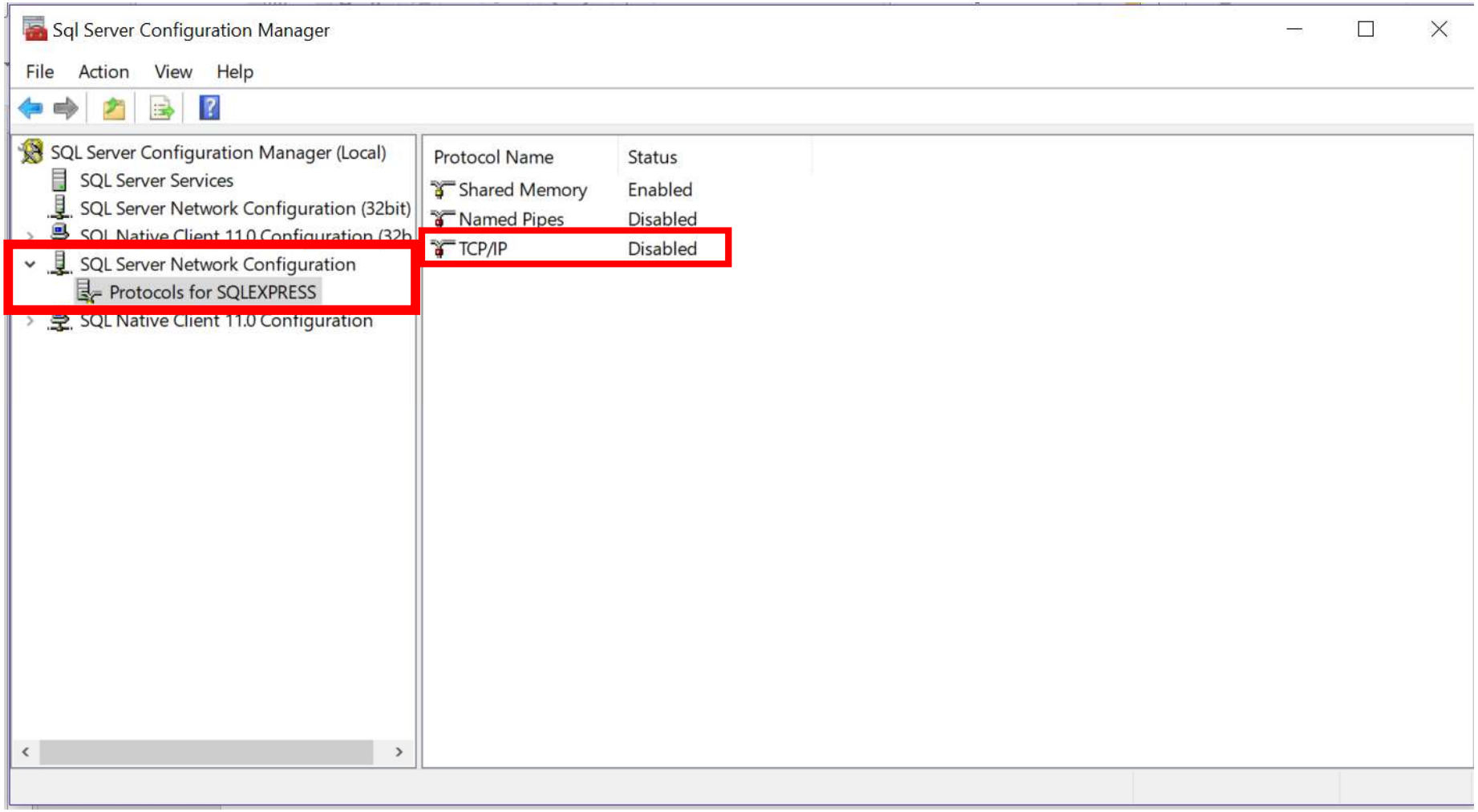
Connecting NetBeans Project to MSSQL Server

cmd: 'SQLServerManager15.msc' for SQL Server 2019

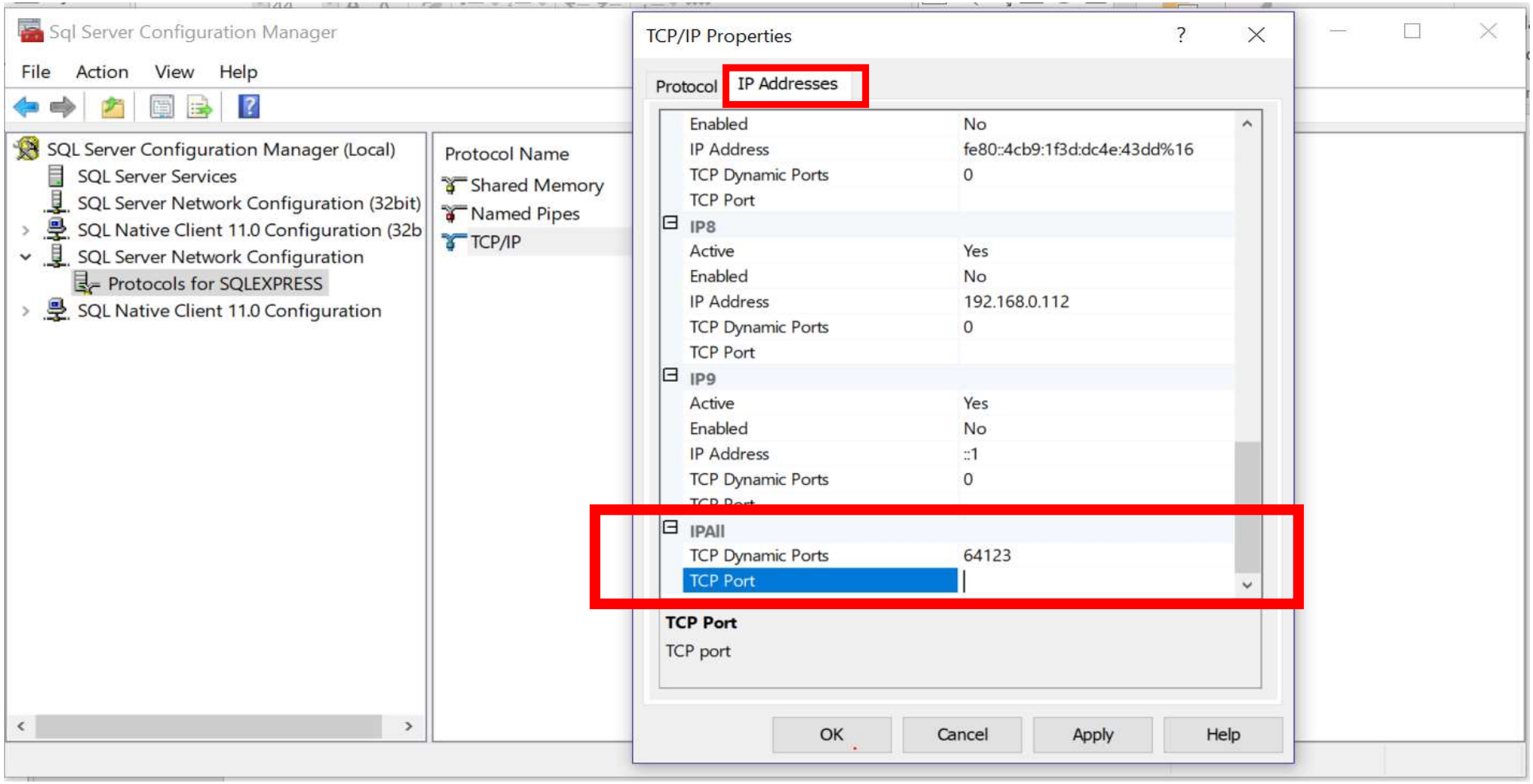
Open the Sql Server Configuration Manager



