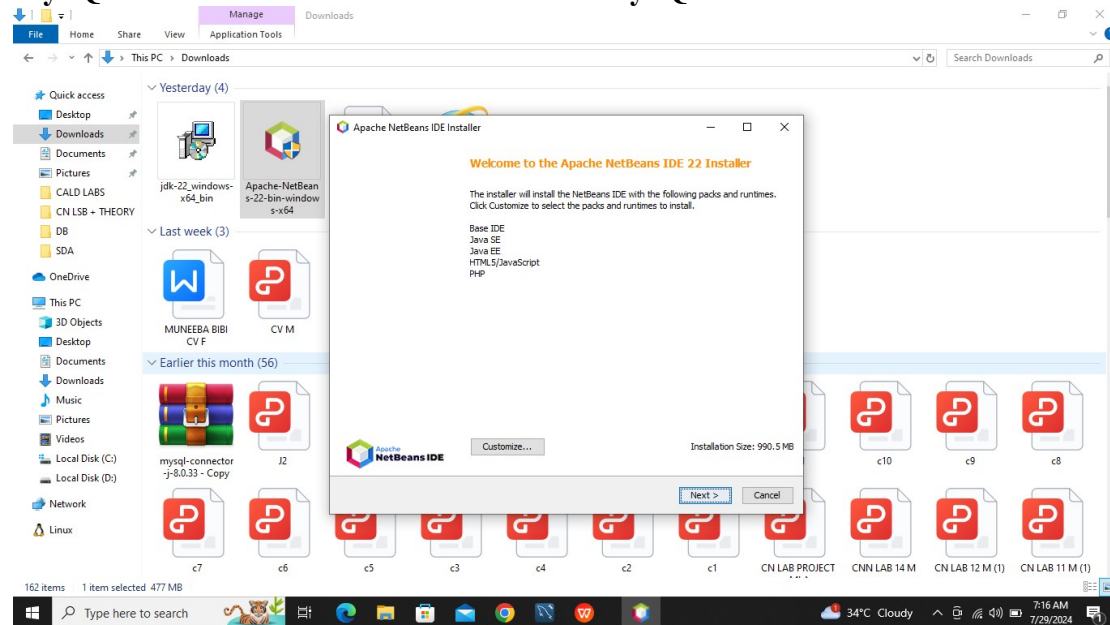


TASK 1

Implement a simple CRUD (Create, Read, Update, Delete) application using Java and MySQL database.

Solution

For This Task I have download first Apache NetBeans IDE 22 Installer, JDK 22, MySQL Workbench and JDBC Driver for MySQL.



License Agreement

Please read the following license agreement carefully.

APACHE NETBEANS IDE DEVELOPMENT VERSION ("Product")
LICENSE AGREEMENT

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< Back

Next >

Cancel

Apache NetBeans IDE 22 Installation

Choose the installation folder and JDK™.



Install the Apache NetBeans IDE to:

C:\Program Files\NetBeans-22

Browse...

JDK™ for the Apache NetBeans IDE:

C:\Program Files\Java\jdk-22

Browse...

< Back

Next >

Cancel

Summary

Click Install to start the installation.



Base IDE Installation Folder:

C:\Program Files\NetBeans-22

☒ Check for Updates

The NetBeans installer can automatically check for updates of installed plugins using your Internet connection.

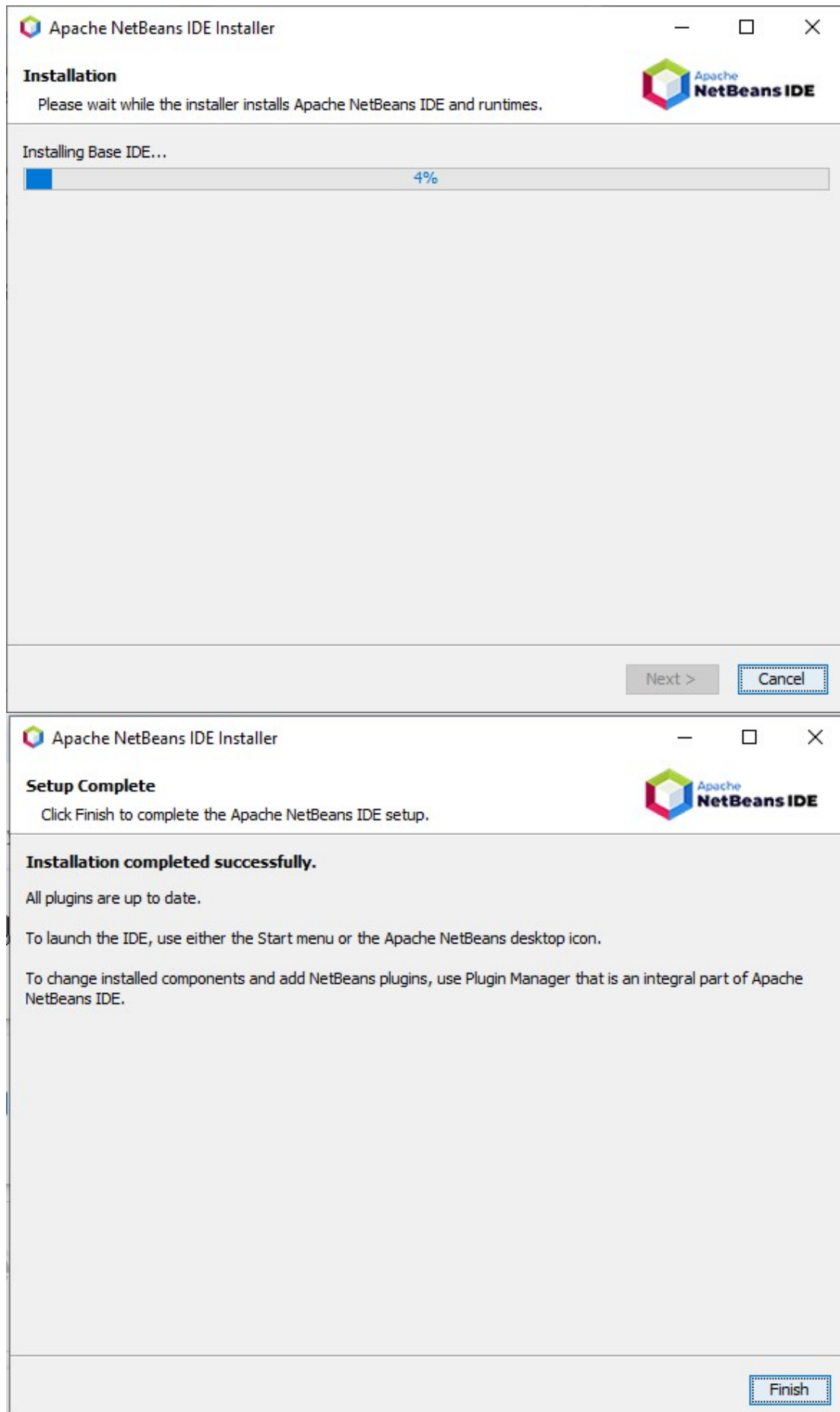
Total Installation Size:

