

CE103 Algorithms and Programming I

Java GUI Programming

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Contents

| | | |
|-------|---|----|
| 0.1 | CE103 Algorithms and Programming I | 1 |
| 0.2 | Week-15 | 1 |
| 0.3 | Java GUI Programming | 1 |
| 0.4 | JavaFX GUI Programming | 1 |
| 0.4.1 | 1-Install Gluon Scene Builder | 1 |
| 0.4.2 | 2-Install Apache Netbeans | 3 |
| 0.4.3 | 3- Configure JavaFX Scene Builder for Apache Netbeans | 8 |
| 0.4.4 | 4-Create First Application | 11 |
| 0.5 | Java Swing GUI Programming | 16 |
| 0.5.1 | References | 24 |

List of Figures

List of Tables

0.1 CE103 Algorithms and Programming I

0.2 Week-15

0.2.0.1 Fall Semester, 2021-2022 Download DOC¹, SLIDE², PPTX³

0.3 Java GUI Programming

0.4 JavaFX GUI Programming

0.4.1 1-Install Gluon Scene Builder

Download and Install Gluon Scene Builder from URL

Scene Builder - Gluon⁴

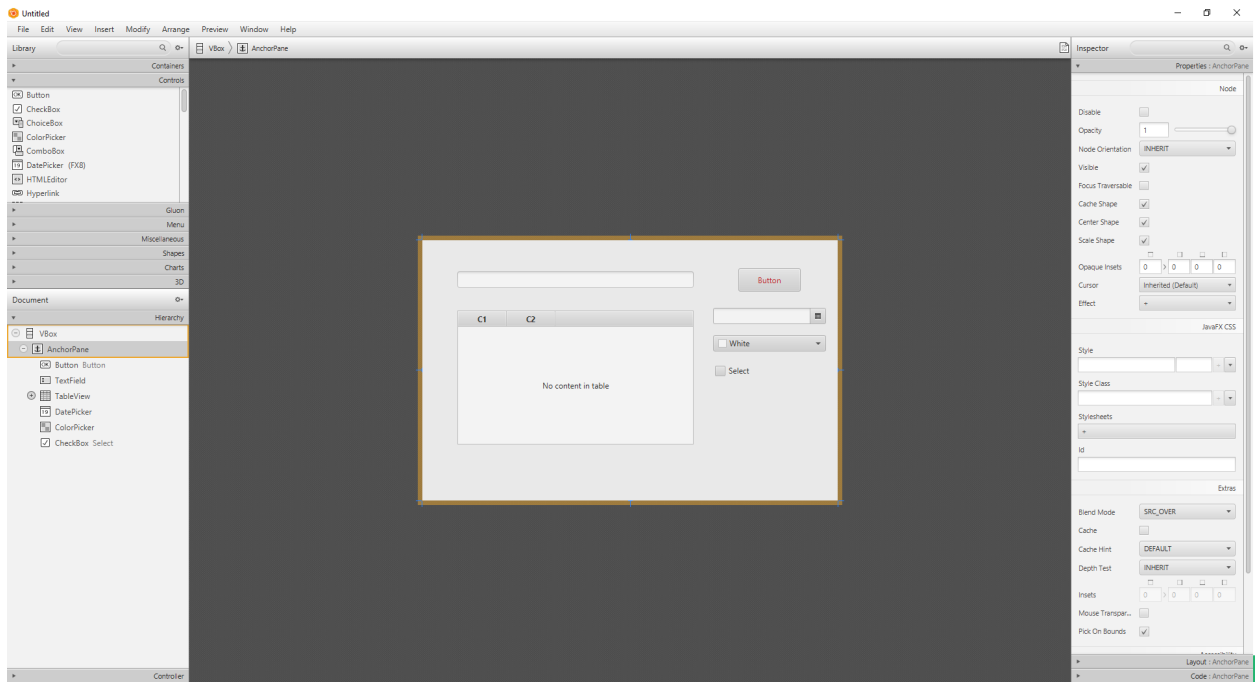
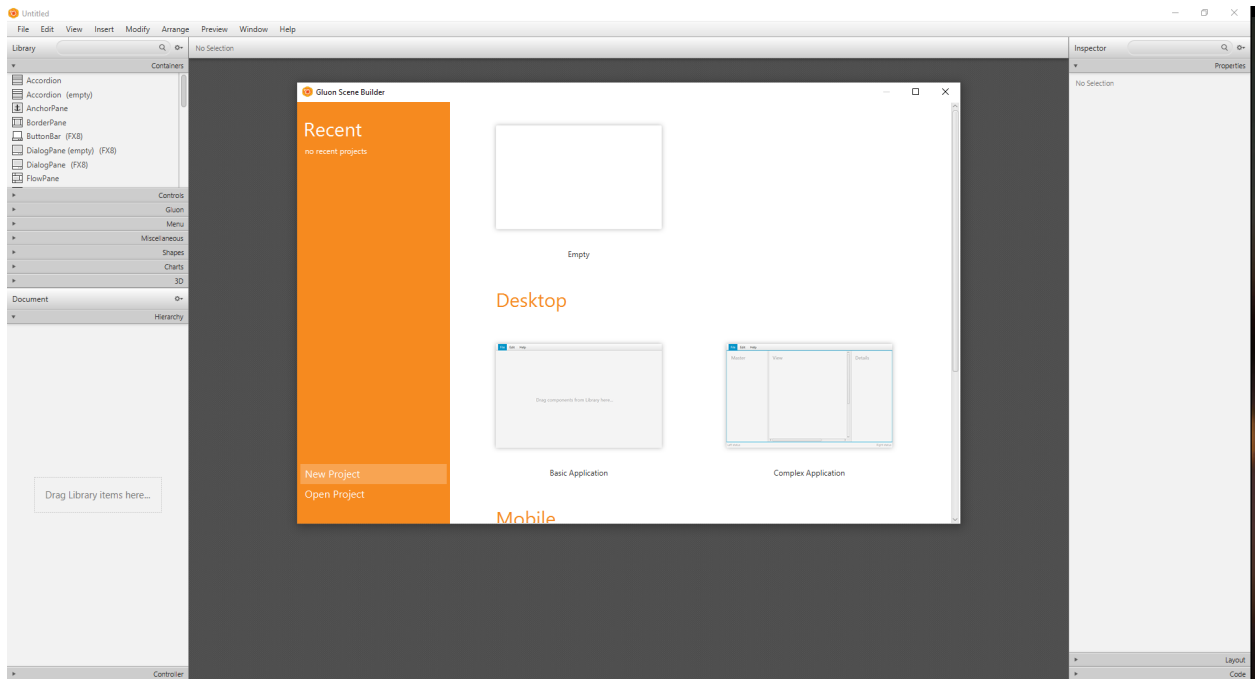
We will use gluon scene builder as an external designer for NetBeans, Eclipse, and IntelliJ idea tools.