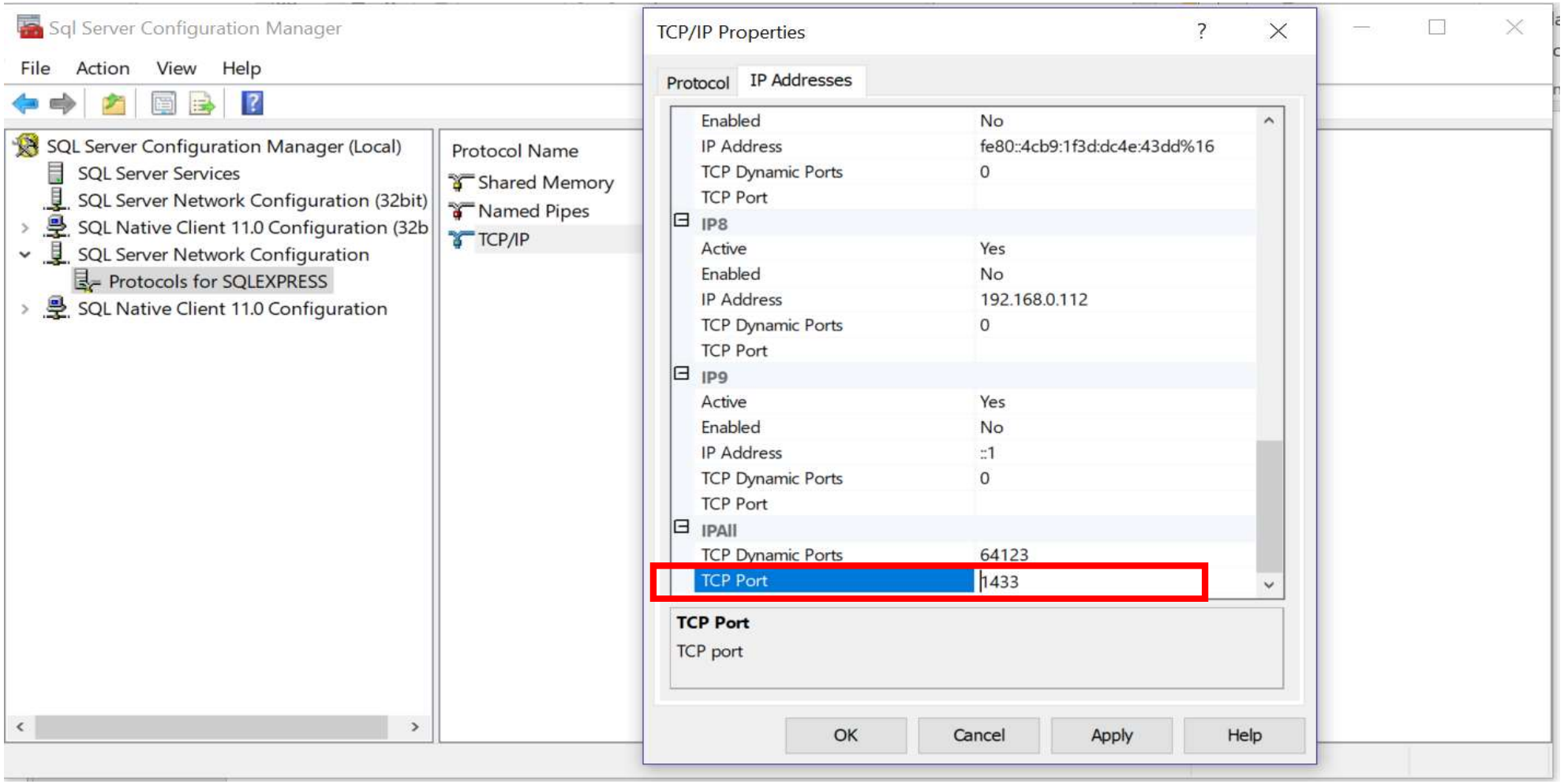
Right Click the TCP/IP, Go to Properties -> IP Addresses



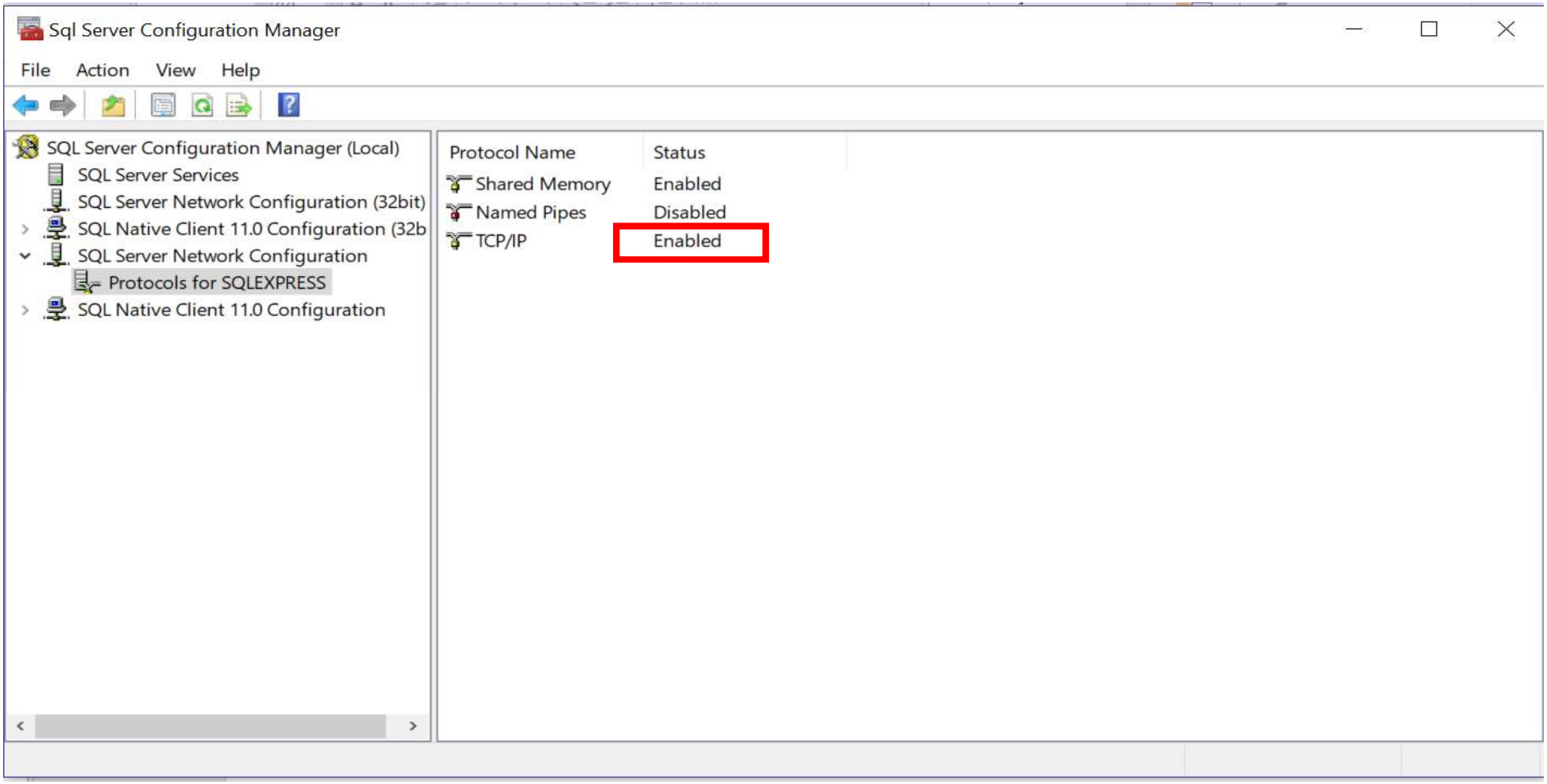
Scroll Down. Go to the last option: IPAll. Click on the TCP Port