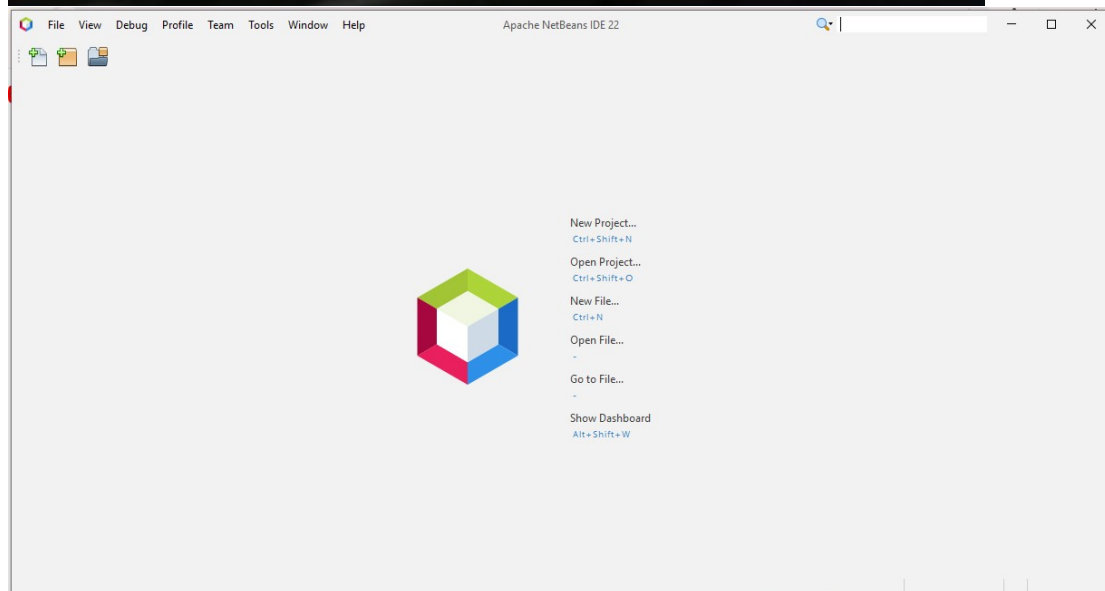
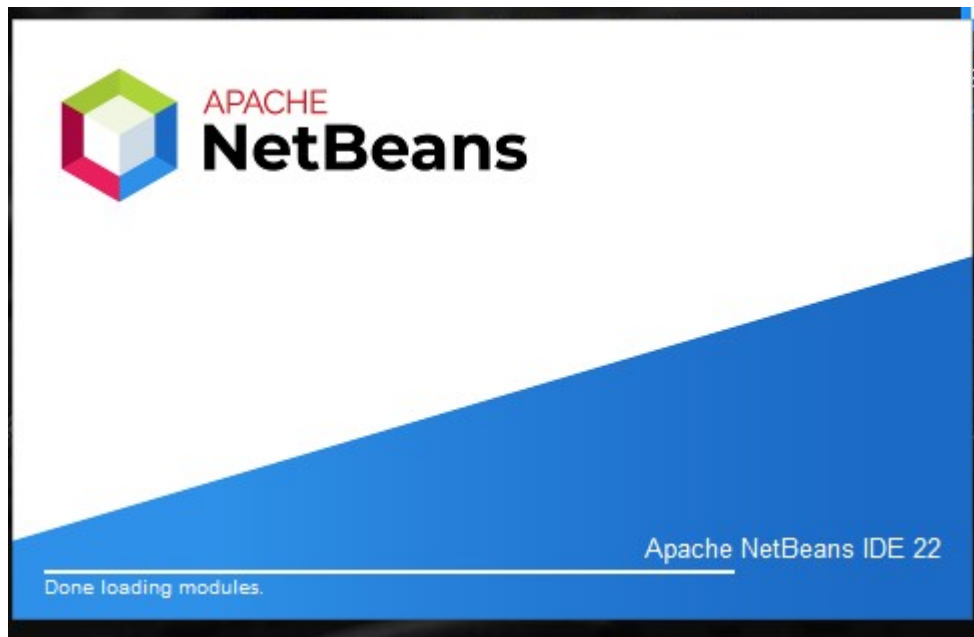
990.5 MB

< Back

Install

Cancel





New project

New Project

Steps

1. Choose Project

2. ...

Choose Project

Filter:

Categories:

Java with Maven

Java with Gradle

Java with Ant

HTML5/JavaScript

C/C++

PHP

Samples

Projects:

Java Application

Web Application

EJB Module

Enterprise Application

Enterprise Application Client

OSGi Bundle

Micronaut Project

NetBeans Module

NetBeans Application

Payara Micro Application

FXML JavaFX Maven Archetype

Simple JavaFX Maven Archetype

Description:

This feature is not yet enabled. Press Next to activate it.

A simple Java SE application using Maven. You are recommended to begin here, if you are new to Java!

< Back

Next >

Finish

Cancel

Help

New Java Application

Steps

1. Choose Project

2. Name and Location

Name and Location

Project Name:

JavaProgramming

Project Location:

C:\Users\The Laptop Hut\Documents\NetBeansProjects

Browse...

Project Folder:

aptop Hut\Documents\NetBeansProjects\JavaProgramming

Artifact Id:

JavaProgramming

Group Id:

com.mycompany

Version:

1.0-SNAPSHOT

Package:

com.mycompany.javaprograming

(Optional)

