

# CE103 Algorithms and Programming I

## Java GUI Programming

Author: Asst. Prof. Dr. Uğur CORUH

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## 1 CE103 Algorithms and Programming I

## 2 Week-15 (Java GUI Programming)

2.0.0.1 Fall Semester, 2021-2022 Download DOC<sup>1</sup>, SLIDE<sup>2</sup>, PPTX<sup>3</sup>

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### 2.1 Java GUI Programming

### 2.2 JavaFX GUI Programming

#### 2.2.1 1-Install Gluon Scene Builder

Download and Install Gluon Scene Builder from URL

Scene Builder - Gluon<sup>4</sup>

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

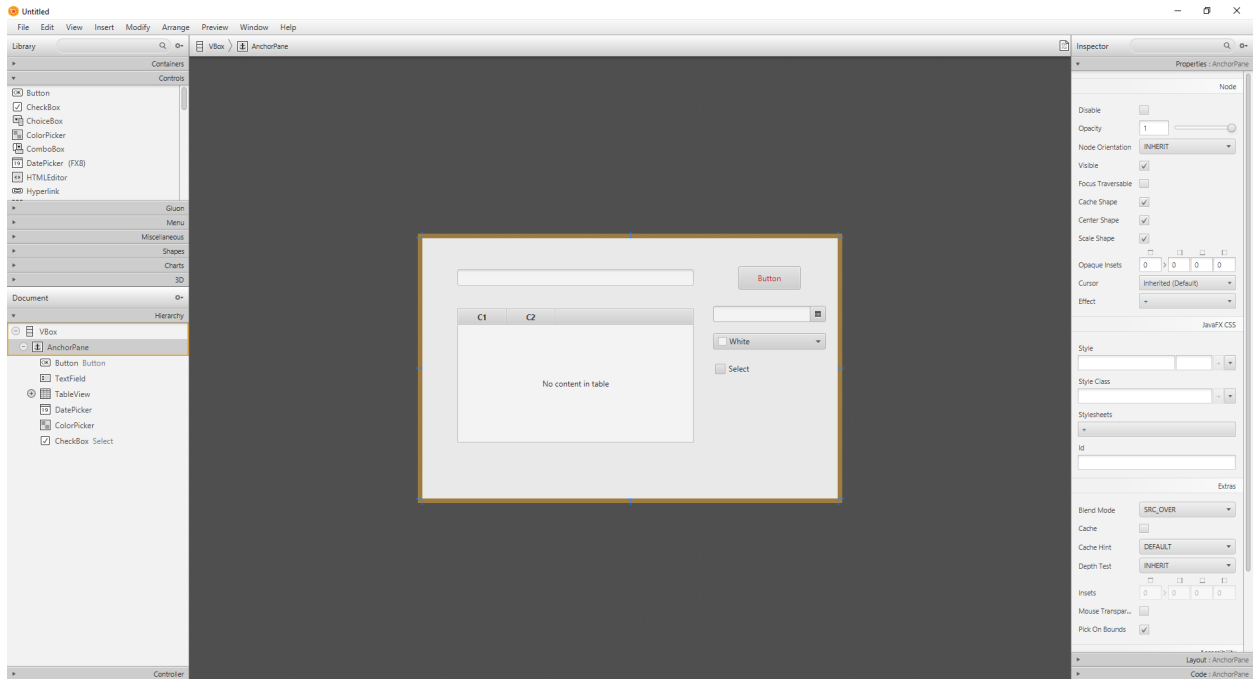
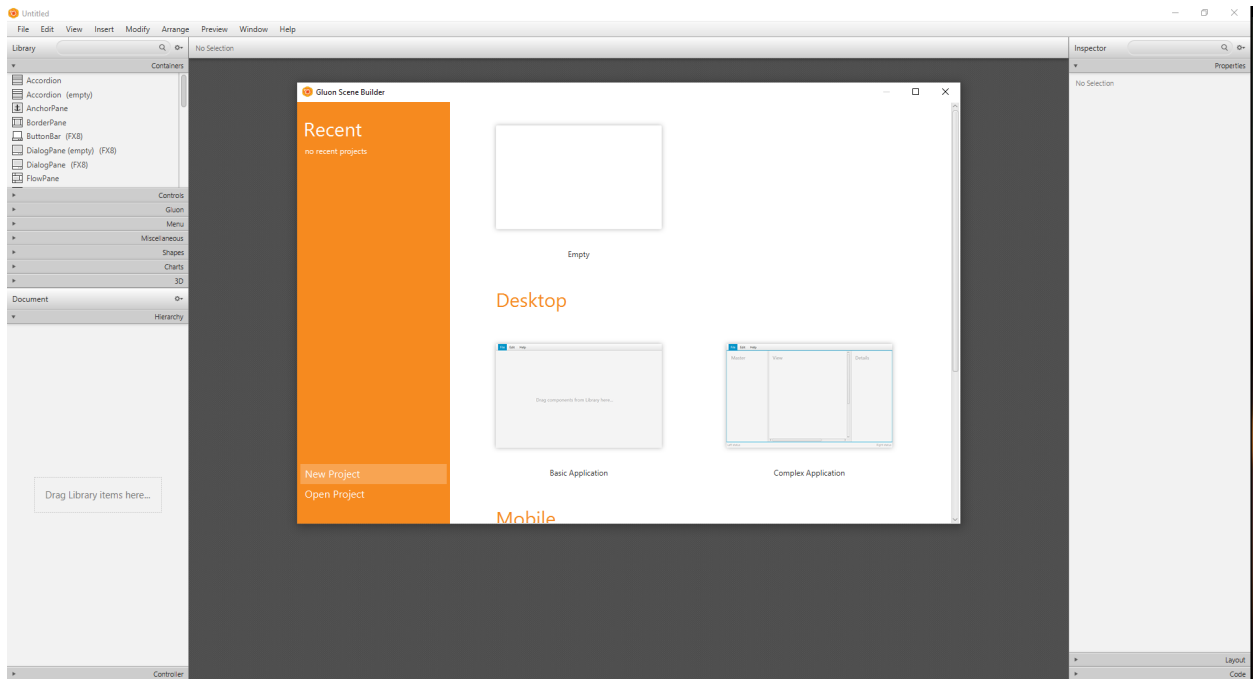
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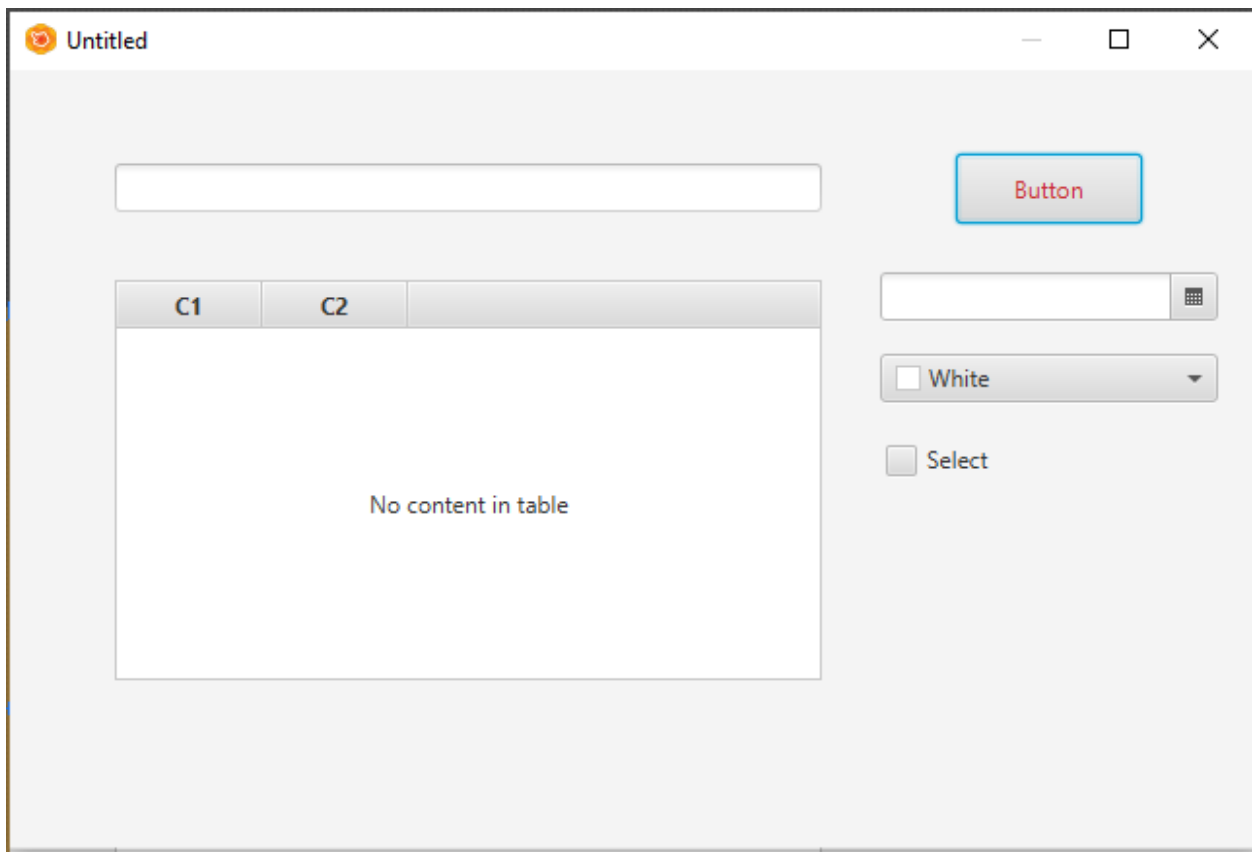
<sup>1</sup>[ce103-week-15-java-gui.en.md\\_doc.pdf](#)