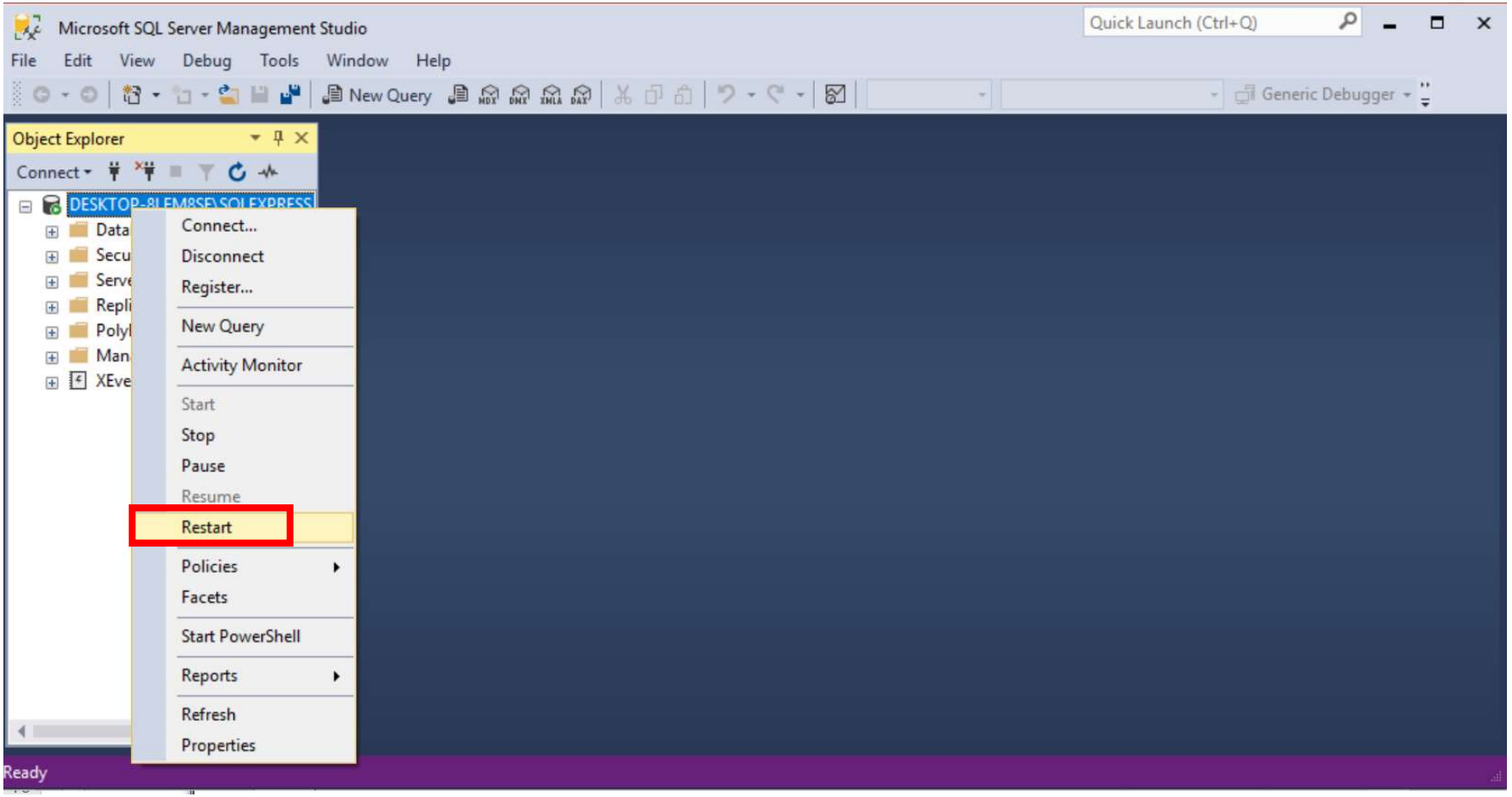
Type 1433 in the TCP Port Option and click Apply.



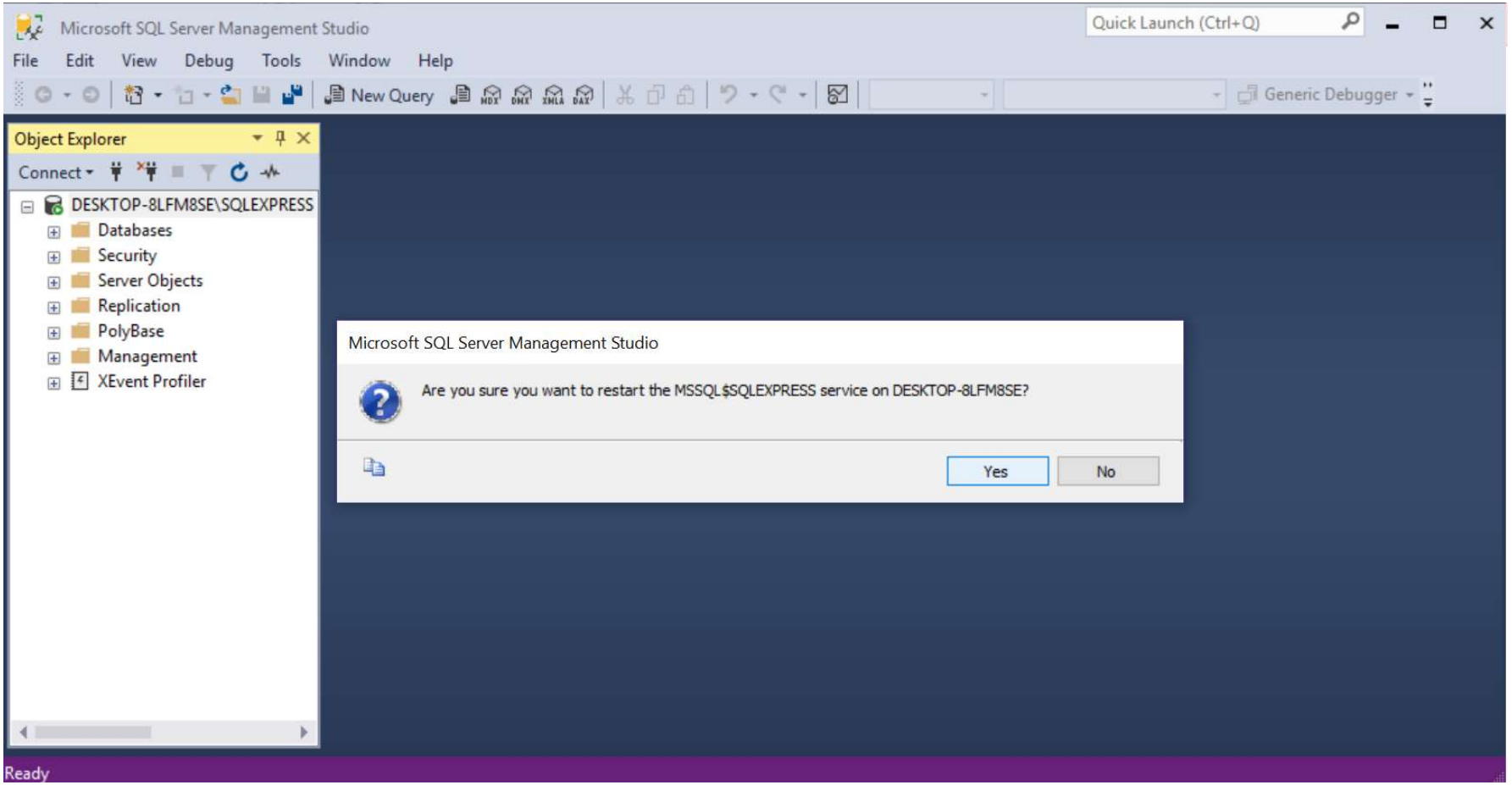
Again Right Click the TCP/IP and Click Enable.