< Back

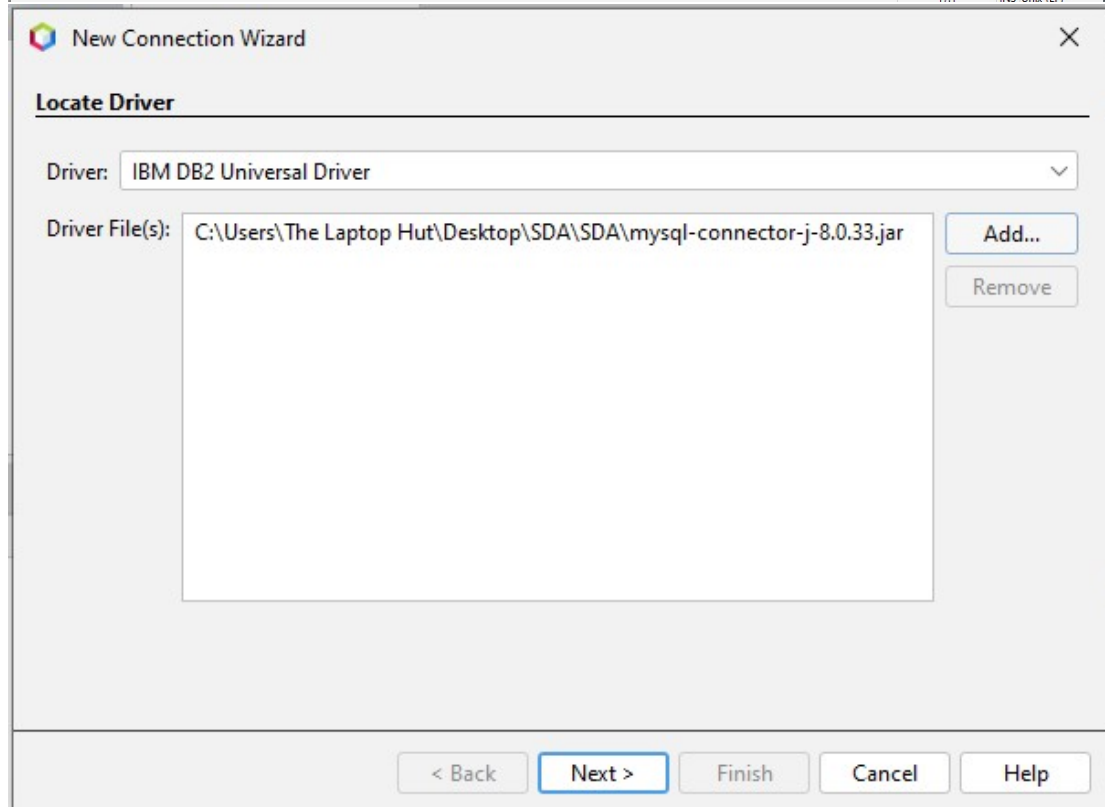
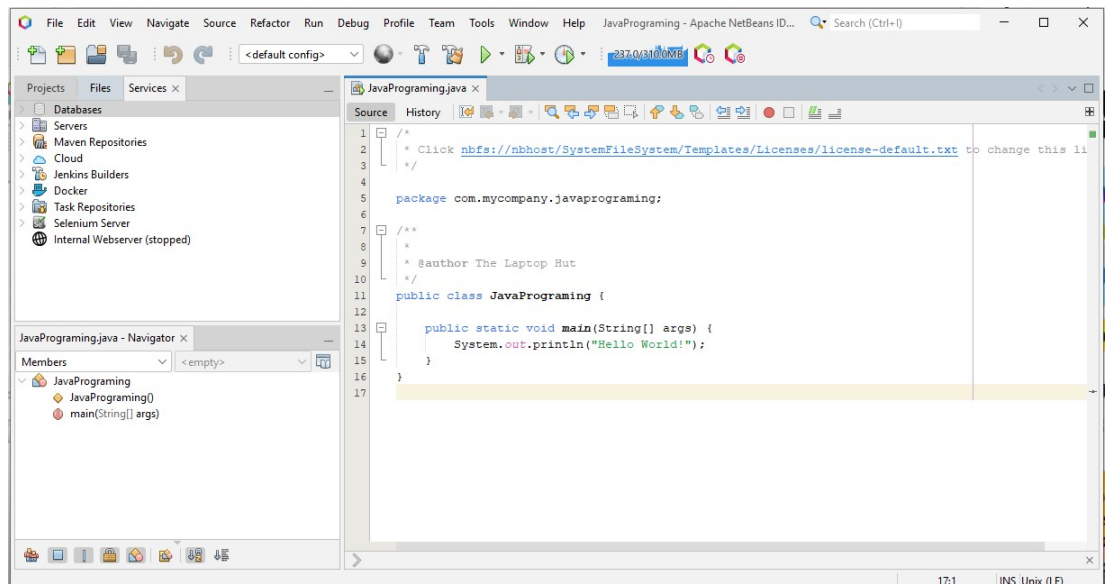
Next >

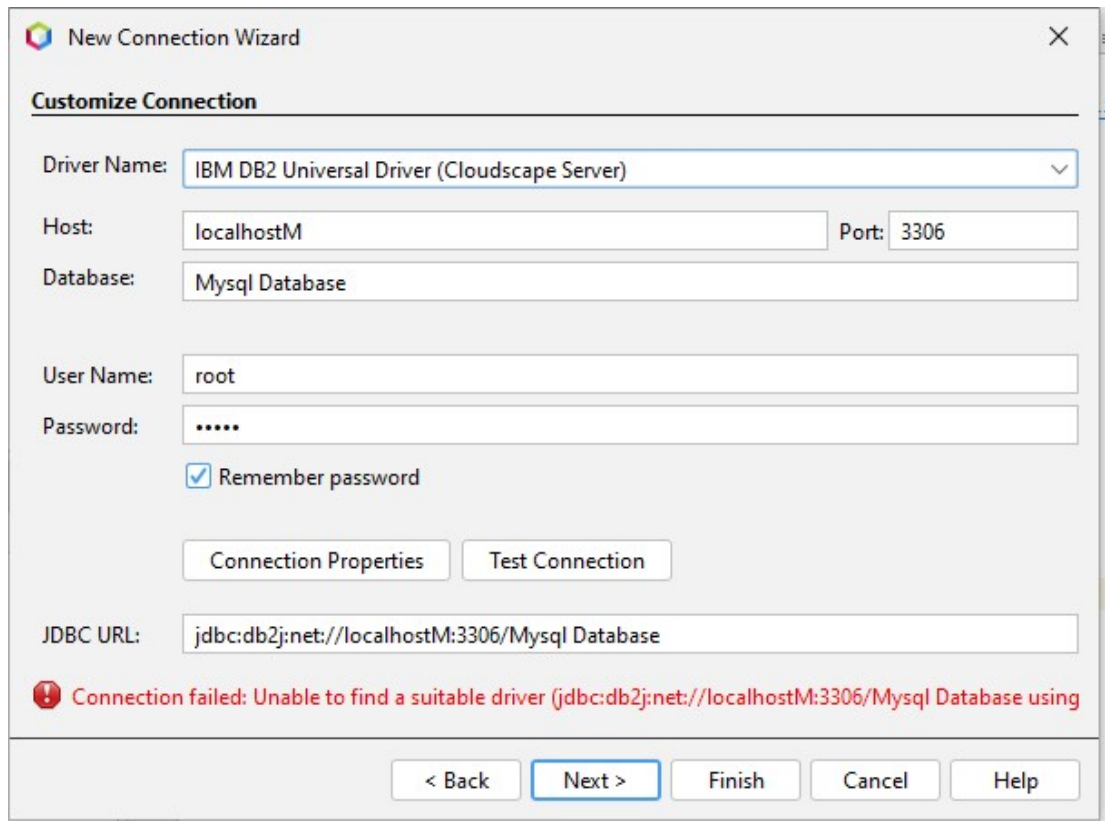
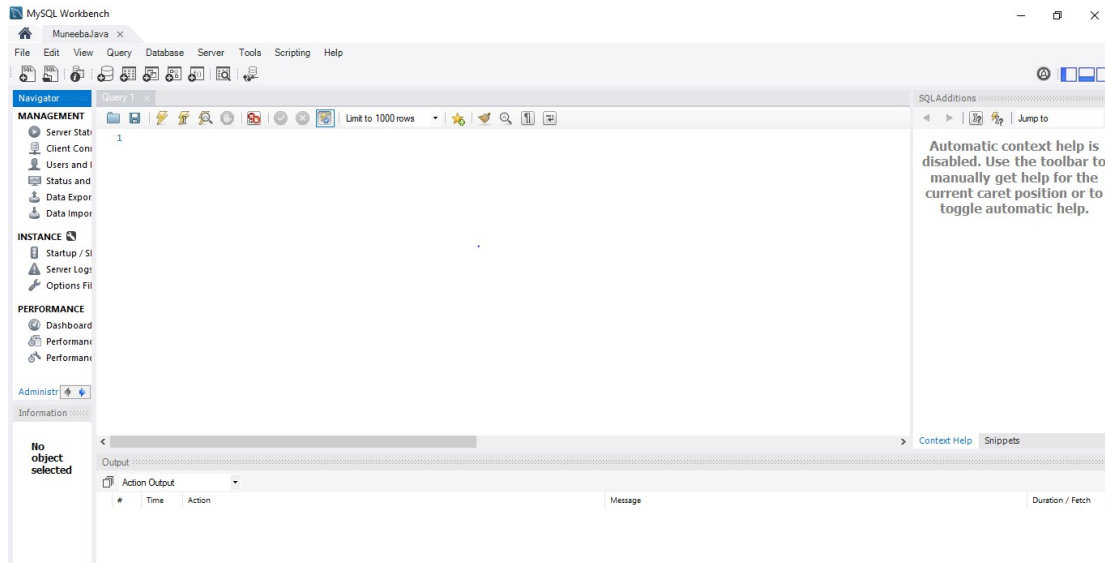
Finish

