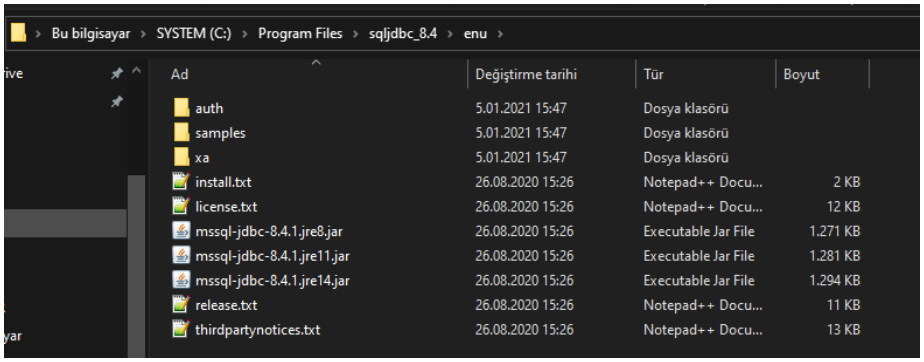
Download JDBC driver:

https://docs.microsoft.com/en-us/sql/connect/jdbc/download-microsoft-jdbc-driver-for-sql-server?view=sql-server-ver15

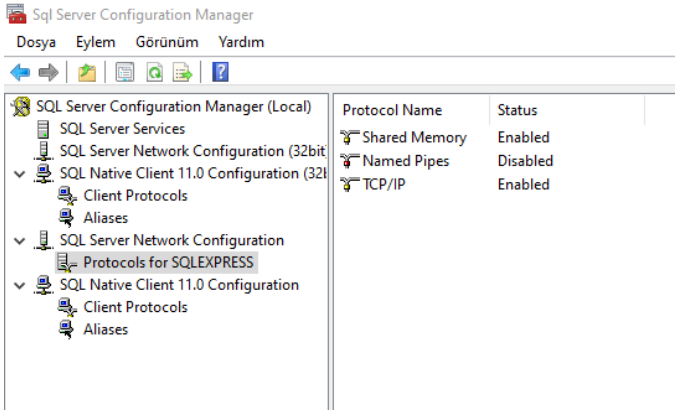
https://go.microsoft.com/fwlink/?linkid=2137600 (zip file direct link)

Extract JDBC zip file to below folder:

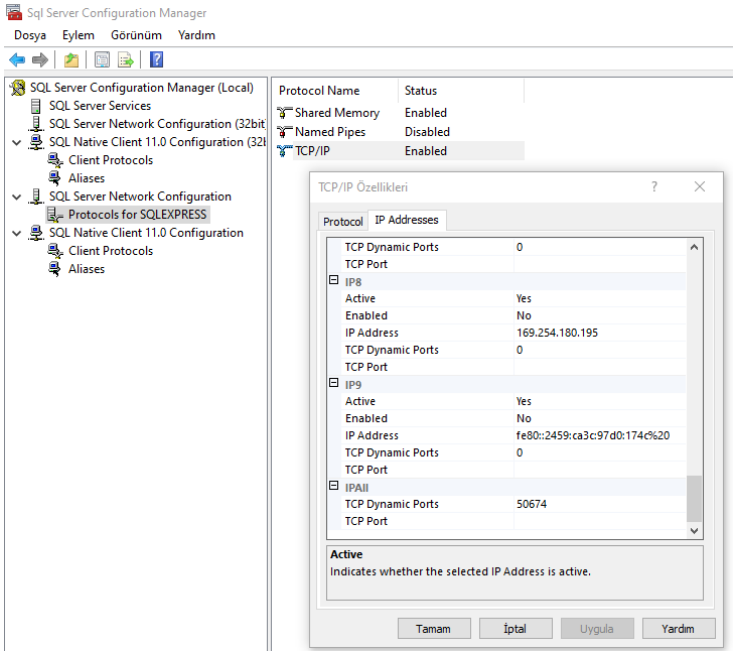
C:\Program Files\sqljdbc_8.4



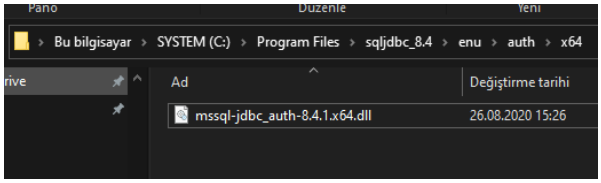
Run “SQL Server Configuration Manager” and Enable TCP/IP