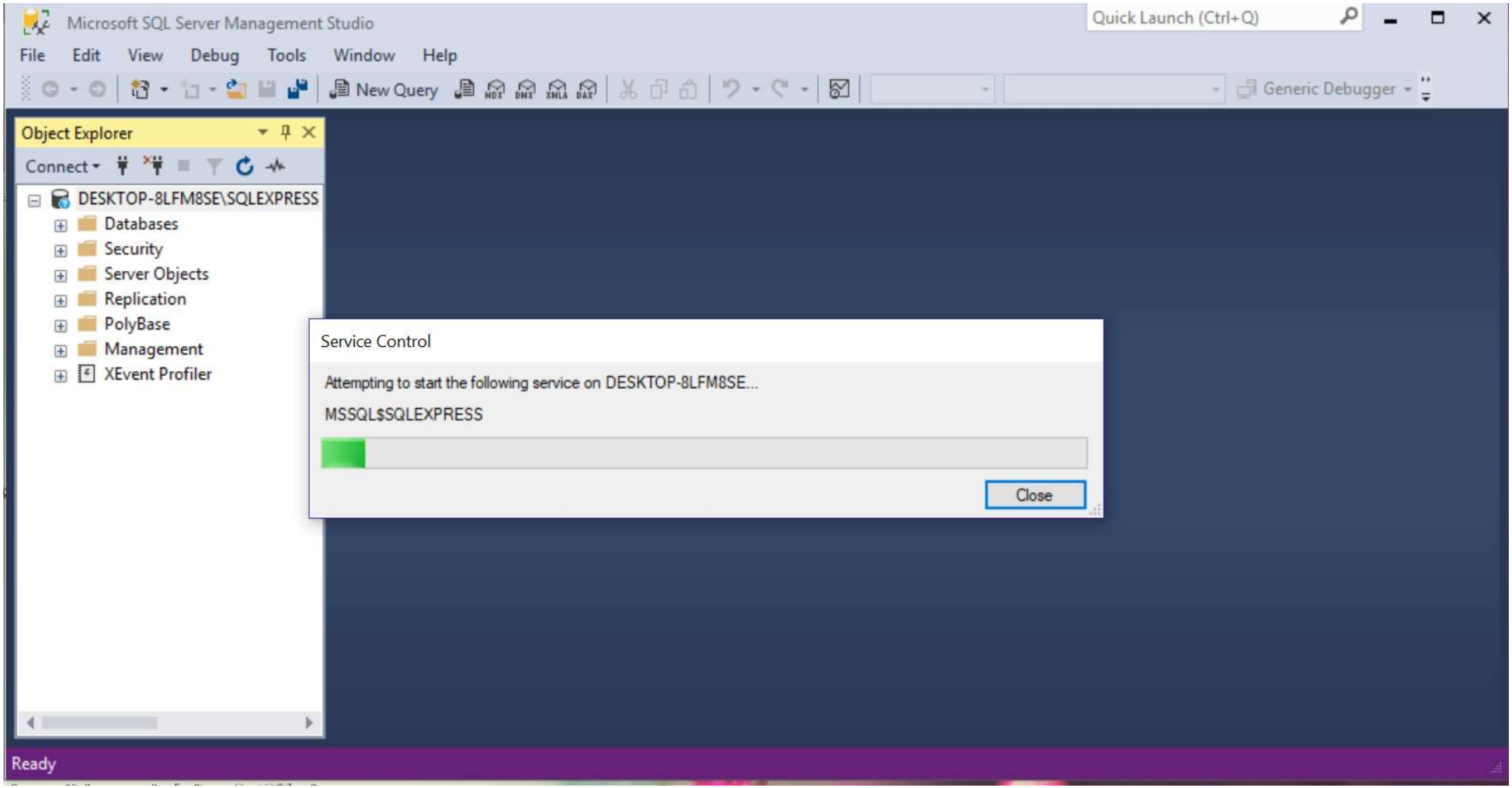


Right Click The SQL Server and Click Restart



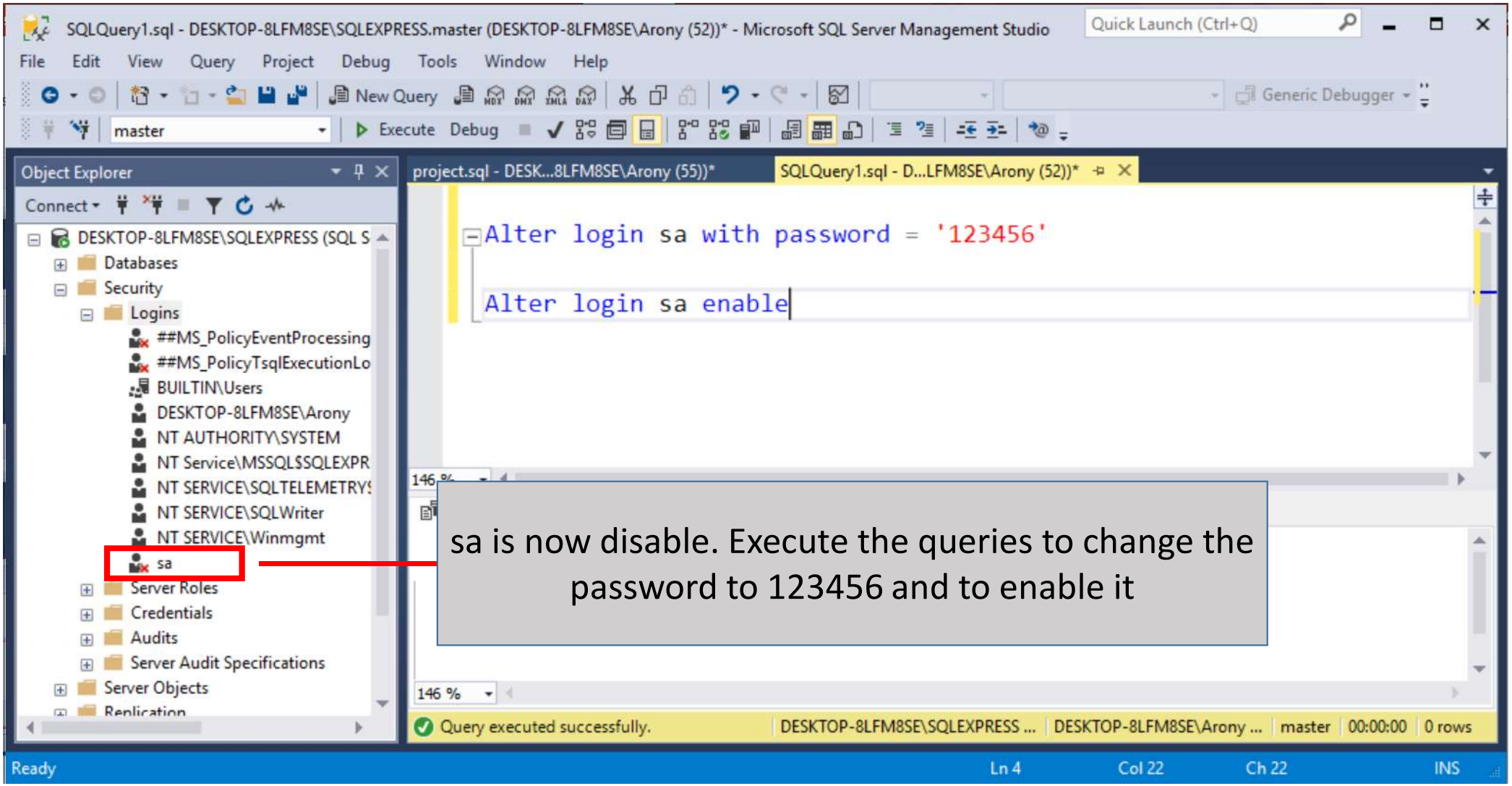
Click Yes


Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Debug Tools Window Help
New Query
Generic Debugger
Object Explorer
Connect
DESKTOP-8LFM8SE\SQLEXPRESS
Databases
Security
Server Objects
Replication
PolyBase
Management
XEvent Profiler
Microsoft SQL Server Management Studio
Are you sure you want to restart the MSSQL$SQLEXPRESS service on DESKTOP-8LFM8SE?
Yes
No
Ready


Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File
Edit
View
Debug
Tools
Window
Help
New Query
Generic Debugger
Object Explorer
Connect
DESKTOP-8LFM8SE\SQLEXPRESS
Databases
Security
Server Objects
Replication
PolyBase
Management
XEvent Profiler
Service Control
Attempting to start the following service on DESKTOP-8LFM8SE...
MSSQL$SQLEXPRESS
Close
Ready

Execute the Following queries:

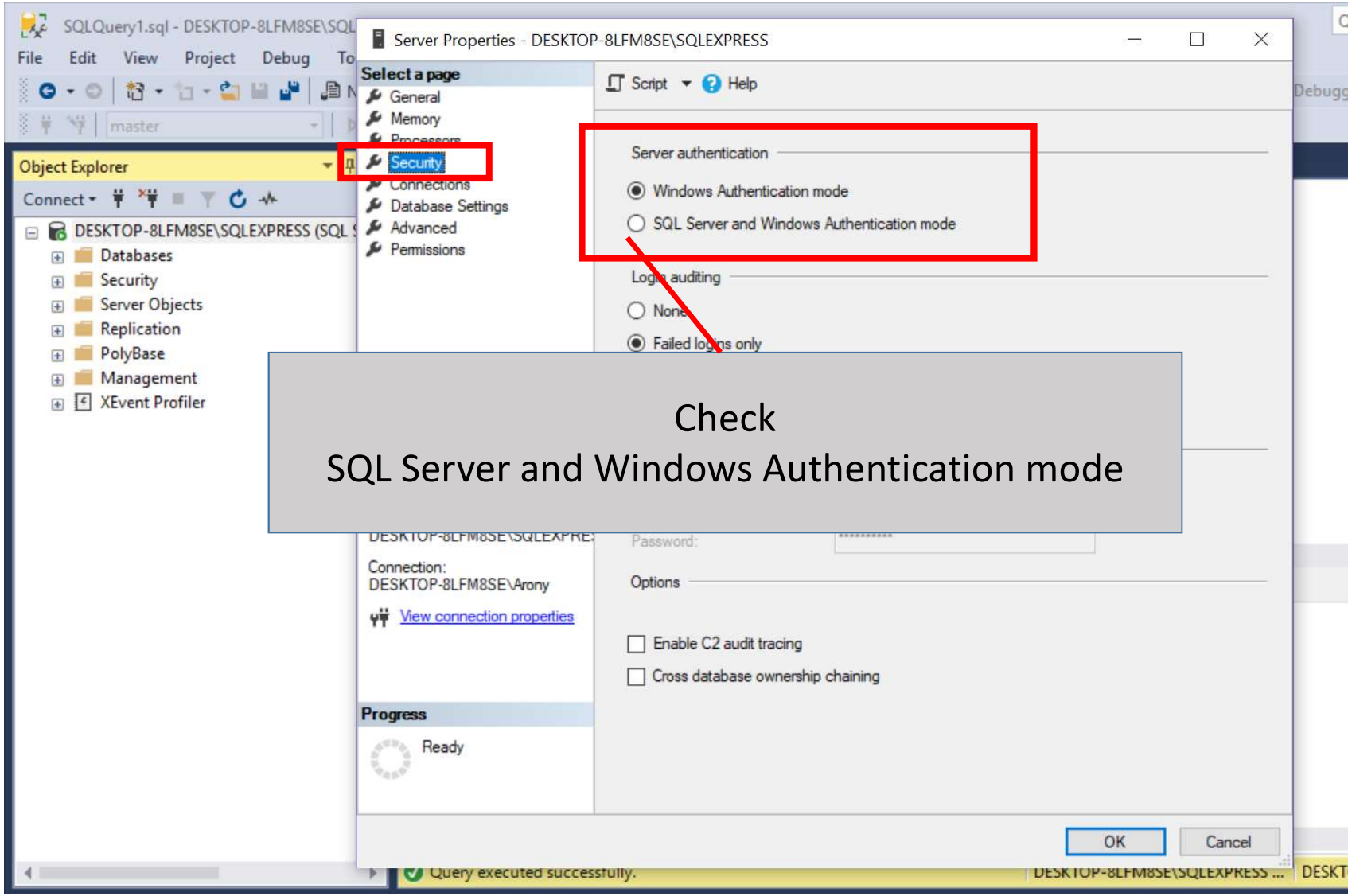
```
Alter login sa with password = ‘123456’

Alter login sa enable
```