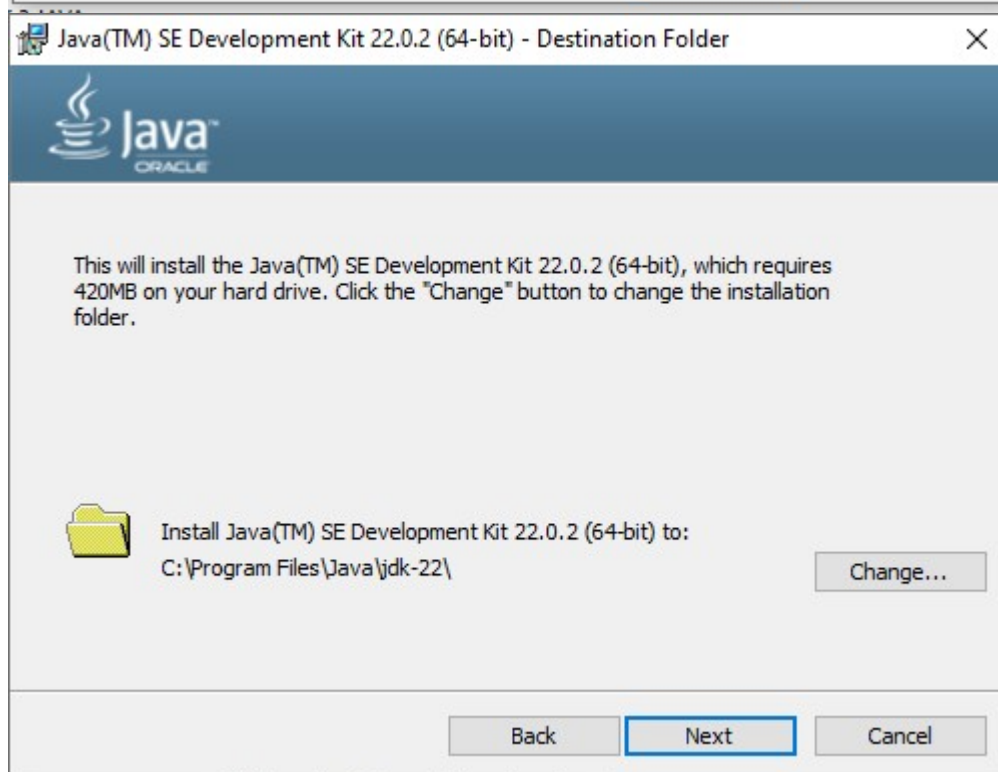
Cancel

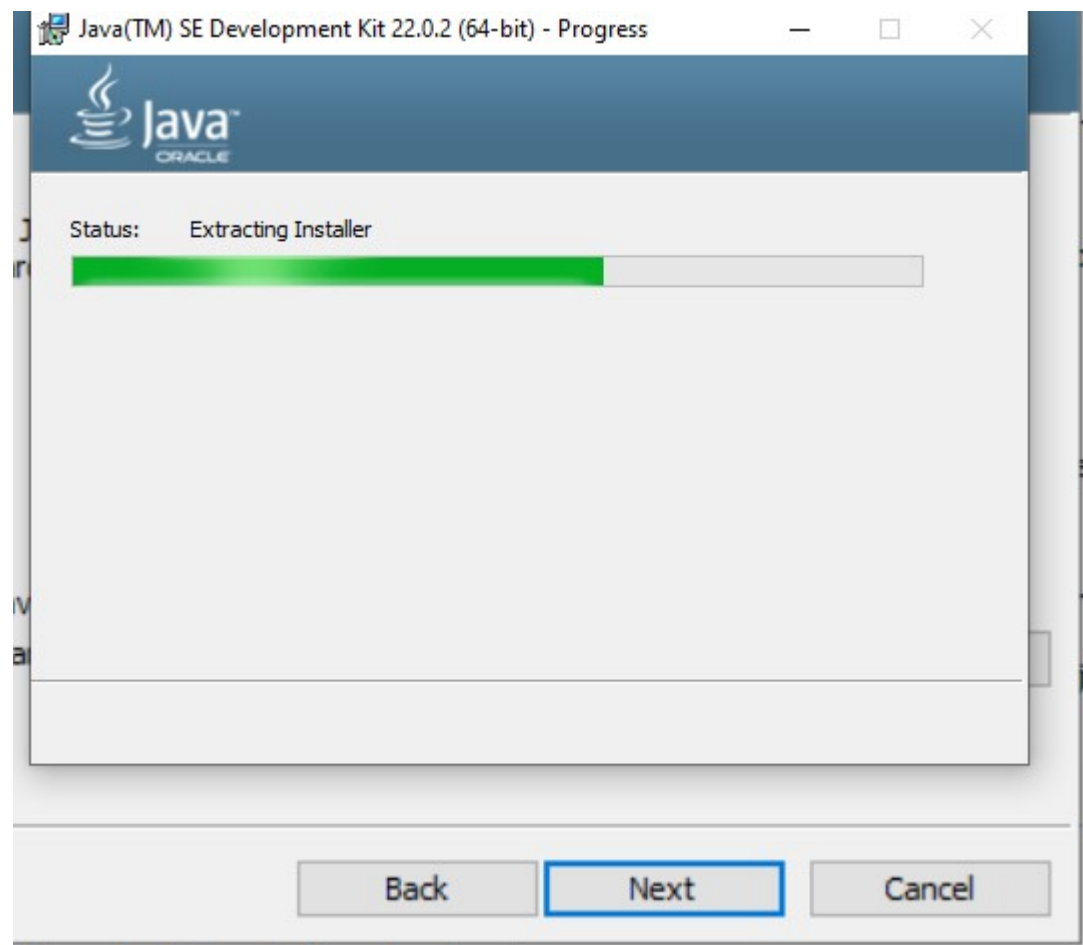
Help