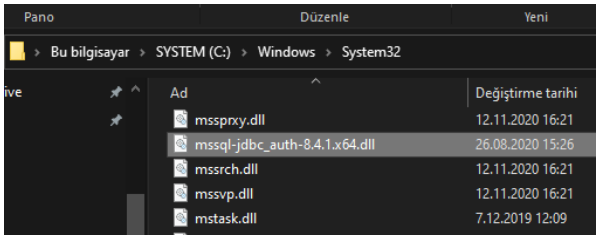
Learn the Port



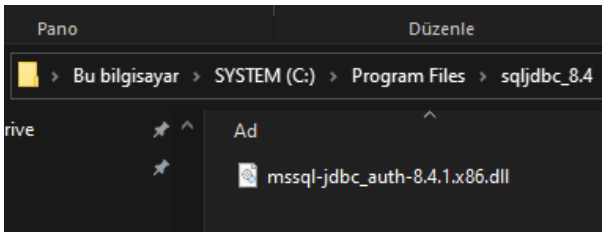
Copy authentication dll (mssql-jdbc_auth-8.4.1.x64.dll) to windows\system32 folder



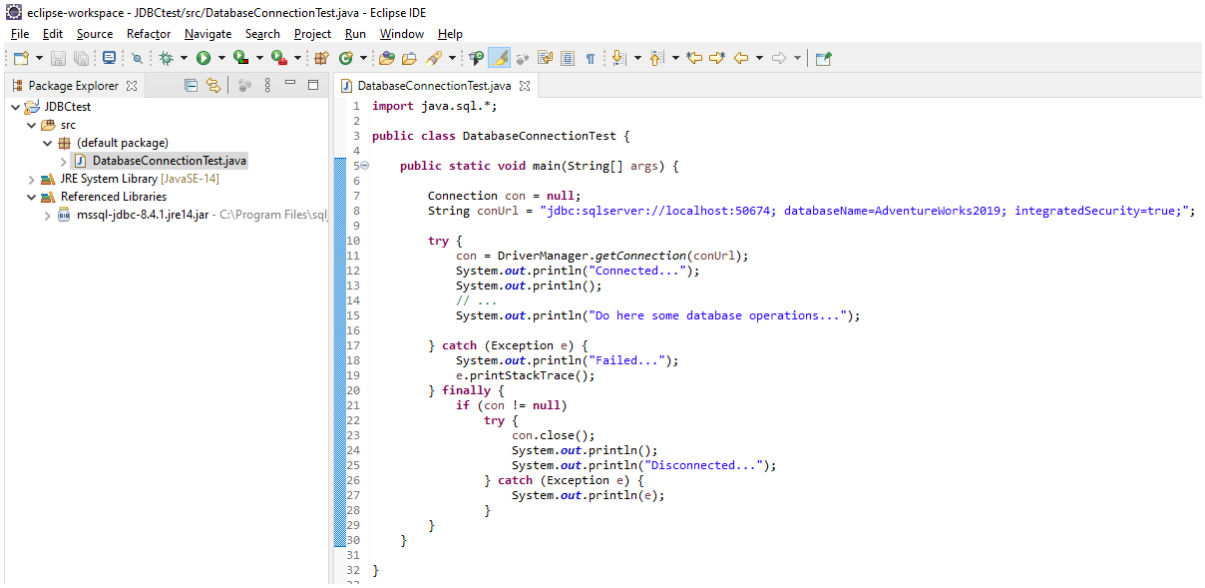
to



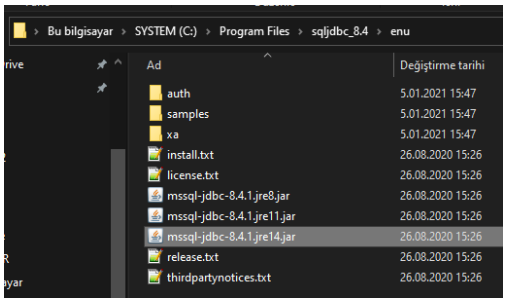
If Java is 32bits then copy below dll to windows\system32 folder



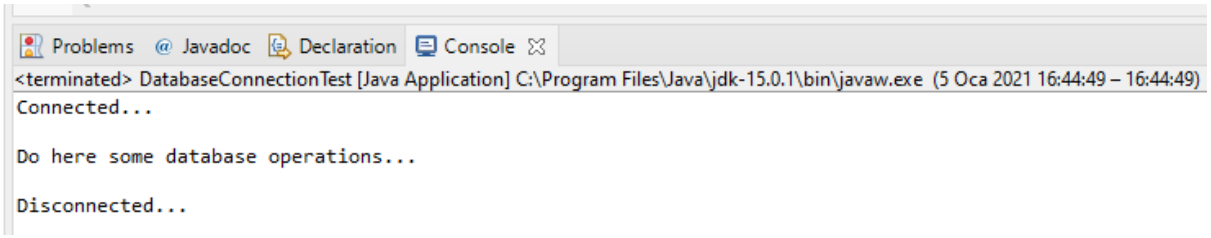
Create a Java console project:



Add the corresponding jar to Referenced Libraries (Java 8, 11, or 14):



Just run the console application:



Java Code:

```
import java.sql.*;

public class DatabaseConnectionTest {

	public static void main(String[] args) {

		Connection con = null;
		String conUrl = "jdbc:sqlserver://localhost:50674;
databaseName=AdventureWorks2019; integratedSecurity=true;";

		try {
			con = DriverManager.getConnection(conUrl);
			System.out.println("Connected...");
			System.out.println();
			// ...
			System.out.println("Do here some database operations...");

		} catch (Exception e) {
			System.out.println("Failed...");
			e.printStackTrace();
		} finally {
			if (con != null)
				try {
					con.close();
					System.out.println();
					System.out.println("Disconnected...");
				} catch (Exception e) {
					System.out.println(e);
				}
		}
	}

}
```

hello1

```
package deneme1;

import java.sql.*;

public class hello1 {

	public static void main(String[] args) {

		Connection con = null;
		String conUrl = "jdbc:sqlserver://DESKTOP-BMEEOG5\\MSSQLUSER1;
databaseName=AdventureWorks2019; integratedSecurity=true;";

		try {
			con = DriverManager.getConnection(conUrl);
			System.out.println("Connected...");
			System.out.println();


			// ...
			System.out.println("Do here some database operations...");


		} catch (Exception e) {
			System.out.println("Failed...");
			e.printStackTrace();
		} finally {
			if (con != null)
				try {
					con.close();
					System.out.println();
					System.out.println("Disconnected...");
				} catch (Exception e) {
					System.out.println(e);
				}
		}
	}

}
```

Hello2(select,insert,update,delete örnekleri(parametrized))

```
package deneme1;

import java.sql.*;
import java.util.Scanner;


public class hello2 {

	static Connection con;

	public static void main(String[] args) {

		Connection con=null;

		String conUrl = "jdbc:sqlserver://DESKTOP-BMEEOG5\\MSSQLUSER1;
databaseName=AdventureWorks2019; integratedSecurity=true;";

		try {
			con = DriverManager.getConnection(conUrl);
			System.out.println("Connected...");
			System.out.println();
		} catch (Exception e) {
			System.out.println("Failed...");
			e.printStackTrace();
		}

			System.out.println("------------------");
			Scanner scan= new Scanner(System.in,"iso-8859-9");
		  int secim;

			  while(true)
			  {
			      System.out.println("*************");
			      System.out.println("1.Listele");
			      System.out.println("2.Ekle");
			      System.out.println("3.Güncelle");
			      System.out.println("4.Sil");
			      System.out.println("5.Çıkış");
			      System.out.print("Seçiminiz:");
			      secim=scan.nextInt();

			      System.out.println("*************");

			      if(secim==1) Listele(con);
			      if(secim==2) Ekle(con);
			      if(secim==3) Guncelle(con);
			      if(secim==4) Sil(con);
			      if(secim==5) {
			       try{
			              con.close();
			          }catch(Exception e){ System.out.println(e);}

			          break;

			      }
			  }

}
```

```
       public static void Listele(Connection con)
    {
        try{
             String sqlQuery = " select * from ogrenci";
             PreparedStatement prepStmt = con.prepareStatement(sqlQuery);
             ResultSet rs=prepStmt.executeQuery();



            /*Statement stmt=con.createStatement();
            ResultSet rs=stmt.executeQuery("select * from ogrenci"); */
            while(rs.next())
            System.out.println(rs.getInt(1)+"  "+rs.getString(2)+"
"+rs.getString(3));
            prepStmt.close();

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

    }
       public static void Ekle(Connection con)
    {
        Scanner scan= new Scanner(System.in,"iso-8859-9");
        System.out.print("Yeni Öğrenci No     :");
        int yenino = scan.nextInt();
        System.out.print("Yeni Öğrenci Adı    :");
        String ad=scan.next();
        System.out.print("Yeni Öğrenci Soyadı :");
        String soyad=scan.next();
        try{
             String sqlQuery = " INSERT INTO ogrenci VALUES(?,?,?)";
             PreparedStatement prepStmt = con.prepareStatement(sqlQuery);
             prepStmt.setInt(1, yenino);
             prepStmt.setString(2, ad);
             prepStmt.setString(3, soyad);
             prepStmt.executeUpdate();
             prepStmt.close();

              /*Statement stmt=con.createStatement();
             String sorgu=String.format("insert into ogrenci values( %d,
'%s','%s')", yenino,ad,soyad);
             int ekleme = stmt.executeUpdate(sorgu);
             System.out.println("Kayıt Eklendi");*/

            System.out.println("Kayıt Eklendi");
        }catch(Exception e){ System.out.println(e);}

    }

    public static void Guncelle(Connection con)
    {
        Scanner scan= new Scanner(System.in,"iso-8859-9");
        try{
            Listele(con);
            System.out.print("Öğrenci Numarasını Girin:");
            int eskino=scan.nextInt();
            System.out.print("Yeni Öğrenci No     :");
            int yenino = scan.nextInt();
            System.out.print("Yeni Öğrenci Adı    :");
            String ad=scan.next();
```

```
            System.out.print("Yeni Öğrenci Soyadı :");
            String soyad=scan.next();

            String sqlQuery= ("UPDATE ogrenci SET ogrno = ?, ograd = ?, ogrsoyad
= ? WHERE ogrno = ?");

            PreparedStatement prepStmt = con.prepareStatement(sqlQuery);
             prepStmt.setInt(1, yenino);
             prepStmt.setString(2, ad);
             prepStmt.setString(3, soyad);
             prepStmt.setInt(4, eskino);
             prepStmt.executeUpdate();

            /*String sorgu=String.format("update ogrenci set ogrno=%d,
ograd='%s',ogrsoyad='%s' where ogrno=%d ", yenino,ad,soyad,eskino) ;

            Statement stmt=con.createStatement();
            int guncelleme = stmt.executeUpdate(sorgu); */
            System.out.println("Kayıtlar Güncellendi");
        }catch(Exception e){ System.out.println(e);}
    }

    public static void Sil(Connection con)
    {
        Scanner scan= new Scanner(System.in,"iso-8859-9");
        try{
            Listele(con);
            System.out.print("Öğrenci Numarasını Girin:");
            int eskino=scan.nextInt();

            String sqlQuery= ("delete from ogrenci where ogrno = ?");

            PreparedStatement prepStmt = con.prepareStatement(sqlQuery);
             prepStmt.setInt(1, eskino);
             prepStmt.executeUpdate();

            /*String sorgu=String.format("delete from ogrenci where
ogrno=%d",eskino);
            Statement stmt=con.createStatement();
            int silindi = stmt.executeUpdate(sorgu);  */
            System.out.println("Kayıtlar Silindi");

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

}
```