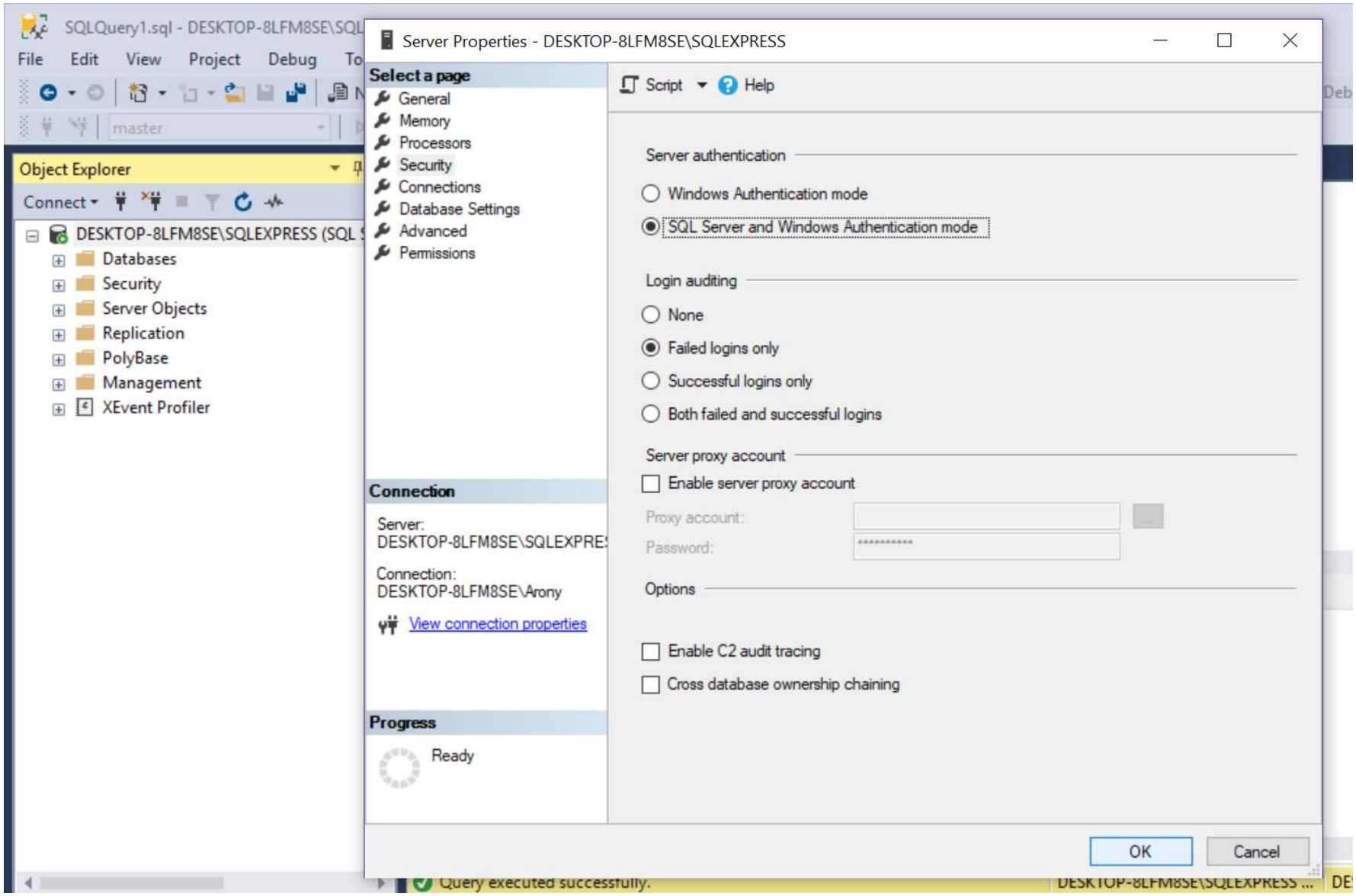

SQLQuery1.sql - DESKTOP-8LFM8SE\SQLEXPRESS.master (DESKTOP-8LFM8SE\Arony (52))* - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Debug Tools Window Help
New Query
Generic Debugger
master
Execute Debug
Object Explorer
Connect
DESKTOP-8LFM8SE\SQLEXPRESS (SQL S
Databases
Security
Logins
##MS_PolicyEventProcessing
##MS_PolicyTsqlExecutionLo
BUILTIN\Users
DESKTOP-8LFM8SE\Arony
NT AUTHORITY\SYSTEM
NT Service\MSSQL$SQLEXPR
NT SERVICE\SQLTELEMETRY$
NT SERVICE\SQLWriter
NT SERVICE\Winmgmt
sa
Server Roles
Credentials
Audits
Server Audit Specifications
Server Objects
Replication
project.sql - DESK...8LFM8SE\Arony (55))*
SQLQuery1.sql - D...LFM8SE\Arony (52))*
Alter login sa with password = '123456'
Alter login sa enable
146 %
sa is now disable. Execute the queries to change the password to 123456 and to enable it
Query executed successfully.
DESKTOP-8LFM8SE\SQLEXPRESS ...
DESKTOP-8LFM8SE\Arony ...
master
00:00:00
0 rows
Ready
Ln 4
Col 22
Ch 22
INS

Right Click
Sql Server.

Go to

Properties
-> Security

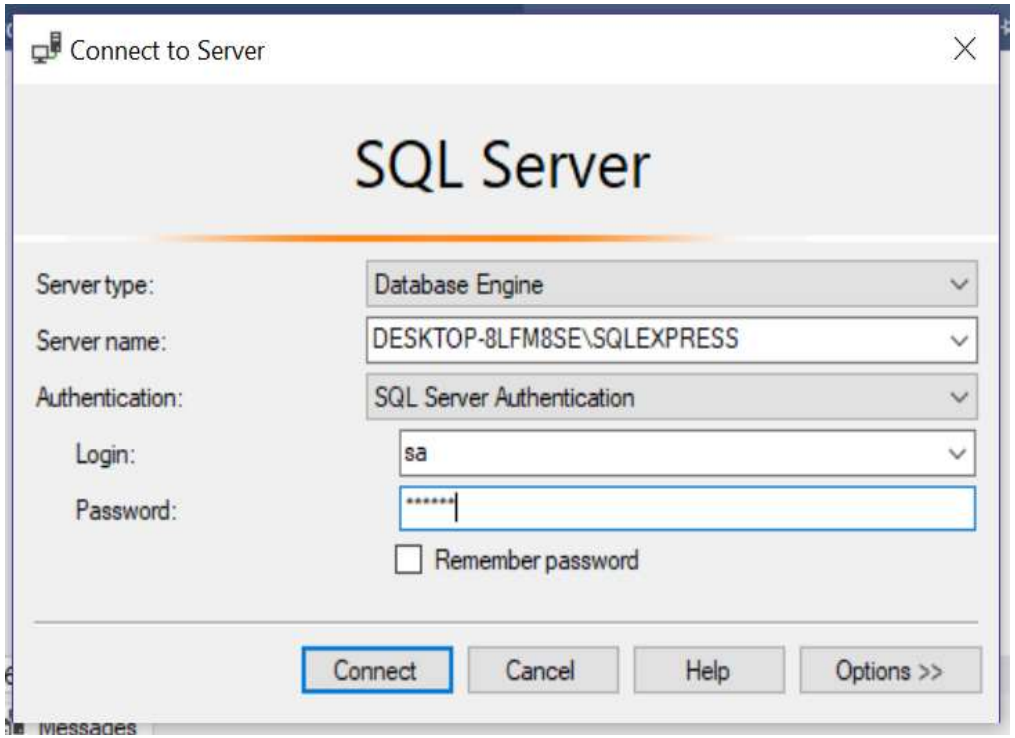



SQLQuery1.sql - DESKTOP-8LFM8SE\SQL
File Edit View Project Debug To
master
Object Explorer
Connect
DESKTOP-8LFM8SE\SQLEXPRESS (SQL
Databases
Security
Server Objects
Replication
PolyBase
Management
XEvent Profiler
Server Properties - DESKTOP-8LFM8SE\SQLEXPRESS
Select a page
General
Memory
Processors
Security
Connections
Database Settings
Advanced
Permissions
Script
Help
Server authentication
Windows Authentication mode
SQL Server and Windows Authentication mode
Login auditing
None
Failed logins only
Successful logins only
Both failed and successful logins
Server proxy account
Enable server proxy account
Proxy account:
Password:
Options
Enable C2 audit tracing
Cross database ownership chaining
Connection
Server:
DESKTOP-8LFM8SE\SQLEXPRE
Connection:
DESKTOP-8LFM8SE\Arony
View connection properties
Progress
Ready
OK
Cancel
Query executed successfully.
DESKTOP-8LFM8SE\SQLEXPRESS ...

Steps:

- Disconnect the sql server
- Then again click connect.
- Change Authentication from Windows Authentication to SQL Server Authentication
- Give Login : sa

  Password : 123456
- Click Connect



Steps:

- Create your project Database in Microsoft SQL SERVER Management Studio.

- Create table and insert data in the database.