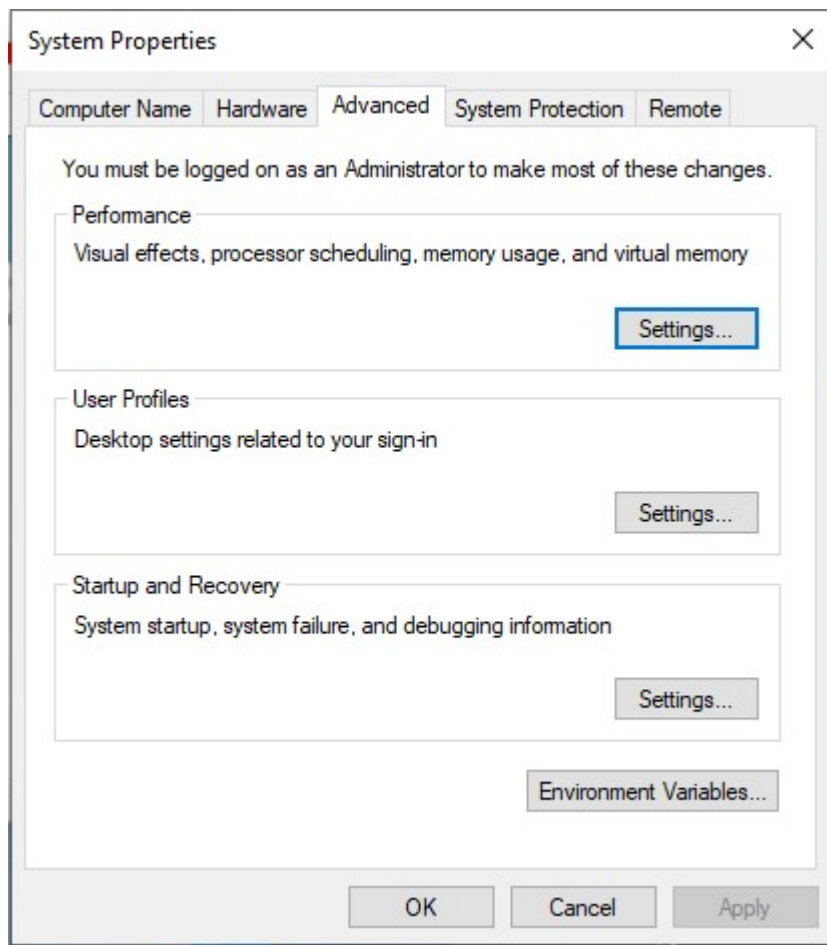
Connection

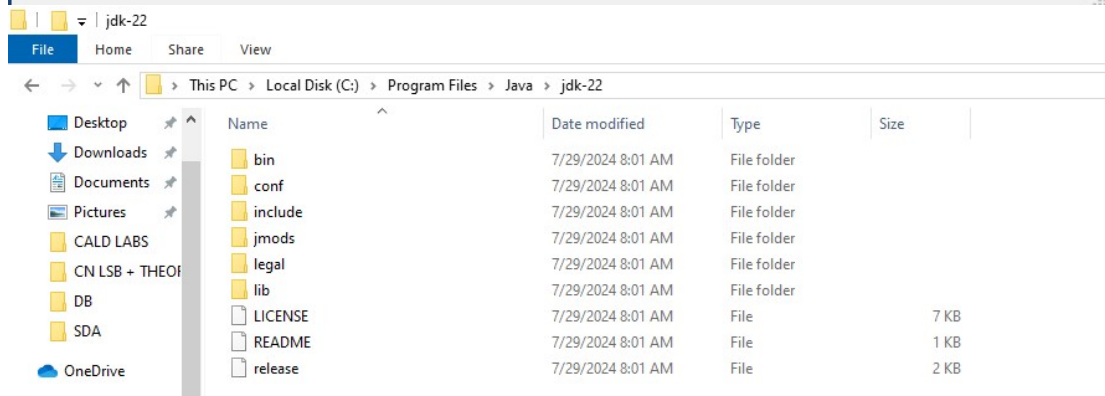
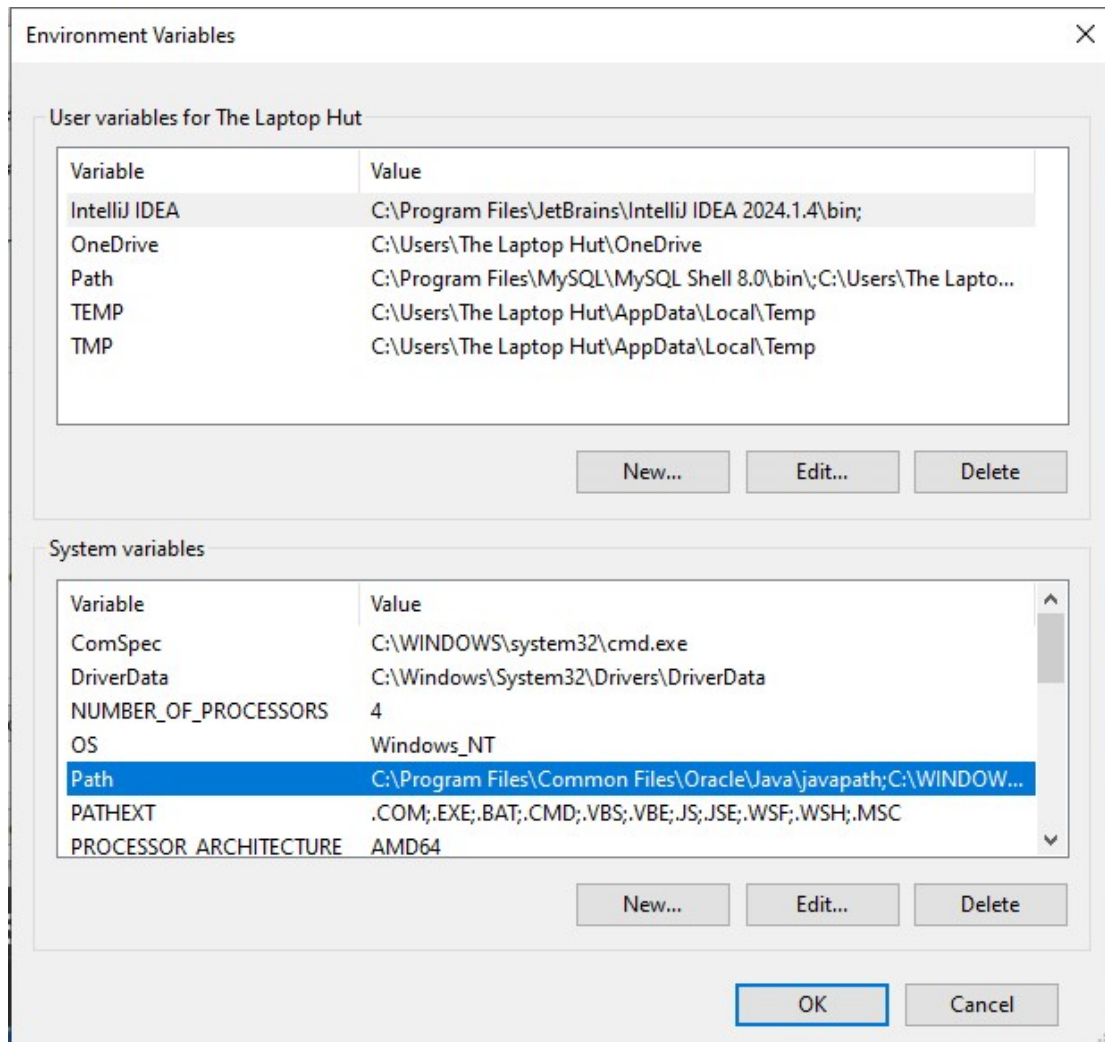