Hello3(Transaction-rollback örneği)

```
package deneme1;

import java.sql.*;
import java.util.Scanner;


public class hello3 {


		private static String INSERT = "INSERT INTO department
(idDepartment, name) VALUES (?, ?)";

		public static void insertRow(Connection conn, int idRow, String
contentRow)
				throws SQLException {
			PreparedStatement pstmt = null;
			pstmt = conn.prepareStatement(INSERT);
			pstmt.setInt(1, idRow);
			pstmt.setString(2, contentRow);
			pstmt.execute();
			pstmt.close();
		}

		/**
		 * @param args
		 */
		public static void main(String[] args) {
			Connection connection=null;

			String conUrl = "jdbc:sqlserver://DESKTOP-
BMEEOG5\\MSSQLUSER1; databaseName=AdventureWorks2019; integratedSecurity=true;";

			try {
				connection = DriverManager.getConnection(conUrl);
				System.out.println("Connected...");
				System.out.println();
			} catch (Exception e) {
				System.out.println("Failed...");
				e.printStackTrace();
			}
			try {
				// 2nd Step, Disable the auto commit
				connection.setAutoCommit(false);
				System.err.println("The autocommit was disabled!");
			} catch (SQLException e) {
				System.err.println("There was an error disabling
autocommit");
			}
			// Starts JDBC Transaction
			try {
				// 3rd Step, Execute the statements
				insertRow(connection, 1, "Malaga");
				insertRow(connection, 2, "Barcelona");
				// 4th Step, Complete a transaction, committing the
changes.
				connection.commit();
				System.err.println("The transaction was successfully
executed");
```

```
                    } catch (SQLException e) {
                          try {
                                // 5th and Final Step, We must rollback the
transaction if a
                                // SQLException occurs
                                connection.rollback();
                                System.err.println(e.getMessage());
                                System.err.println("Transaction rollback");
                          } catch (SQLException e1) {
                                System.err.println(e1.getMessage());
                                System.err.println("There was an error making a
rollback");
                          }
                    }
              }
}
```