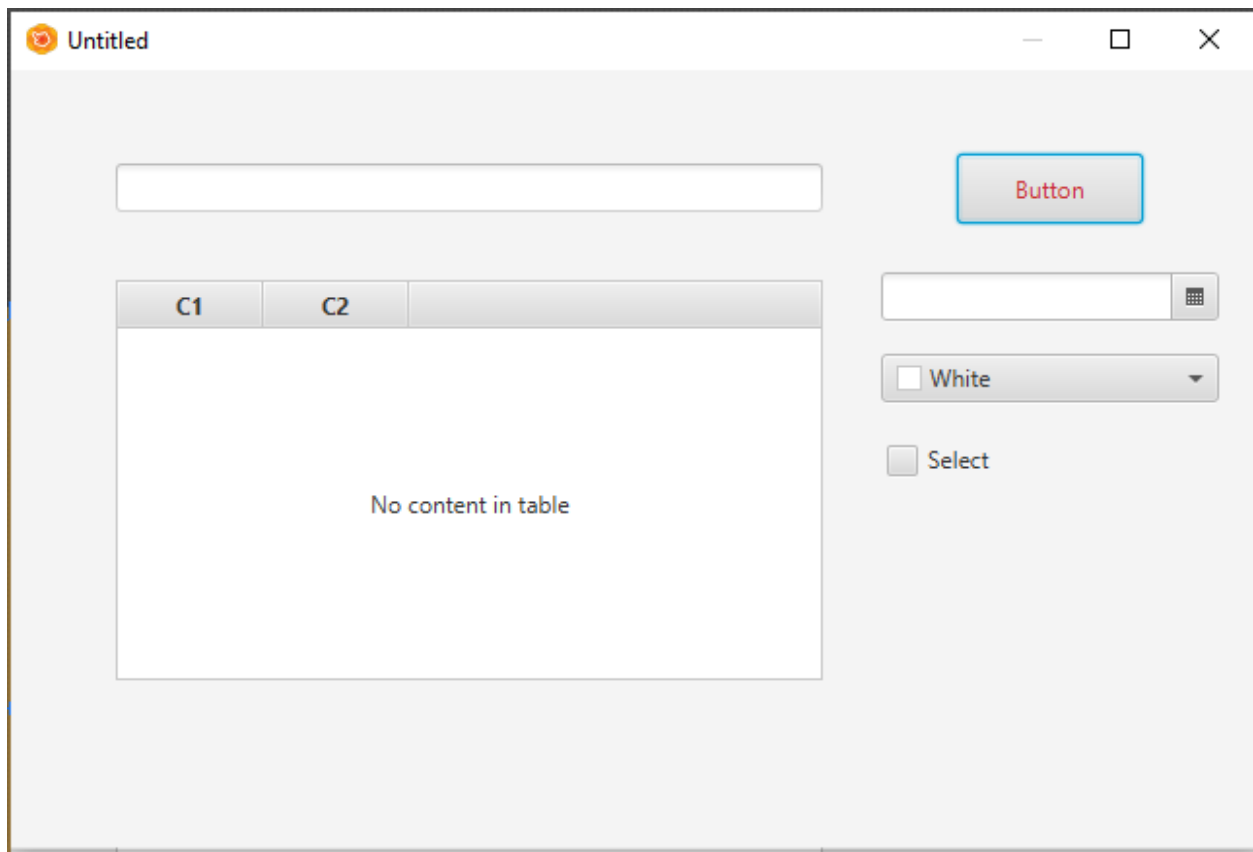
¹ce103-week-15-java-gui.md_doc.pdf

²ce103-week-15-java-gui.md_slide.pdf

³ce103-week-15-java-gui.md_slide.pptx

⁴<https://gluonhq.com/products/scene-builder/>





you can save this design as an FXML file from File->Save As

0.4.2 2-Install Apache Netbeans

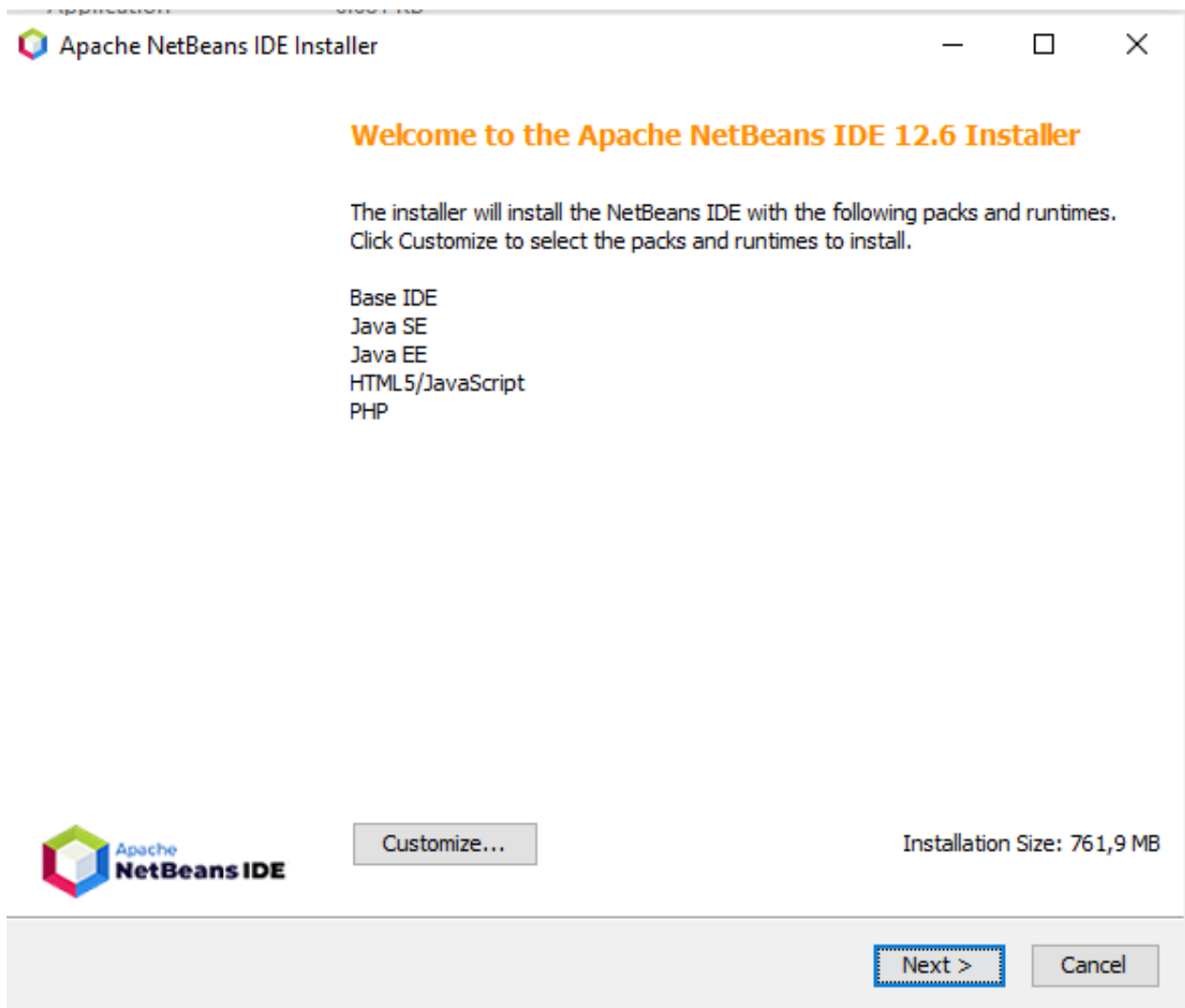
Download and install apache Netbeans

<https://netbeans.apache.org/>



Reading module storage...

Apache NetBeans IDE 12.6



Apache NetBeans IDE 12.6 Installation

Choose the installation folder and JDK™.



Install the Apache NetBeans IDE to:

C:\Program Files\NetBeans-12.6

Browse...

JDK™ for the Apache NetBeans IDE:

C:\Program Files\Java\jdk-16.0.1

Browse...

< Back

Next >

Cancel



Summary

Click Install to start the installation.



Base IDE Installation Folder:

C:\Program Files\NetBeans-12.6

☒ Check for Updates

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

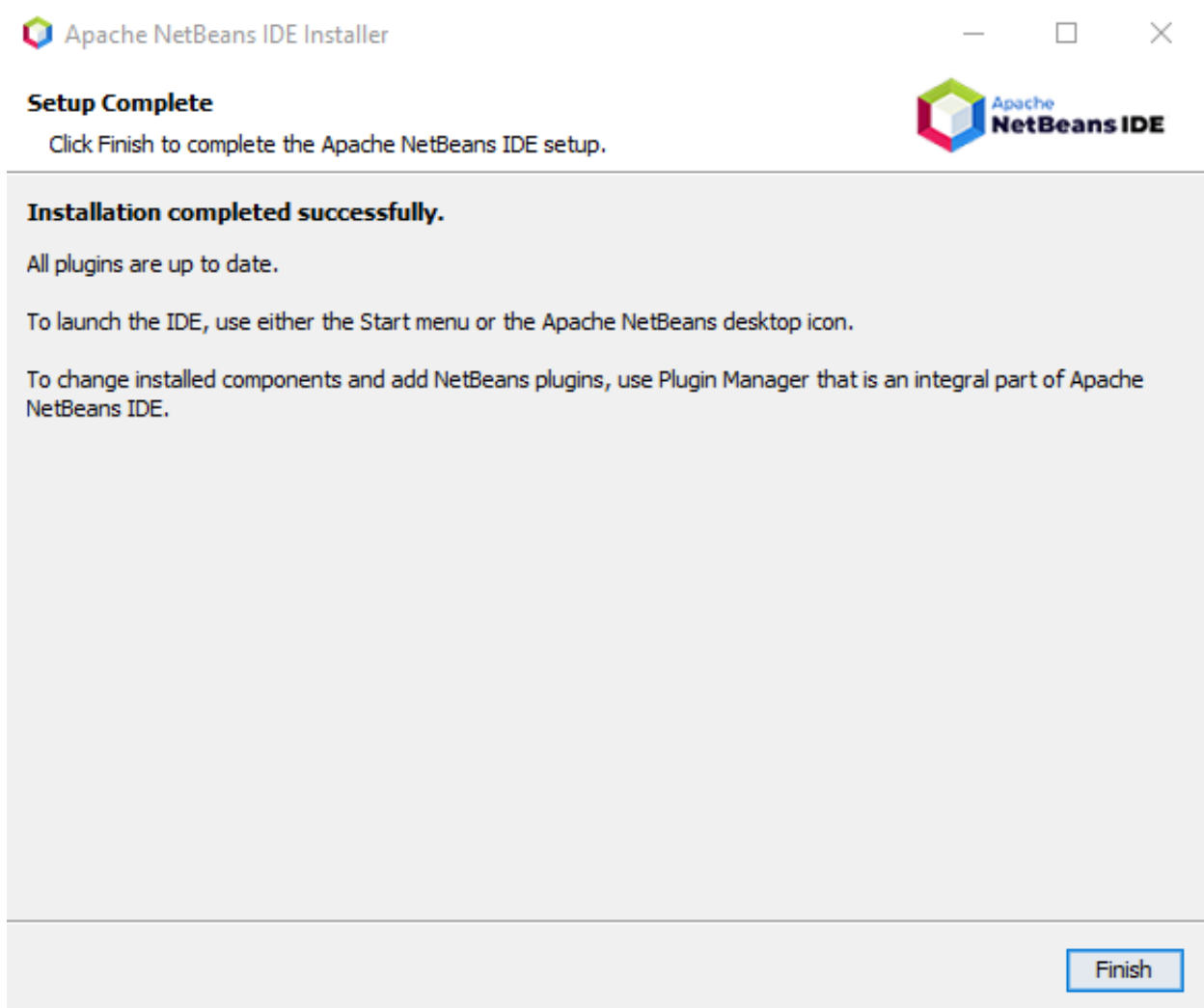
Total Installation Size:

761,9 MB

< Back

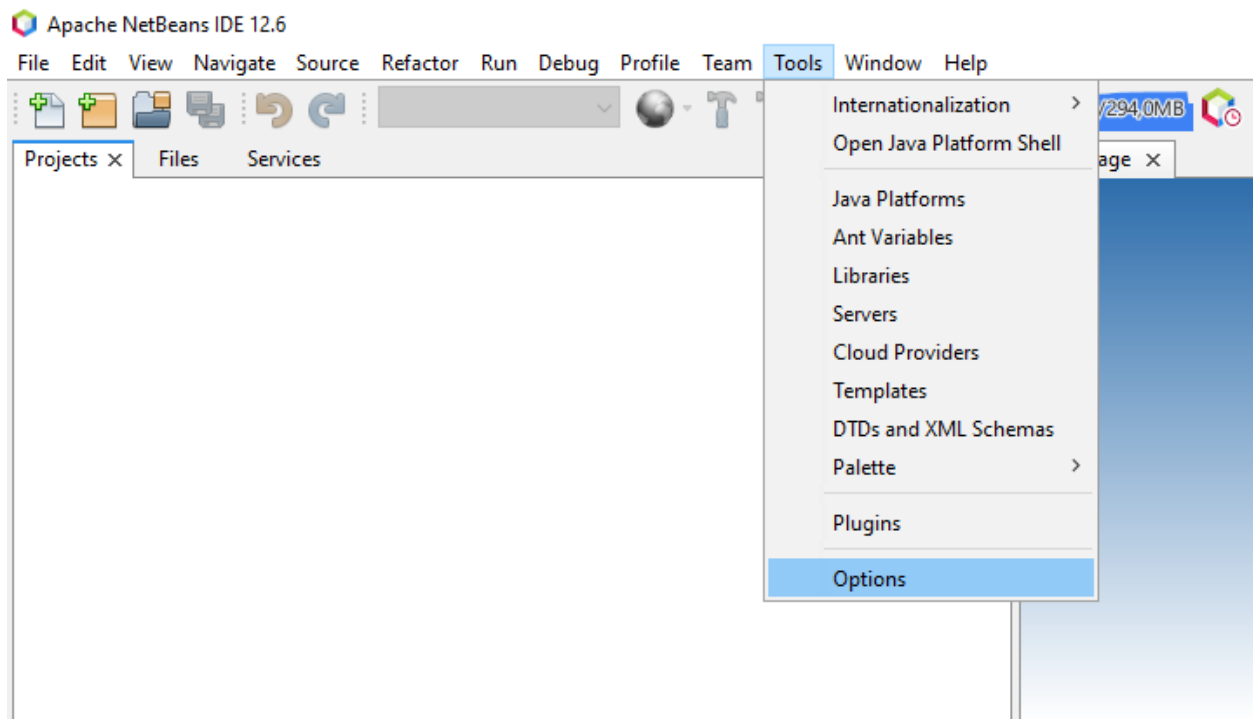
Install

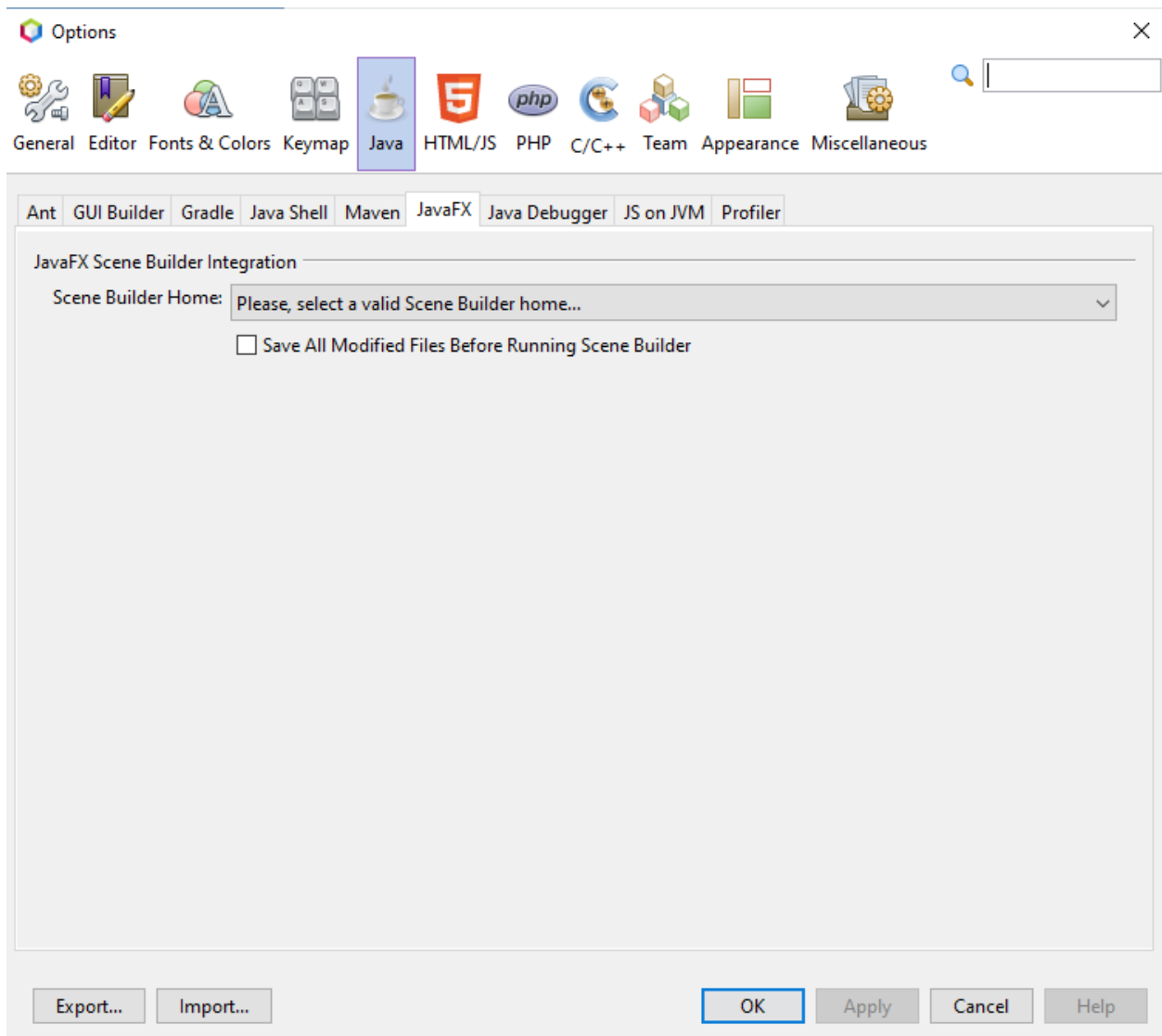
Cancel



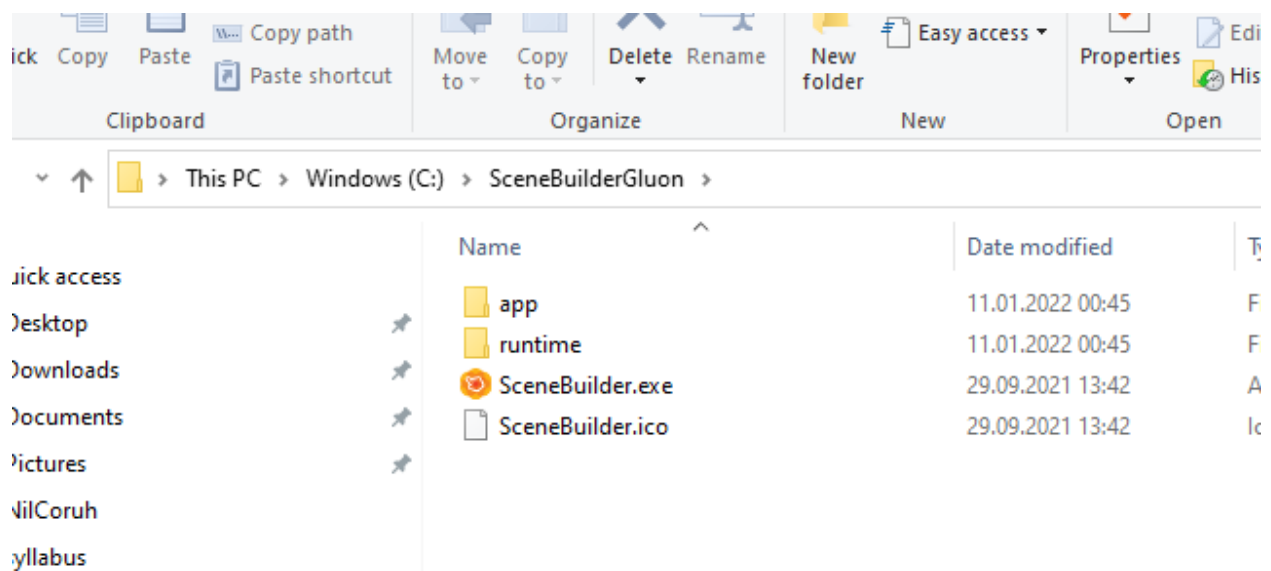
0.4.3 3- Configure JavaFX Scene Builder for Apache Netbeans