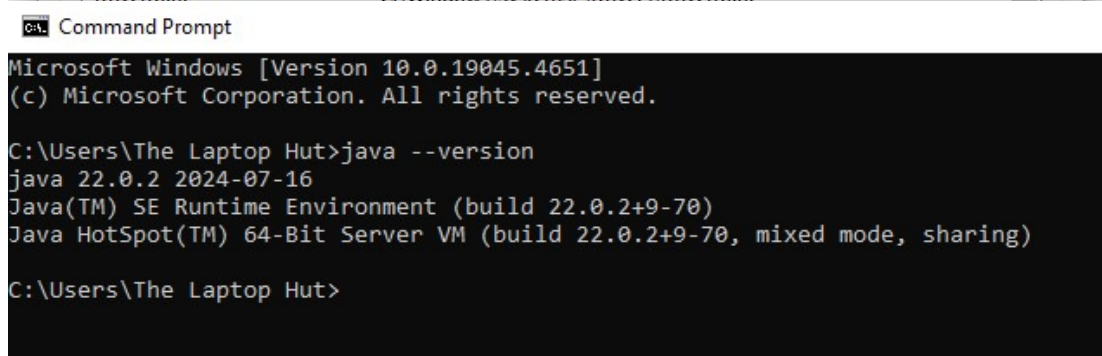
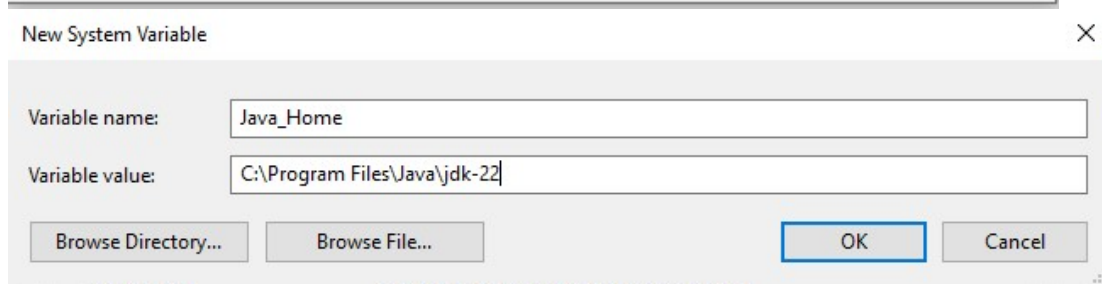
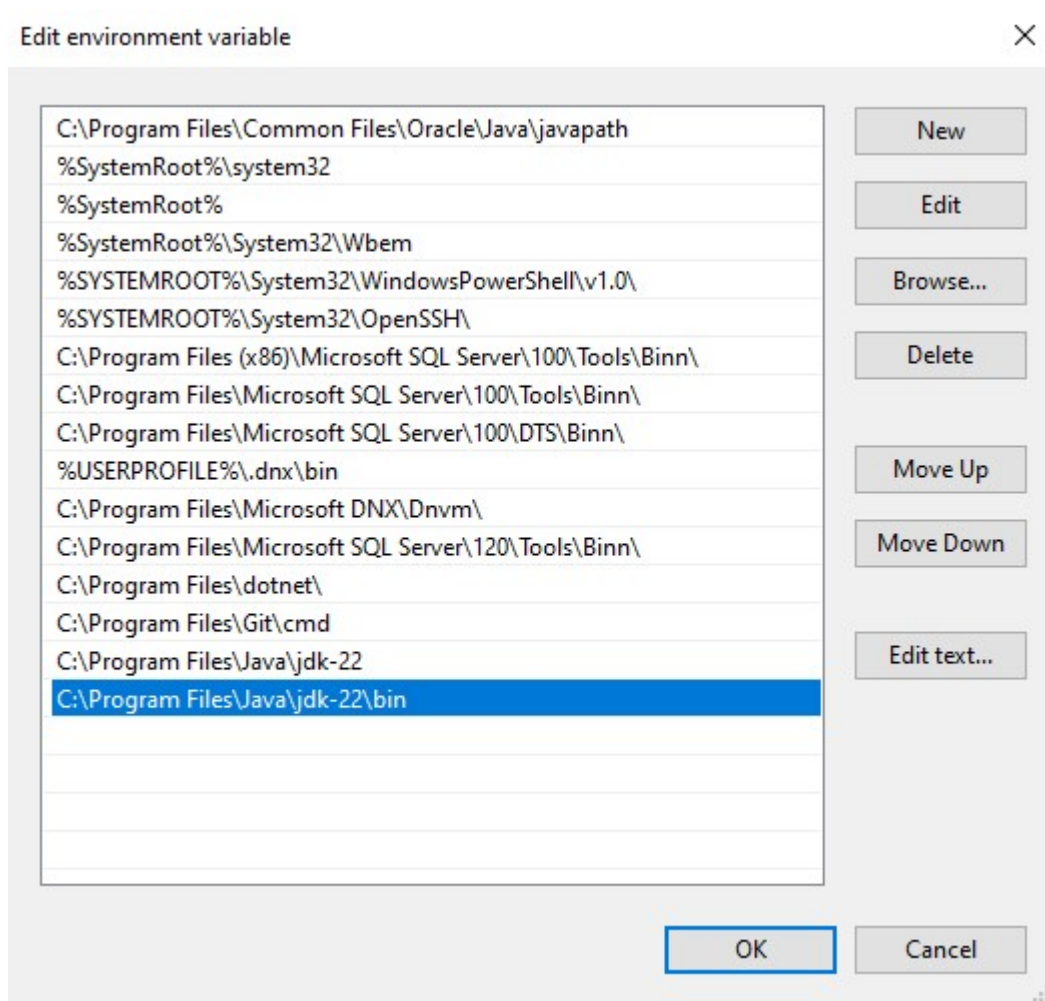