You can use this for testing Purpose

```
Create Database ProjectDB;

Use ProjectDB;

CREATE TABLE Customer(

CustomerID int IDENTITY(1,1) NOT NULL PRIMARY KEY,
FirstName varchar (50) NOT NULL,
LastName varchar (50) NOT NULL,
CustomerAddress varchar (50) NOT NULL,
City varchar (50) NOT NULL,
Country varchar (50) NOT NULL
);

INSERT INTO CUSTOMER
VALUES ('Amy', 'Johnson', '11000 Beecher', 'Joliet',  'USA'),
       ('Bill', 'Brown', '7312 Bettis Ave.', 'Pittsburg','USA'),
       ('Janna', 'Smith', '200 E. Elm Apt. #32', 'Sparks','USA'),
       ('Evette', 'LeBlanc', '207 Queens Quay West', 'Toronto','CA'),
       ('Drew', 'Brisco', '1690 Hollis Street', 'Ottawa','CA')
```

Steps:

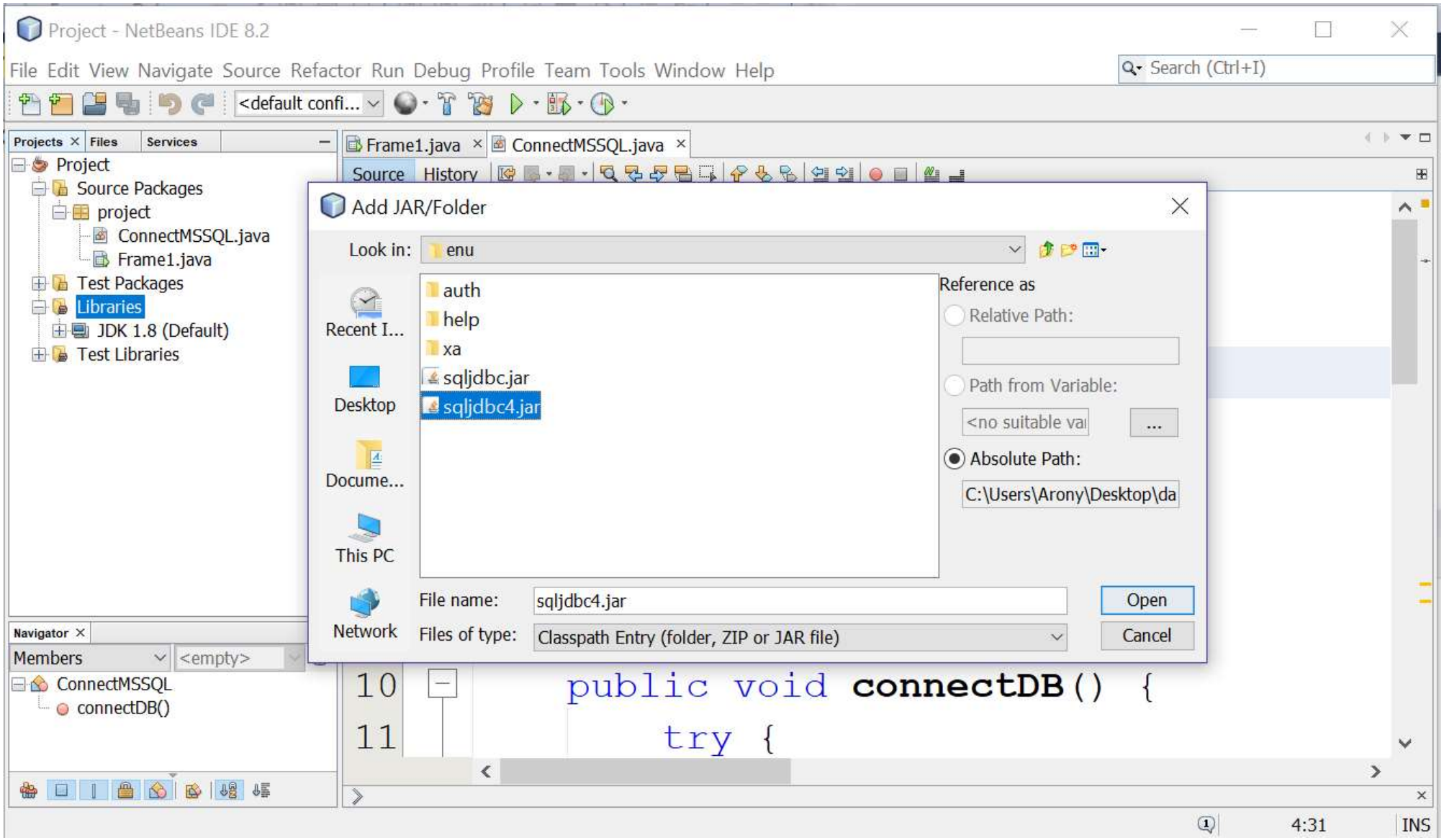
- Open NetBeans. Create New Project -> Project Name Unclick the create main class before finishing
- Create a new class named ConnectMSSQL.
- Copy and paste the connectDB() method given in the next slide inside the Class ConnectMSSQL

```
public void connectDB(){
        try {
           Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");
           Connection connection = DriverManager
                 .getConnection(
                       "jdbc:sqlserver://localhost:1433;databaseName=ProjectDB;selectMethod=cursor",   "sa", "123456");

           System.out.println("DATABASE NAME IS:"
                 + connection.getMetaData().getDatabaseProductName());
           Statement statement = connection.createStatement();
           ResultSet resultSet = statement
                 .executeQuery("SELECT FirstName FROM Customer");
           while (resultSet.next()) {
              System.out.println("Customer NAME:"
                    + resultSet.getString("FirstName"));
           }
        } catch (Exception e) {
           e.printStackTrace();
        }
     }
```

The Class will look like this

```java
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

public class ConnectMSSQL {

    public void connectDB() {
        try {
            Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");
            Connection connection = DriverManager.getConnection(
                    "jdbc:sqlserver://localhost:1433;databaseName=ProjectDB;selectMethod=cursor", "sa", "123456");

            System.out.println("DATABASE NAME IS:" + connection.getMetaData().getDatabaseProductName());

            Statement statement = connection.createStatement();
            ResultSet resultSet = statement.executeQuery("SELECT FirstName FROM Customer");

            while (resultSet.next()) {
                System.out.println("Customer NAME:" + resultSet.getString("FirstName"));

            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
```

- Right click Libraries in the Project Created in Netbeans
- Select Add Jar/Folder
- Add the sqljdbc4.jar to the Libraries


Project - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
Projects
Files
Services
Project
Source Packages
project
ConnectMSSQL.java
Frame1.java
Test Packages
Libraries
JDK 1.8 (Default)
Test Libraries
Frame1.java
ConnectMSSQL.java
Source
History
Add JAR/Folder
Look in:
enu
auth
help
xa
sqljdbc.jar
sqljdbc4.jar
Recent I...
Desktop
Docume...
This PC
Network
Reference as
Relative Path:
Path from Variable:
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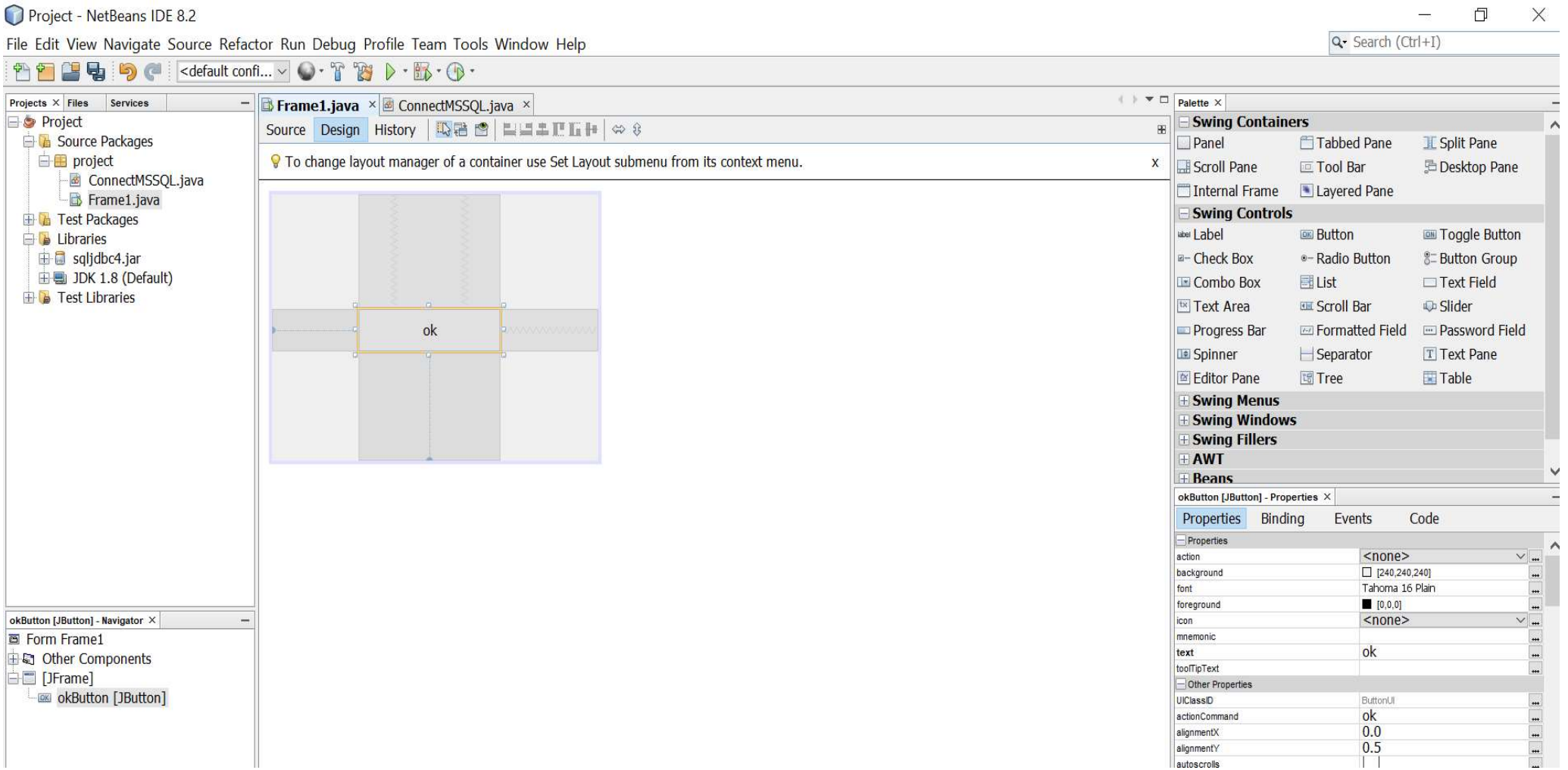
Absolute Path:
C:\Users\Arony\Desktop\da
File name:
sqljdbc4.jar
Files of type:
Classpath Entry (folder, ZIP or JAR file)
Open
Cancel
Navigator
Members
<empty>
ConnectMSSQL
connectDB()
10
11
public void connectDB() {
try {
4:31
INS