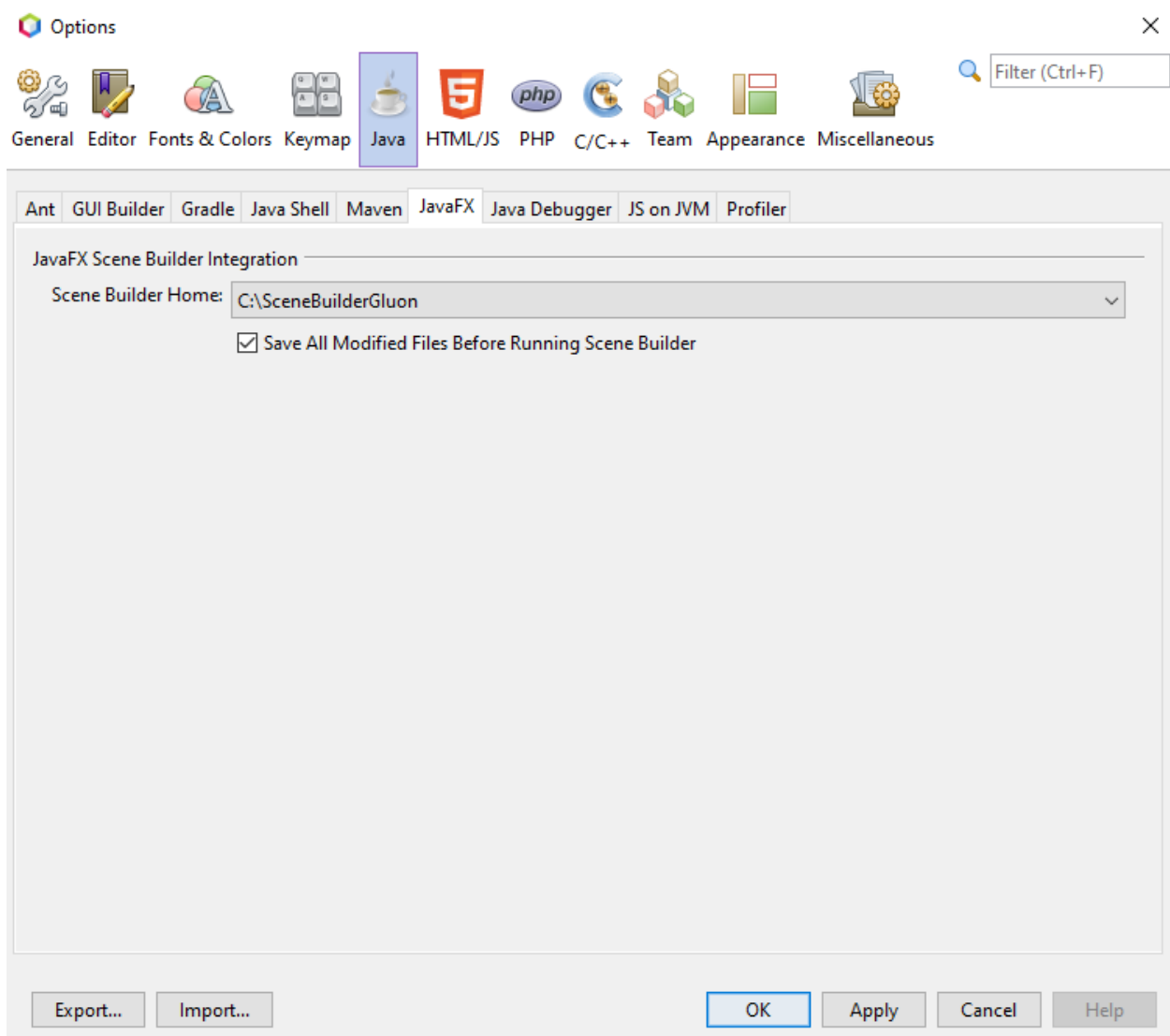
Open Tools->Options->Java->JavaFX





Select builder home





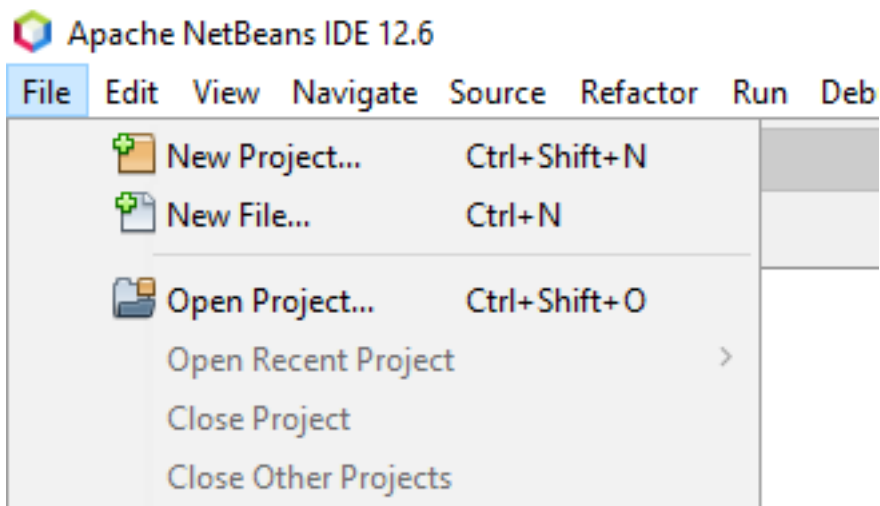
you can find old integration documentation here

Using JavaFX Scene Builder with Java IDEs: Using Scene Builder with NetBeans IDE | JavaFX 2 Tutorials and Documentation⁵

0.4.4 4-Create First Application

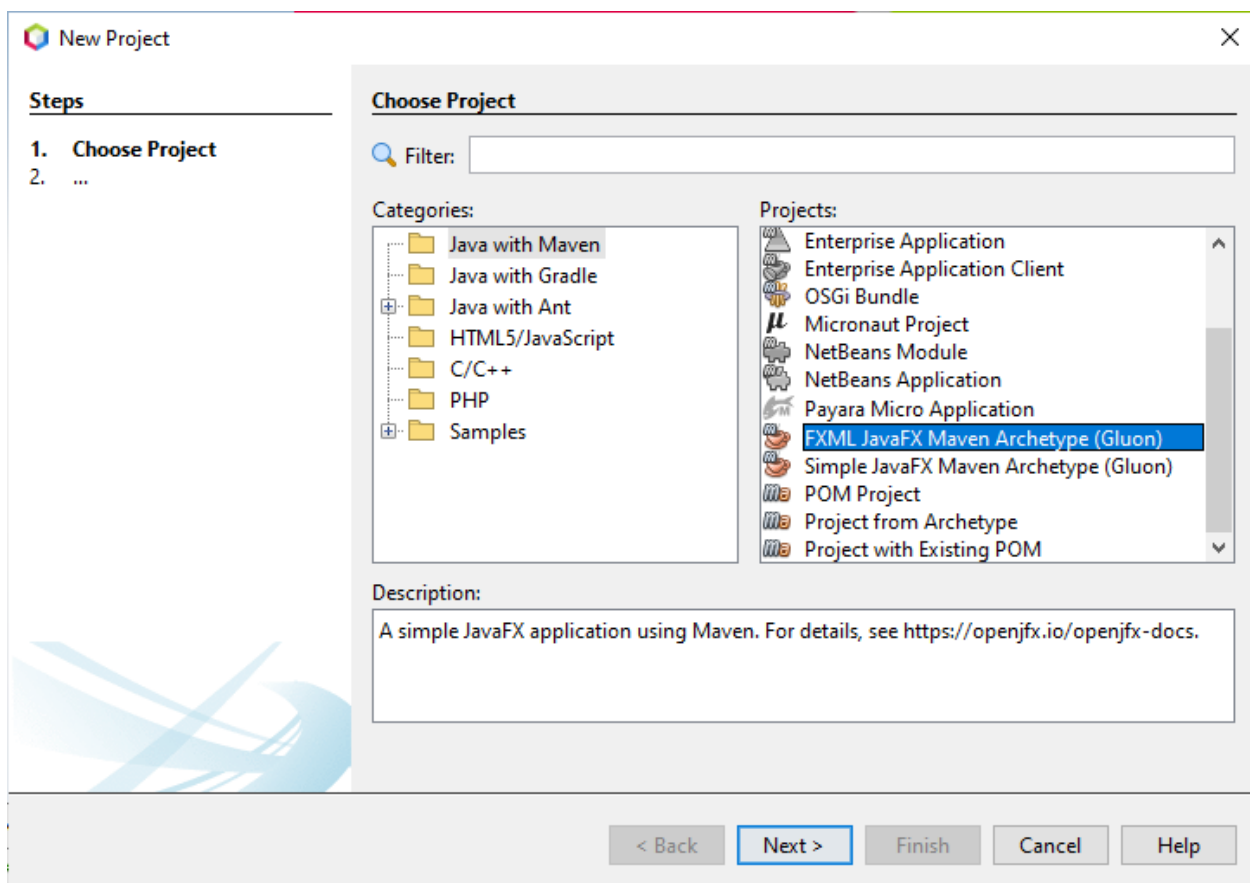
Select File->New Project

⁵https://docs.oracle.com/javafx/scenebuilder/1/use__java__ides/sb-with-nb.htm



Select Java With Maven Types

FXML JavaFX Maven Archetype (Gluon)



Set project properties

New FXML JavaFX Maven Archetype (Gluon) ✕

Steps

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

Name and Location

Project Name:

Project Location: Browse...

Project Folder:

Artifact Id:

Group Id:

Version:

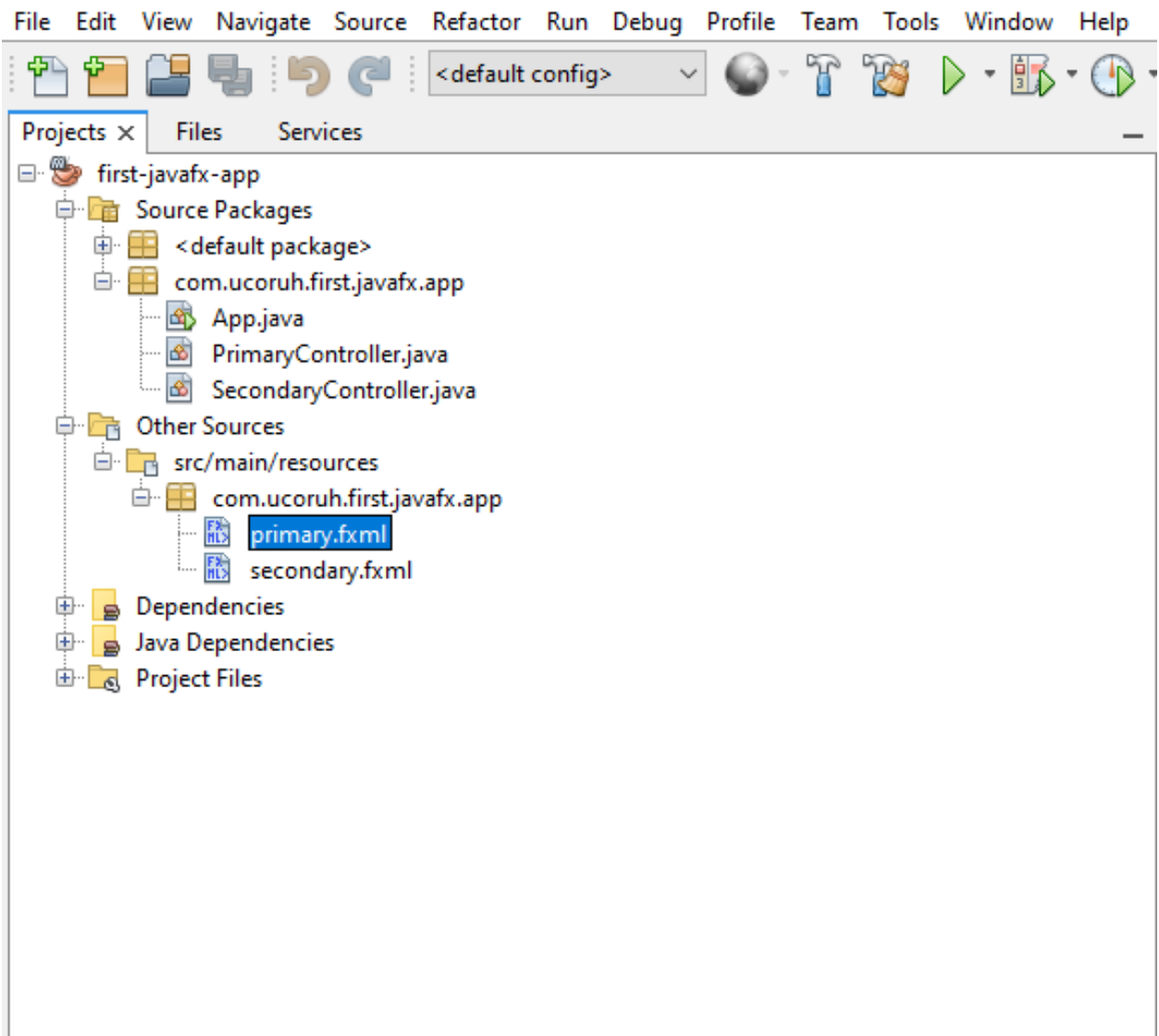
Package: (Optional)