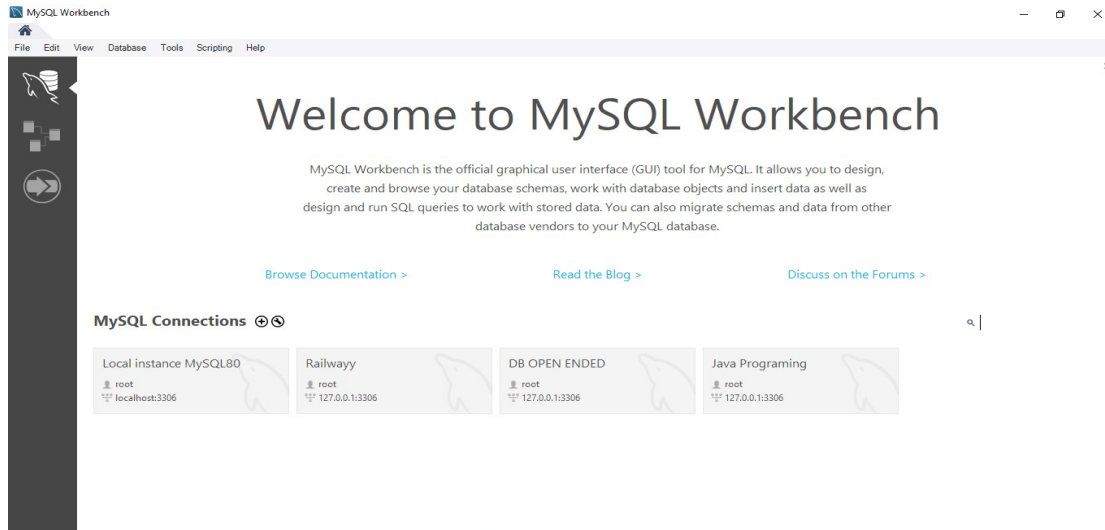












MySQL Product Archives

MySQL Connector/J (Archived Versions)

Please note that these are old versions. New releases will have recent bug fixes and features!
To download the latest release of MySQL Connector/J, please visit [MySQL Downloads](#).

Product Version:
Operating System:

Windows (x86, 32-bit), MSI Installer

Apr 17, 2013

6.0M

[Download](#)

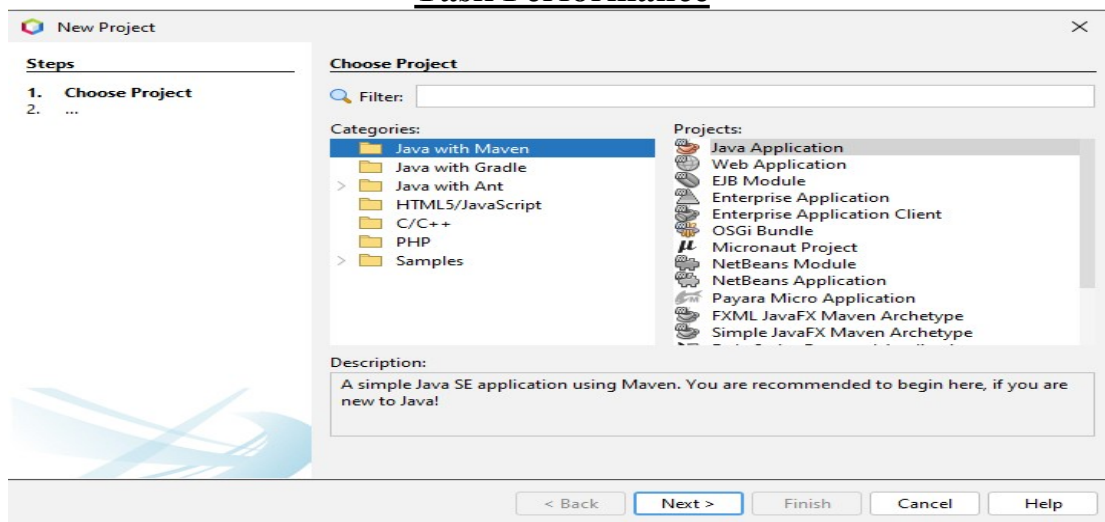
(mysql-connector-java-gpl-5.1.25.msi)

MD5: a2b8abe3779757647c70b737f67d9433 | [Signature](#)

We suggest that you use the MD5 checksums and GnuPG signatures to verify the integrity of the packages you download.

MySQL open source software is provided under the [GPL License](#).

Task Performance



New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name:

Project Location:

Project Folder:

Artifact Id:

Group Id:

Version:

Package: (Optional)


< Back Next > **Finish** Cancel Help

New Connection Wizard

Locate Driver

Driver:

Driver File(s):

 Selected mysql-connector-j-8.0.33.jar might cause unexpected problems. Use preferred mysql-connector-

< Back **Next >** Finish Cancel Help

New Connection Wizard

×

Customize Connection

Driver Name:

MySQL (Connector/J driver)

▼

Host:

localhost

Port:

3306

Database:

mysql

User Name:

root

Password:

...

☒ Remember password

Connection Properties

Test Connection

JDBC URL:

jdbc:mysql://localhost:3306/mysql

< Back

Next >

Finish

Cancel

Help

New Connection Wizard

×

Choose name for connection

Override the default name for the connection. The name should be descriptive about the connection you are creating.

Input connection name:

jdbc:mysql://localhost:3306/myshop?zeroDateTimeBehavior=CONVERT_TO_NULL [root on Default schema]

New Connection Wizard

Choose name for connection

Override the default name for the connection. The name should be descriptive about the connection you are creating.