- Create a jFrame Form inside the project
- Put button on the frame
- Go to the back end of the button
- Create an Object of the Class ConnectMSSQL
- Call the method connectDB()


Project - NetBeans IDE 8.2
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Search (Ctrl+I)
<default confi...
Projects
Files
Services
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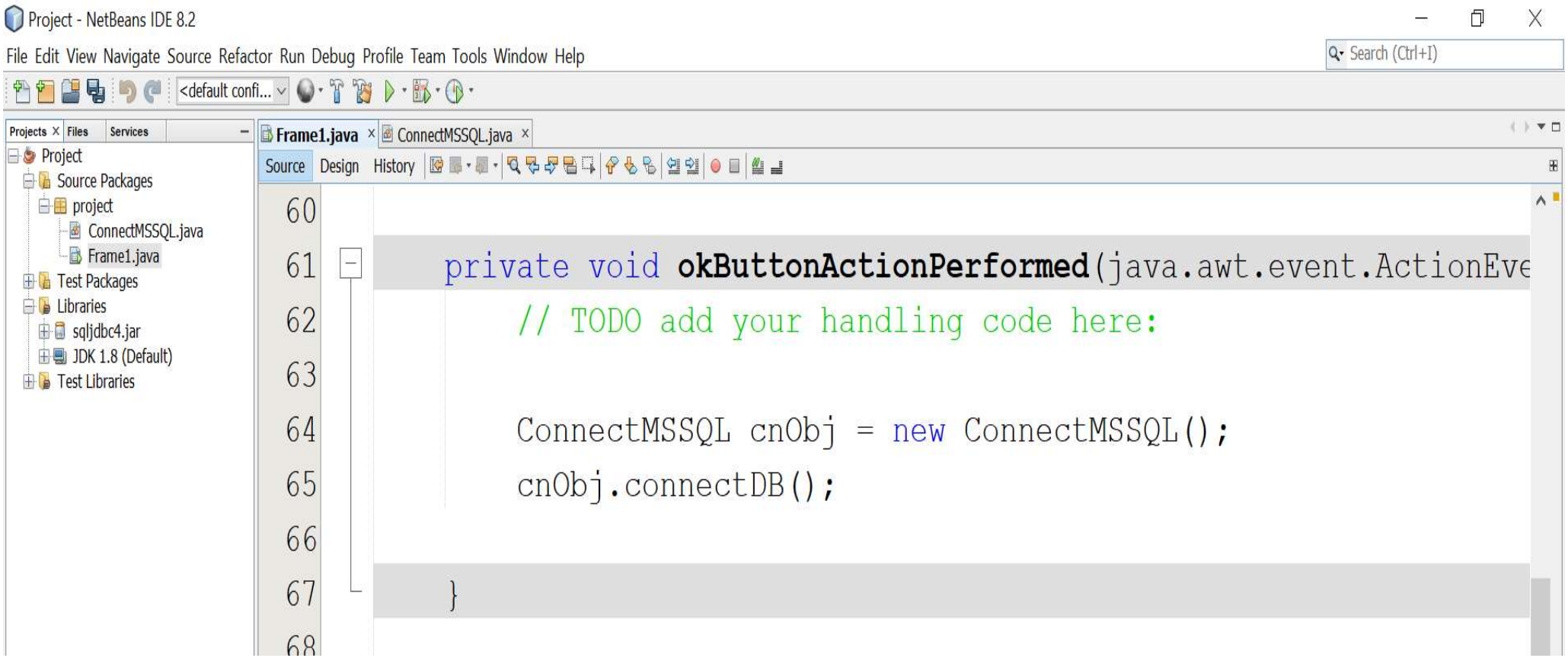
Source Packages
project
ConnectMSSQL.java
Frame1.java
Test Packages
Libraries
sqljdbc4.jar
JDK 1.8 (Default)
Test Libraries
okButton [JButton] - Navigator
Form Frame1
Other Components
[JFrame]
okButton [JButton]
Frame1.java
ConnectMSSQL.java
Source
Design
History
To change layout manager of a container use Set Layout submenu from its context menu.
ok
Palette
Swing Containers
Panel
Tabbed Pane
Split Pane
Scroll Pane
Tool Bar
Desktop Pane
Internal Frame
Layered Pane
Swing Controls
Label
Button
Toggle Button
Check Box
Radio Button
Button Group
Combo Box
List
Text Field
Text Area
Scroll Bar
Slider
Progress Bar
Formatted Field
Password Field
Spinner
Separator
Text Pane
Editor Pane
Tree
Table
Swing Menus
Swing Windows
Swing Fillers
AWT
Beans
okButton [JButton] - Properties
Properties
Binding
Events
Code
Properties
action
<none>
background
[240,240,240]
font
Tahoma 16 Plain
foreground
[0,0,0]
icon
<none>
mnemonic
text
ok
toolTipText
Other Properties
UIClassID
ButtonUI
actionCommand
ok
alignmentX
0.0
alignmentY
0.5
autoscrolls


Project - NetBeans IDE 8.2
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<default confi...
Projects
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Frame1.java
Test Packages
Libraries
sqljdbc4.jar
JDK 1.8 (Default)
Test Libraries
Frame1.java
ConnectMSSQL.java
Source
Design
History
60
61 private void okButtonActionPerformed(java.awt.event.ActionEve
62 // TODO add your handling code here:
63
64 ConnectMSSQL cnObj = new ConnectMSSQL();
65 cnObj.connectDB();
66
67 }
68

- Run the frame and Click ok
- You should get the desired Output