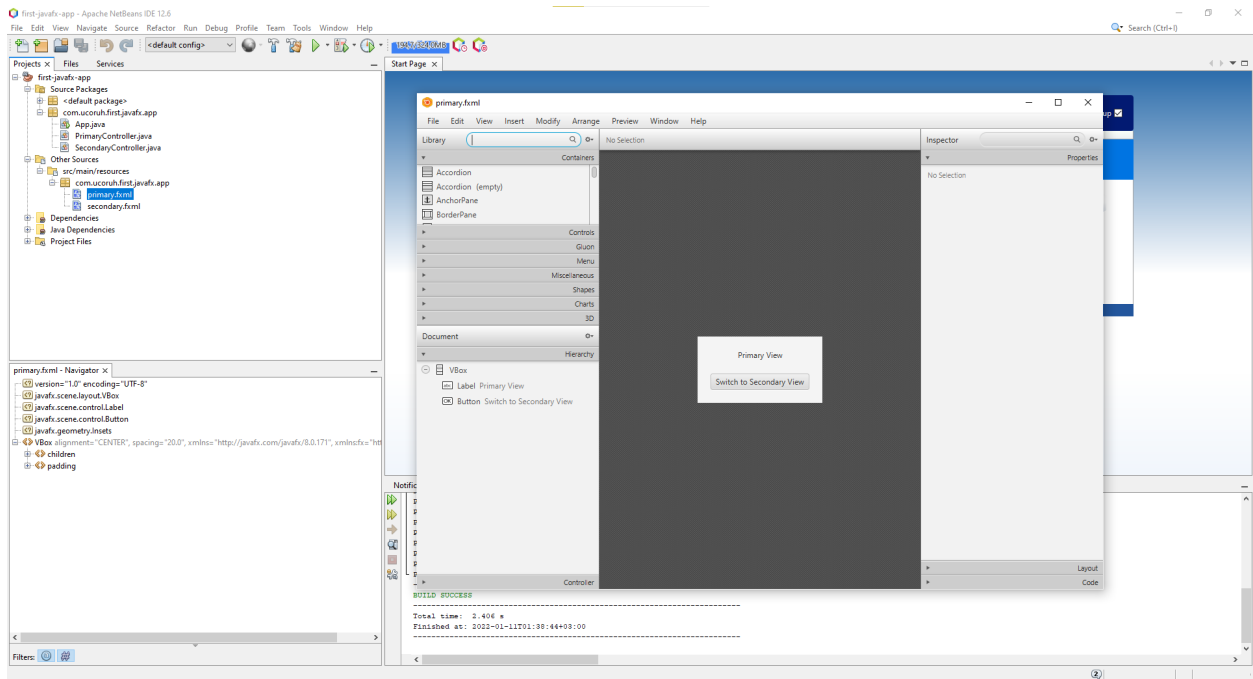
Additional Creation Properties:

| Key | Value |
|------------------------------|-------|
| javaafx-version | 13 |
| javaafx-maven-plugin-version | 0.0.4 |
| add-debug-configuration | Y |

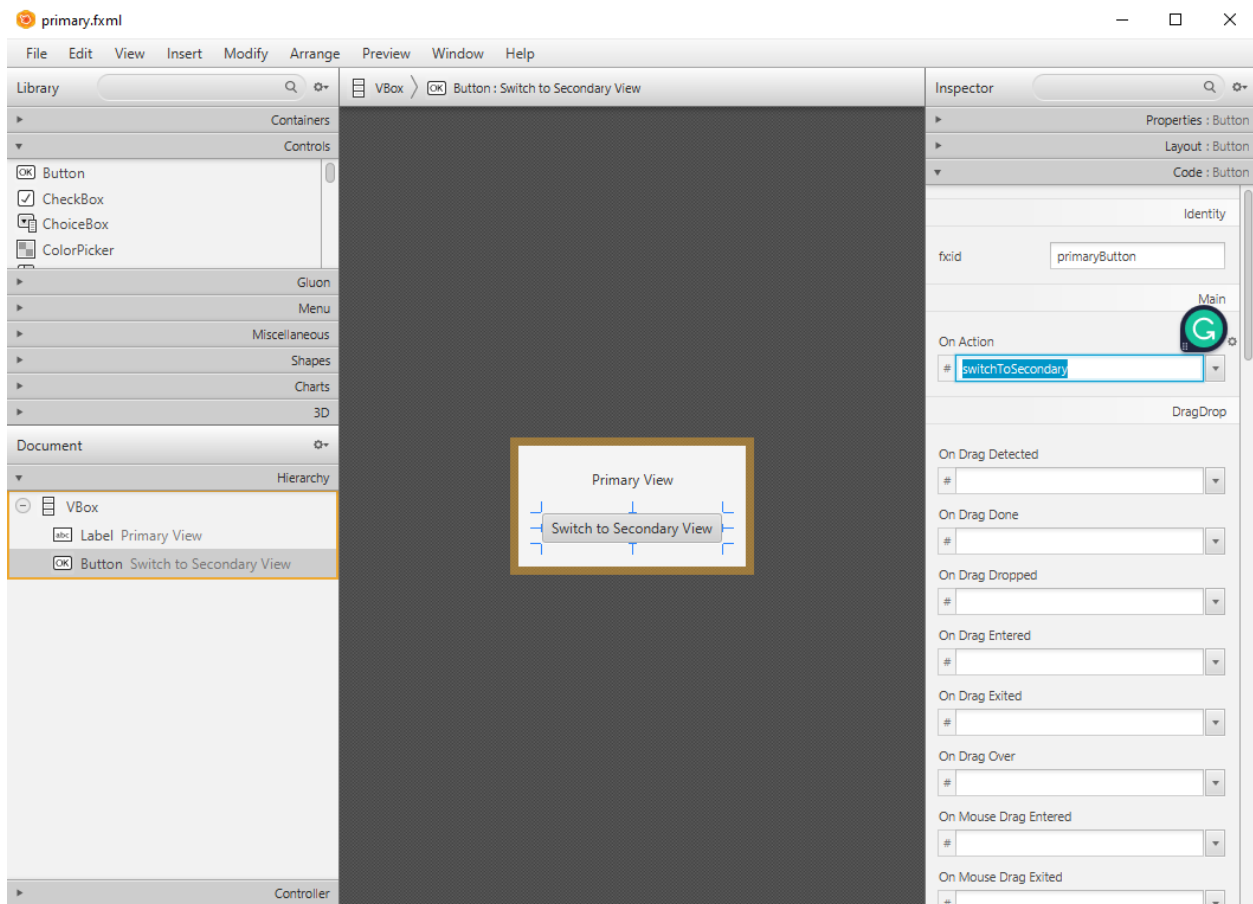
< Back Next > Finish Cancel Help

Open Project Resources and Click FXML files to run Scene Builder

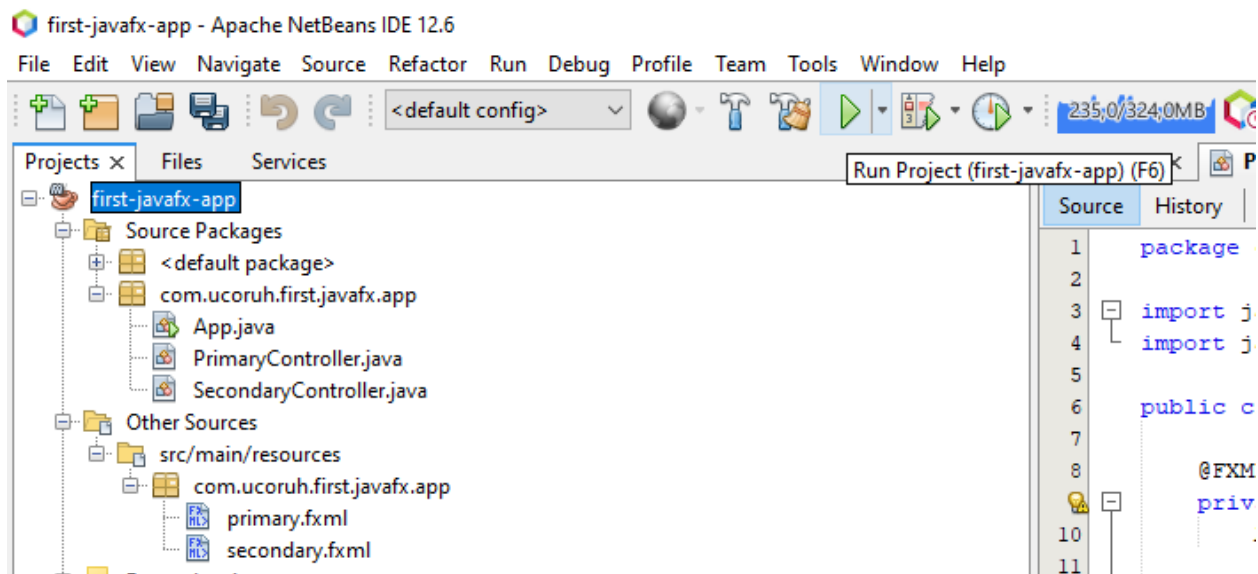




In designer properties tab will show control properties, code tab will show action bindings