Input connection name:

myshop on mysql

Create Table

Table name: products

Key	Index	Null	Unique	Column name	Data type	Size
-----	-------	------	--------	-------------	-----------	------

Add column

Edit

Remove

Move Up

Move Down

Add columns to the list.

OK Cancel Help

Add Column

Name:

Type:

Size: Scale:

Default:

Constraints

☒ Primary key ☒ Unique ☐ Null ☒ Index

☐ Check:

Add Column

Name:

Type:

Size: Scale:

Default:

Constraints

☐ Primary key ☒ Unique ☐ Null ☒ Index

☐ Check:

Add Column

Name:

Type:

Size: Scale:

Default:

Constraints

☐ Primary key ☐ Unique ☒ Null ☐ Index

☐ Check:

Create Table

Table name:

Key	Index	Null	Unique	Column name	Data type	Size
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	id	INT	0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	name	VARCHAR	255
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	description	VARCHAR	255

Apache NetBeans IDE 12.5

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+I)

Projects: Databases, MySQL Server at localhost:3306 [root] (c), Juva DB, Drivers, myshop on mysql, myshop, Tables, clients, customers, products, My shop

ConsoleClass.java x SQL 1 [myshop on mysql] x

Connection: myshop on mysql

```
1 ALTER TABLE products MODIFY COLUMN id INT auto_increment;
```

SELECT * FROM products LIMIT 100

Max. rows: 100 | Fetched Rows: 0 | Matching Rows:

#	id	name	description
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
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100			

Navigators: Members, ConsoleClass, ConsoleClass(), main(String[] args), printMax(int[] table), readValues(int[] table), name: String

Insert Record(s)

Press CTRL+Tab to exit data entry mode from the table. Press CTRL+0 to set NULL value and CTRL+1 to set DEFAULT value for a given column.

#	id	name	description
1	<GENERATED>	pen	high quality products!

SELECT * FROM products LI... X

Max. rows: 100 | Fetched Rows: 1 | Matching Rows:

#	id	name	description
1	1	pen	high quality products

Connection: myshop on mysql

```

1  INSERT INTO products (name, description)
2  VALUES ('white papers', 'A4 format');
3

```

Connection: myshop on mysql

```

1  SELECT * FROM products LIMIT 100;
2

```

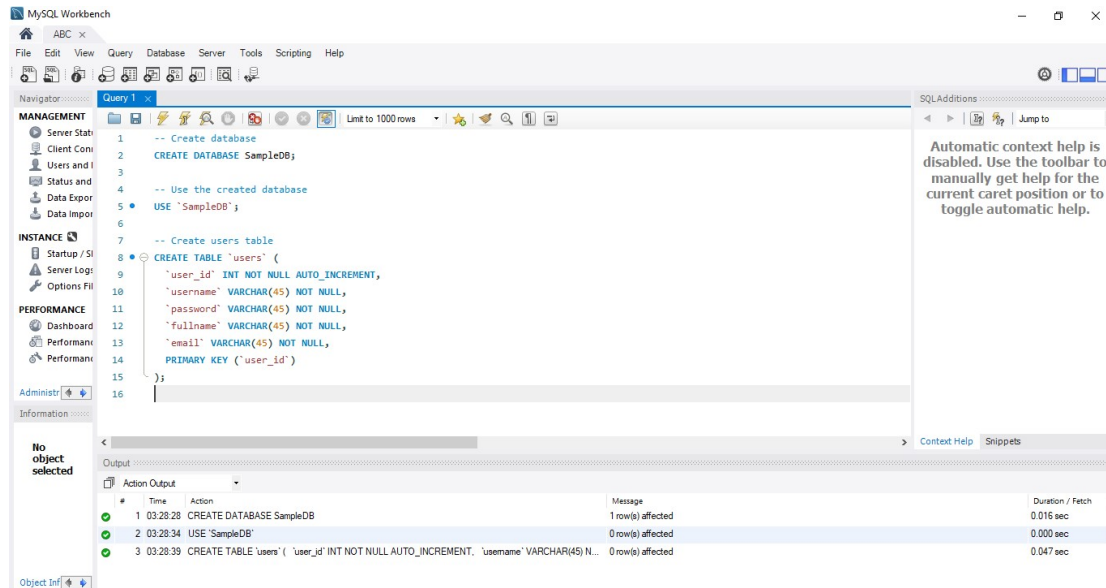
SELECT * FROM products LI... X

Max. rows: 100 | Fetched Rows: 2 |

#	id	name	description
1	1	pen	purchase date 08-07-2021
2	2	white papers	A4 format

Example

1. Creating a sample MySQL database



3. Connecting to the database

String dbURL = "jdbc:mysql://localhost:3306/sampledb";

String username = "root";

String password = "secret";

try {

 Connection conn = DriverManager.getConnection(dbURL, username, password);

 if (conn != null) {
 System.out.println("Connected");
 }

} catch (SQLException ex) {
 ex.printStackTrace();
}

JDBC Execute INSERT Statement Example

String sql = "INSERT INTO Users (username, password, fullname, email) VALUES (?, ?, ?, ?)";

PreparedStatement statement = conn.prepareStatement(sql);

statement.setString(1, "bill");

statement.setString(2, "secretpass");

statement.setString(3, "Bill Gates");

statement.setString(4, "bill.gates@microsoft.com");

int rowsInserted = statement.executeUpdate();

if (rowsInserted > 0) {
 System.out.println("A new user was inserted successfully!");
}

JDBC Execute SELECT Statement Example

```
String sql = "SELECT * FROM Users";

Statement statement = conn.createStatement();
ResultSet result = statement.executeQuery(sql);

int count = 0;

while (result.next()) {
    String name = result.getString(2);
    String pass = result.getString(3);
    String fullname = result.getString("fullname");
    String email = result.getString("email");

    String output = "User #%d: %s - %s - %s - %s";
    System.out.println(String.format(output, ++count, name, pass, fullname, email));
}
```

JDBC Executing UPDATE Statement Example

```
String sql = "UPDATE Users SET password=?, fullname=?, email=? WHERE username=?";

PreparedStatement statement = conn.prepareStatement(sql);
statement.setString(1, "123456789");
statement.setString(2, "William Henry Bill Gates");
statement.setString(3, "bill.gates@microsoft.com");
statement.setString(4, "bill");

int rowsUpdated = statement.executeUpdate();
if (rowsUpdated > 0) {
    System.out.println("An existing user was updated successfully!");
}
```

JDBC Execute DELETE Statement Example

```
String sql = "DELETE FROM Users WHERE username=?";

PreparedStatement statement = conn.prepareStatement(sql);
statement.setString(1, "bill");

int rowsDeleted = statement.executeUpdate();
if (rowsDeleted > 0) {
    System.out.println("A user was deleted successfully!");
}
```