Then you can run applications from Netbeans.



for introduction level information please check the following examples

JavaFX Simple Calculator - Design and Code - YouTube⁶

JavaFX Library Management System Development #0: Introduction - YouTube⁷

for more information about JavaFX please check the following

JavaFX Tutorial - javatpoint⁸

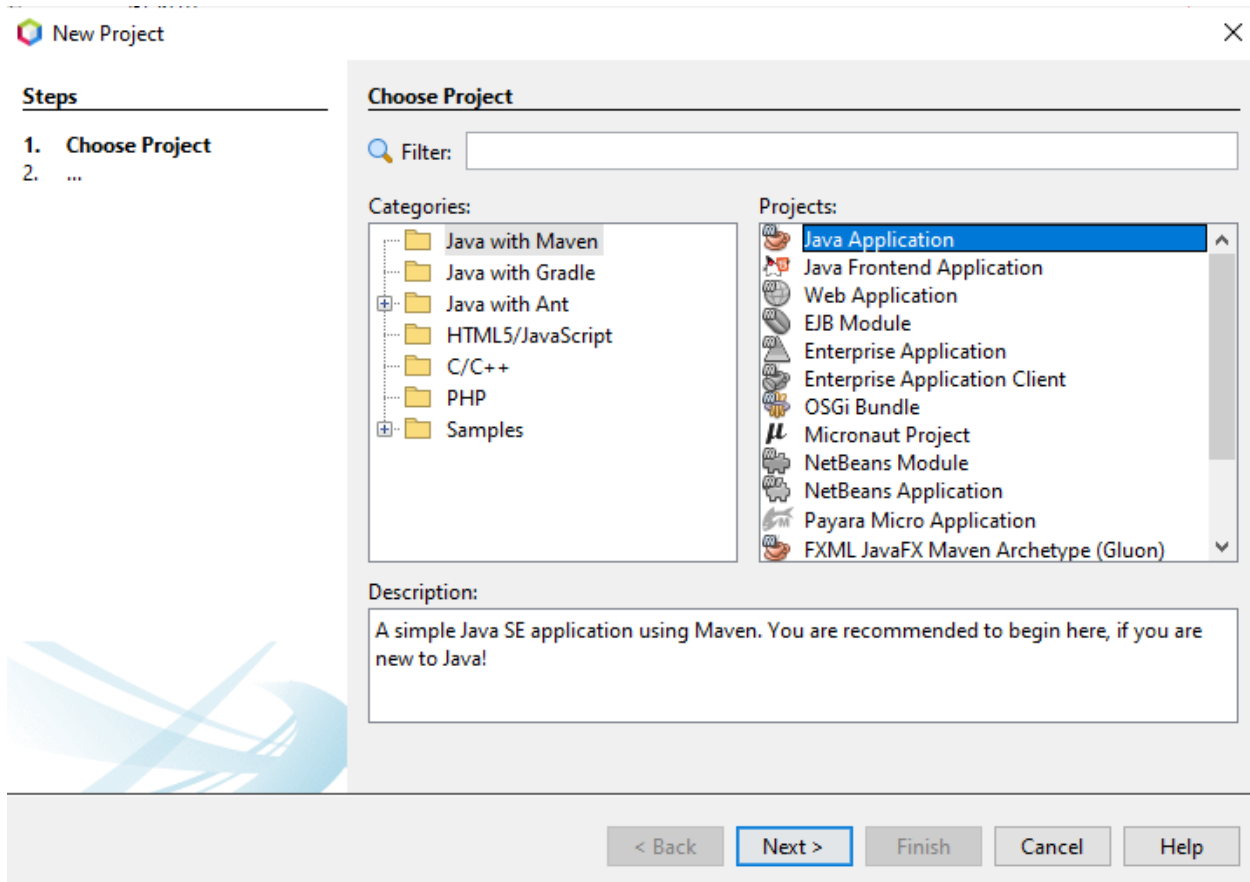
0.5 Java Swing GUI Programming

Select File->New Project -> Java with Maven -> Java Application

⁶https://www.youtube.com/watch?v=oWk9fwRgV_k&ab_channel=qBit

⁷https://www.youtube.com/watch?v=9d3X8eBov1M&ab_channel=GenuineCoder

⁸<https://www.javatpoint.com/javafx-tutorial>



Configure Project

New Java Application

Steps

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

Name and Location

Project Name:

Project Location:

Project Folder:

Artifact Id:

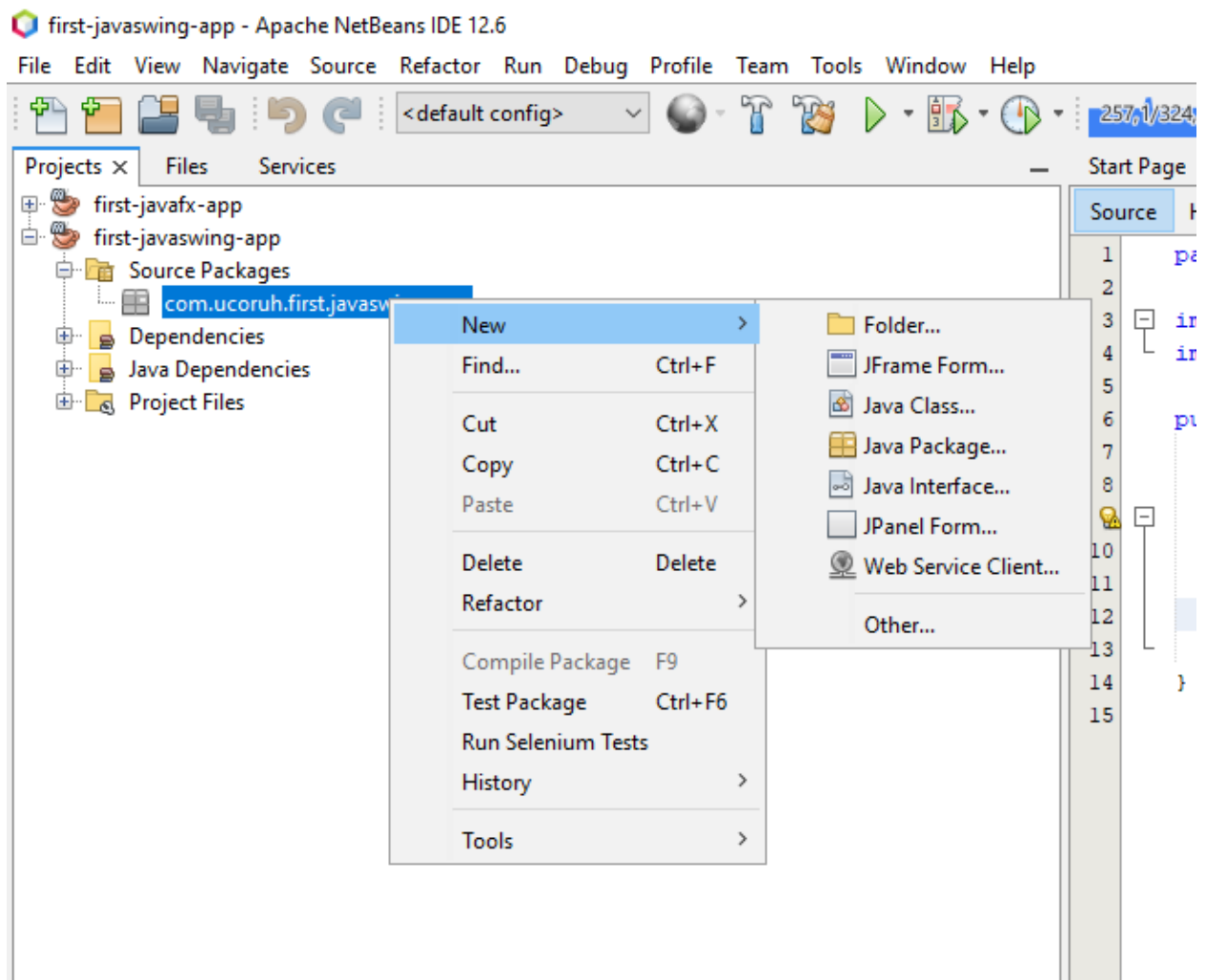
Group Id:

Version:

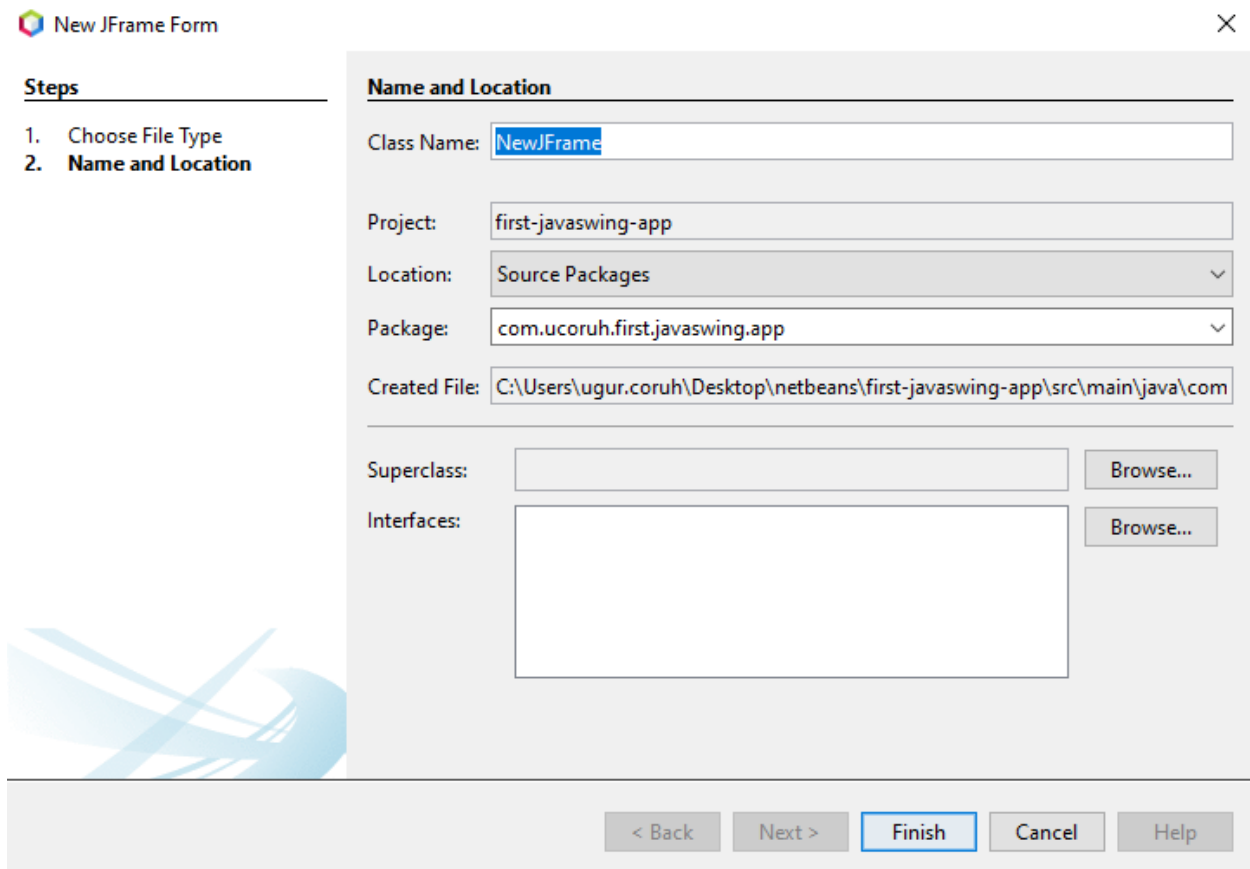
Package: (Optional)

< Back Next > **Finish** Cancel Help

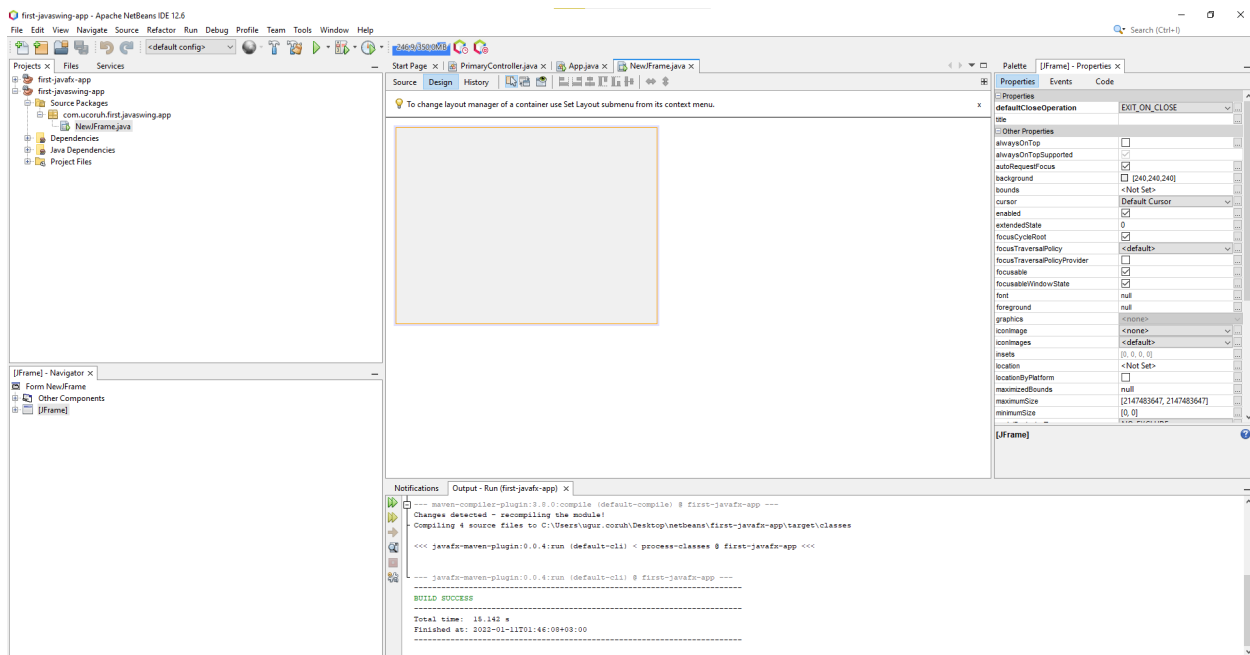
Open project and select package then select right-click -> New -> JFrame Form



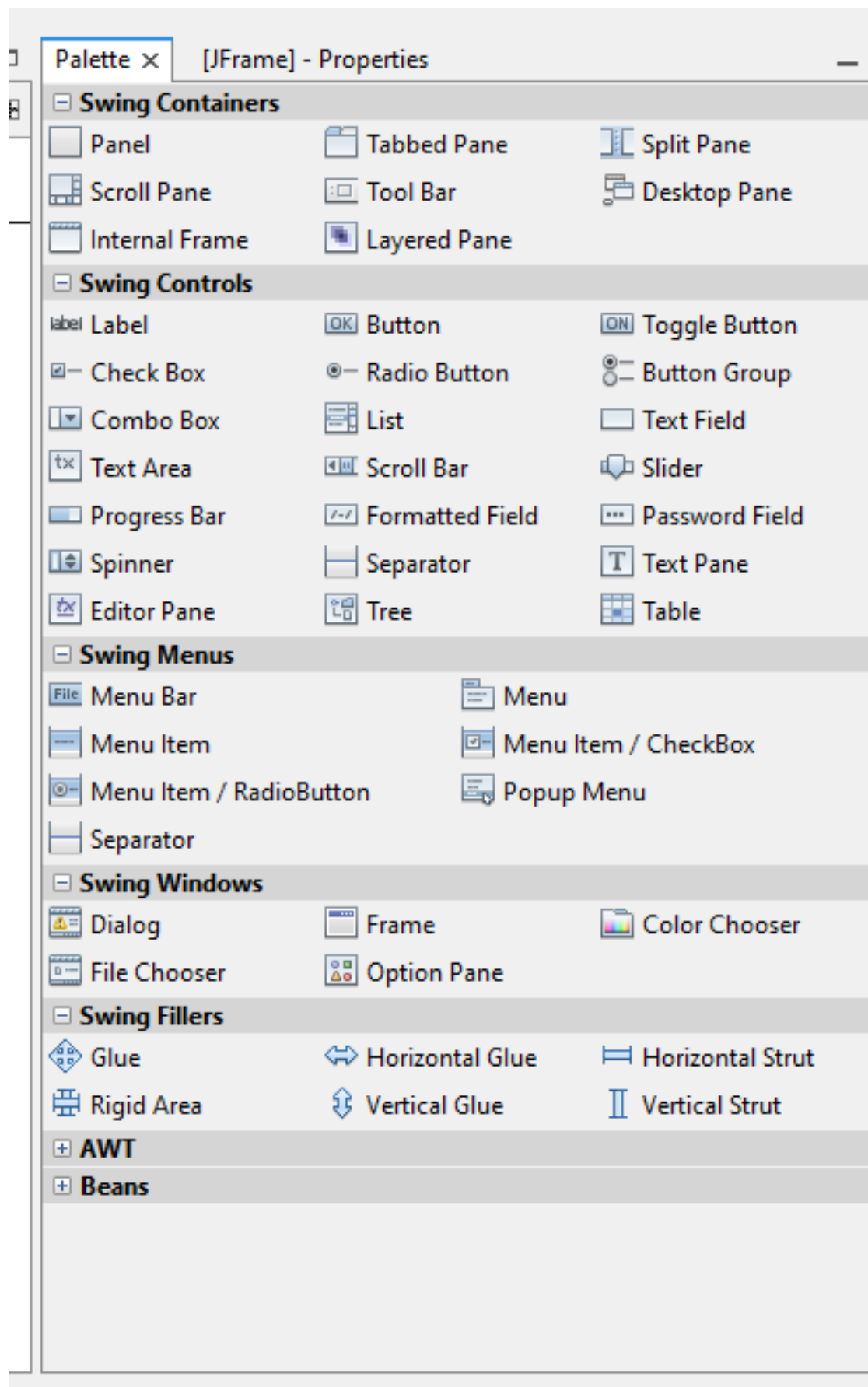
Give a name to your frame



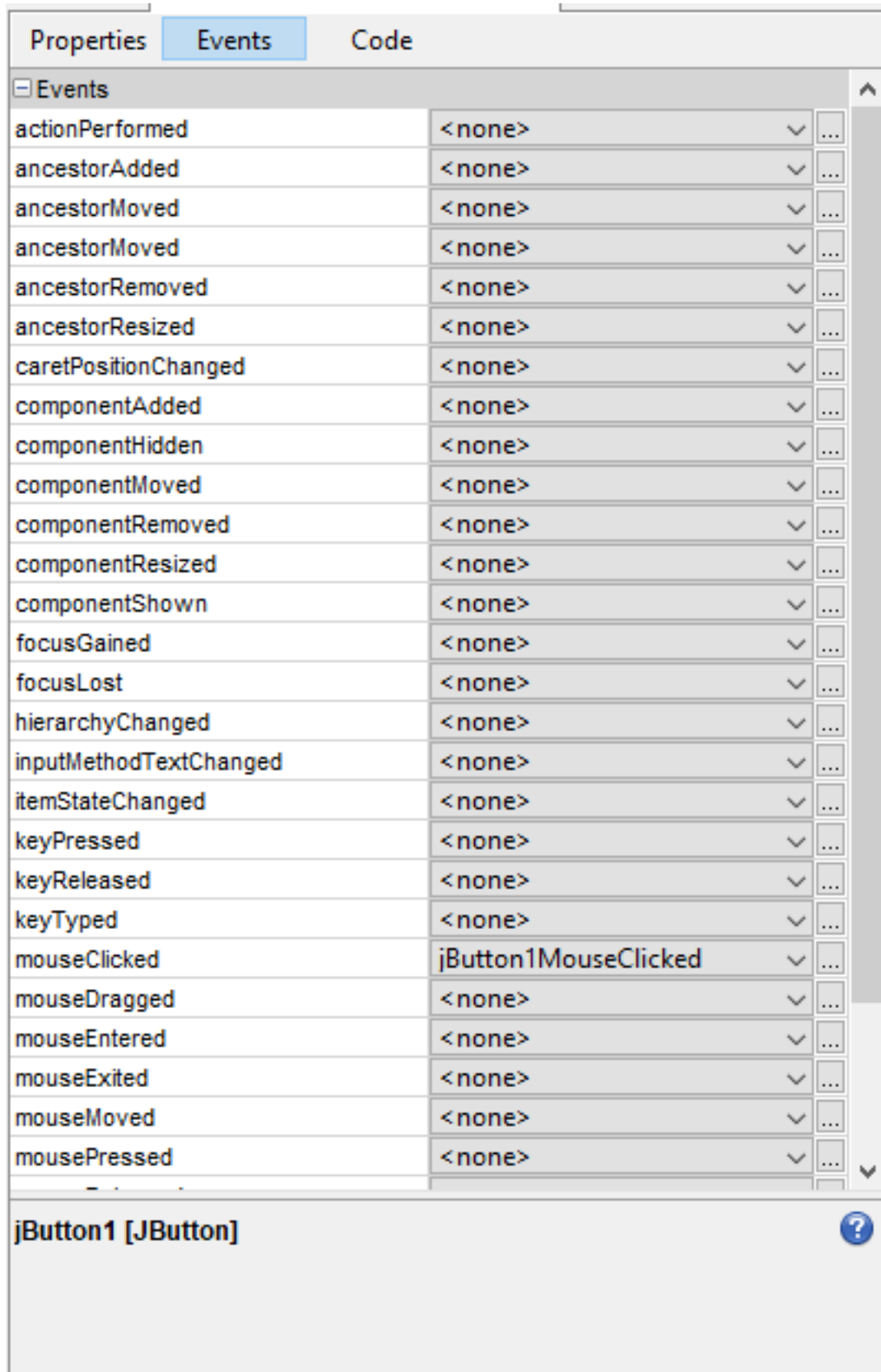
Swing GUI Builder is integrated with Netbeans



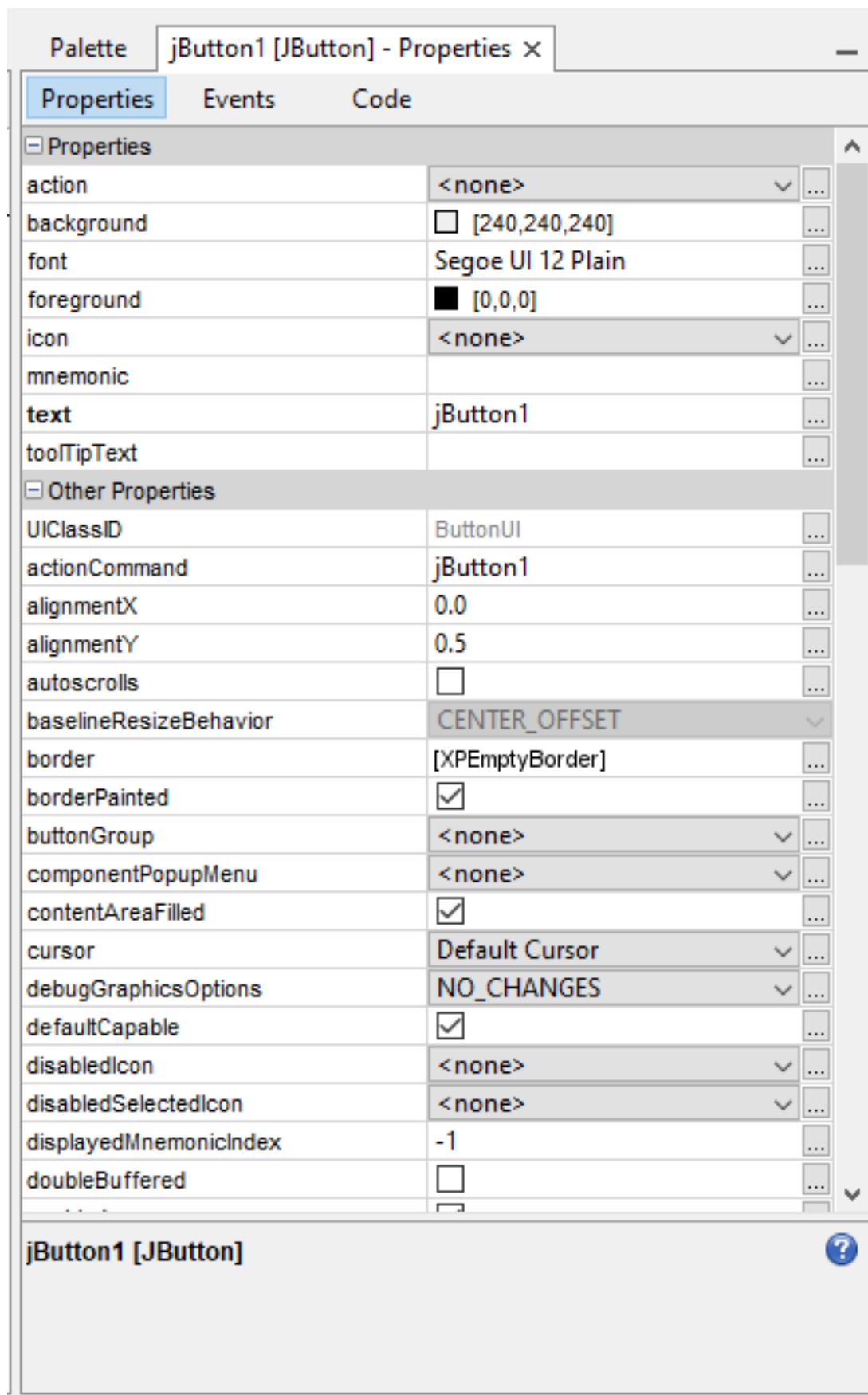
Drag-and-drop controls to panel from the palette



And from the events tab, add custom actions.



you can configure control properties from the properties screen

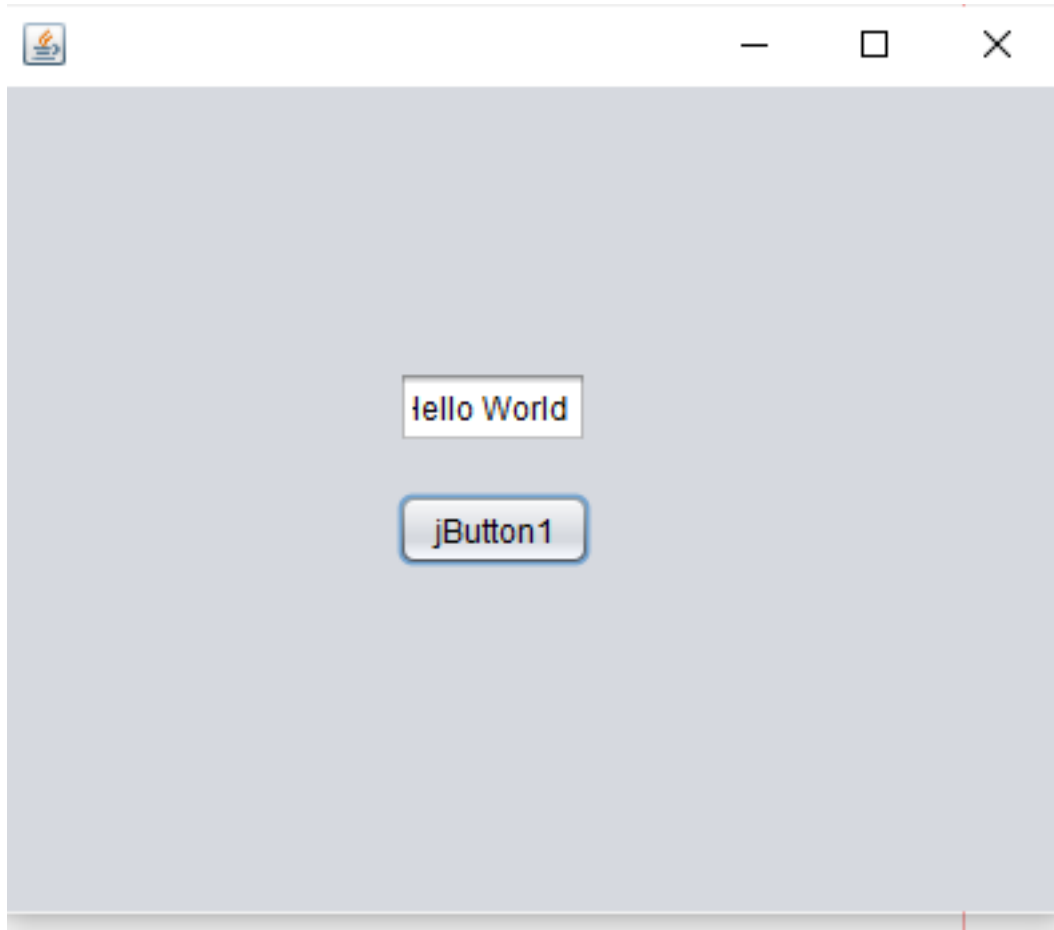


We can add simple events such as when the mouseClicked to button write text on the text field

“Hello World”

```
25      @SuppressWarnings("unchecked")
26      Generated Code
66
67      private void jButton1MouseClicked(java.awt.event.MouseEvent evt) {
68
69          jTextField1.setText("Hello World");
70          // TODO add your handling code here:
71      }
72
73      /**
74      * @param args the command line arguments
```

When you run application, you will see the following screen



0.5.1 References

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