<sup>2</sup>[ce103-week-15-java-gui.en.md\\_slide.pdf](#)

<sup>3</sup>[ce103-week-15-java-gui.en.md\\_slide.pptx](#)

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





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

### 2.2.2 2-Install Apache Netbeans

Download and install apache Netbeans

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



APACHE  
**NetBeans**

Reading module storage...

Apache NetBeans IDE 12.6

## Welcome to the Apache NetBeans IDE 12.6 Installer

The installer will install the NetBeans IDE with the following packs and runtimes. Click Customize to select the packs and runtimes to install.

Base IDE  
Java SE  
Java EE  
HTML5/JavaScript  
PHP



Customize...

Installation Size: 761,9 MB

Next >

Cancel

### 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.

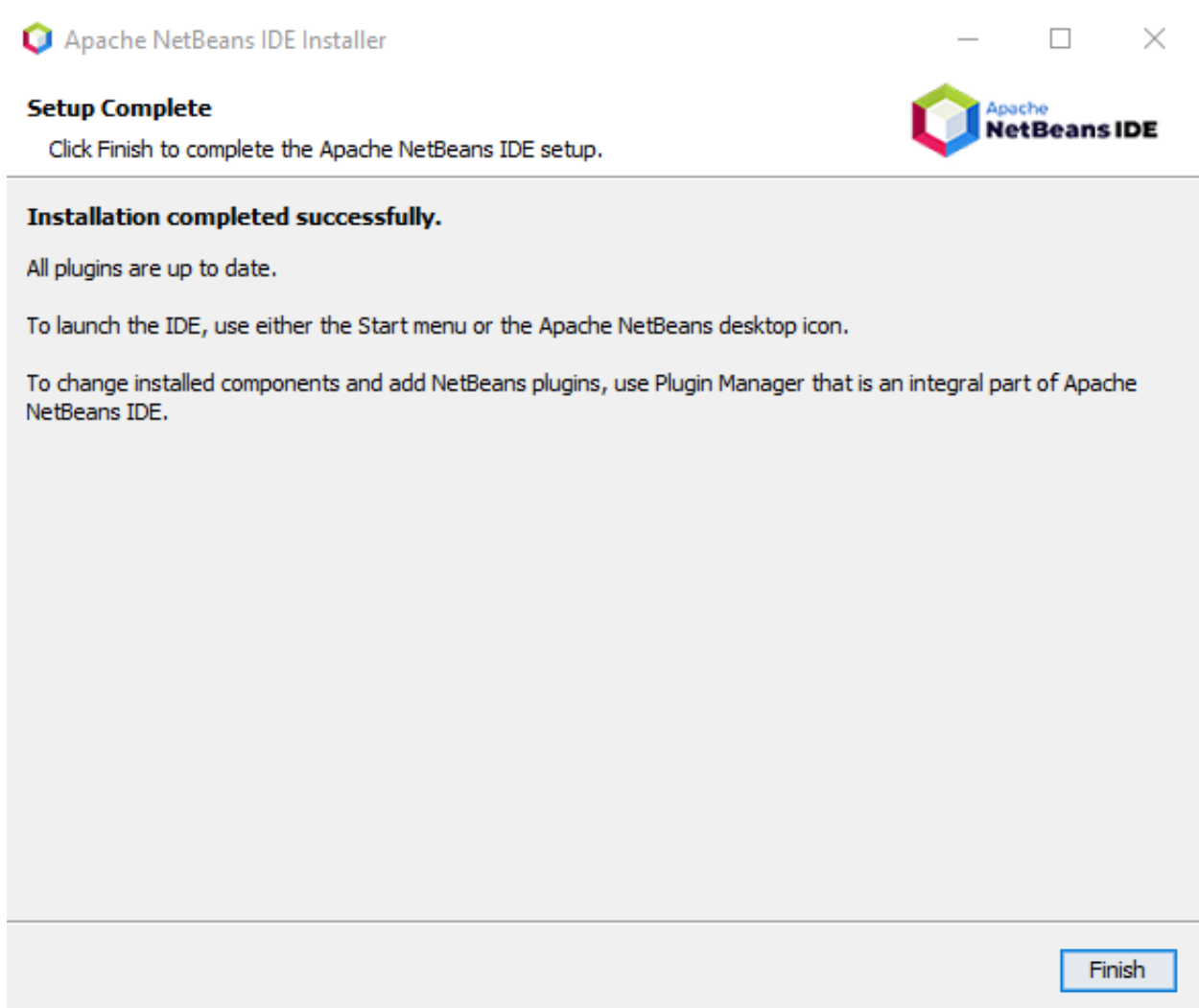
Total Installation Size:

761,9 MB

< Back

Install

Cancel



### 2.2.3 3- Configure JavaFX Scene Builder for Apache Netbeans

Open Tools->Options->Java->JavaFX

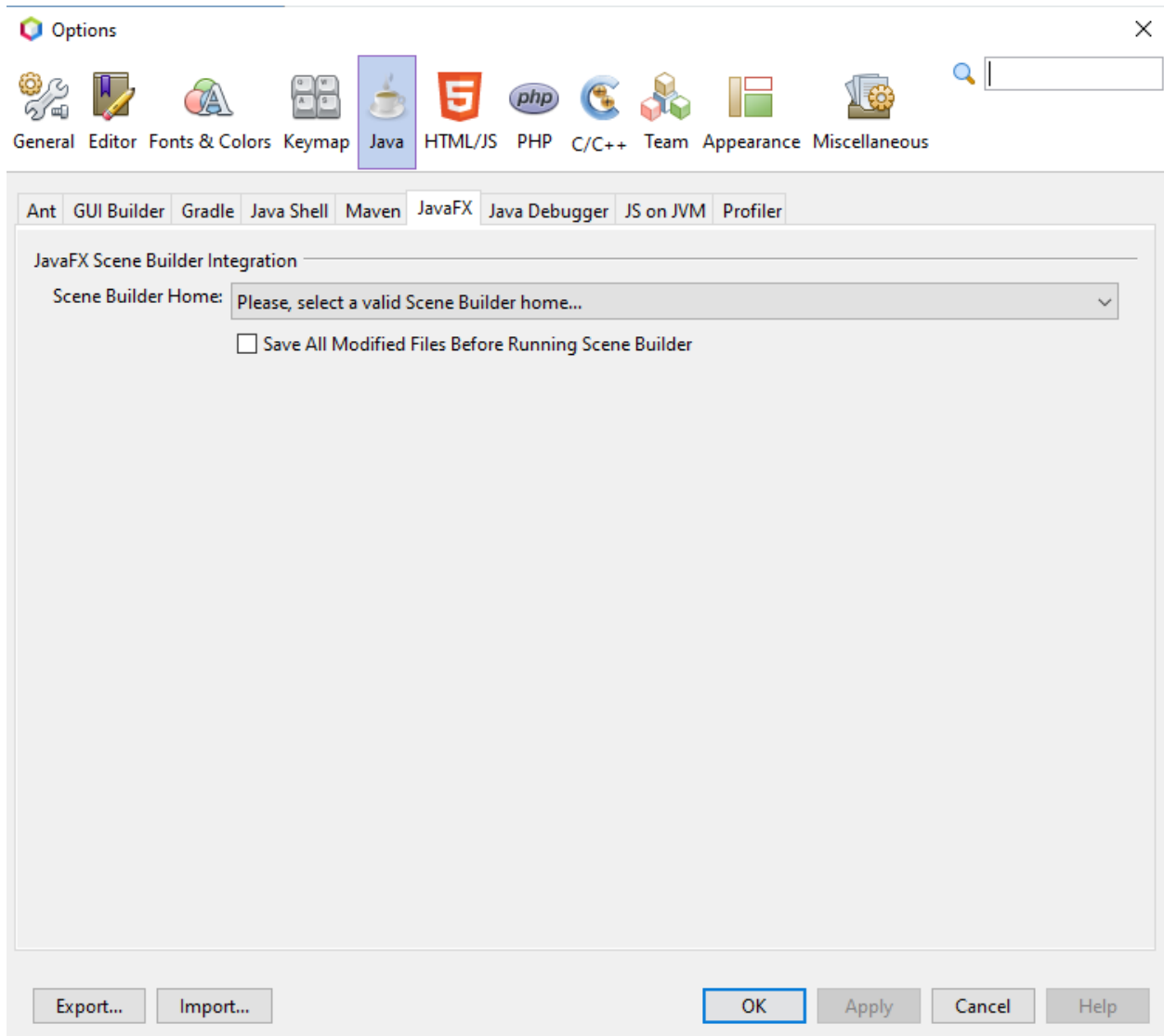




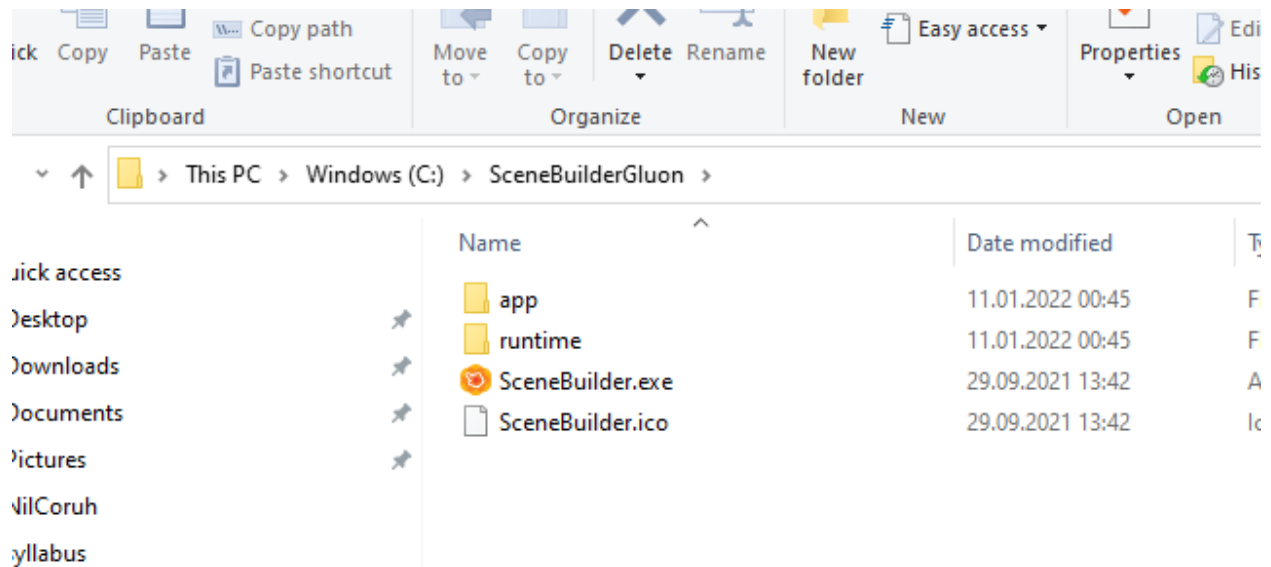
7294.0MB

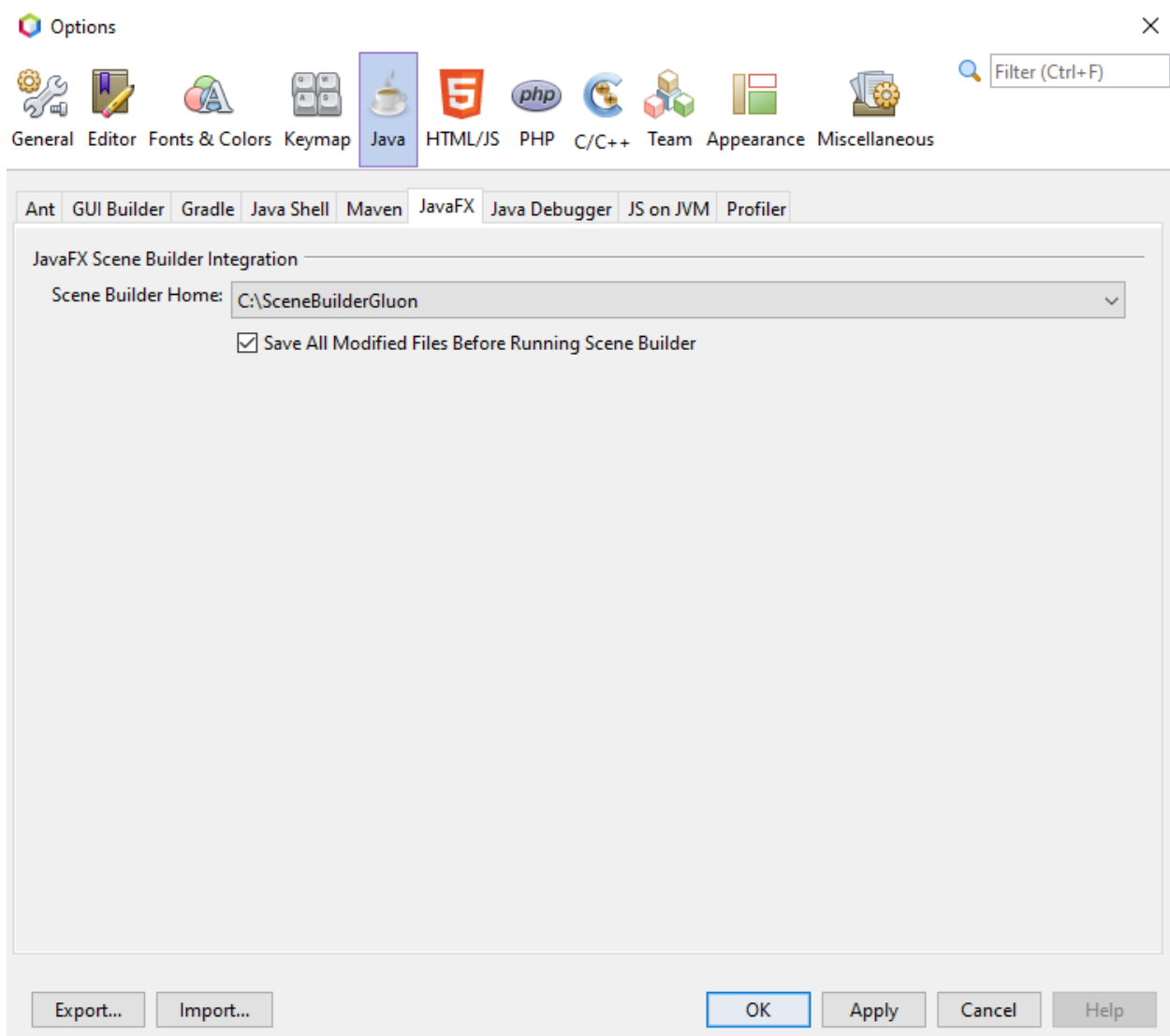
- Internationalization >
- Open Java Platform Shell
- Java Platforms
- Ant Variables
- Libraries
- Servers
- Cloud Providers
- Templates
- DTDs and XML Schemas
- Palette >
- Plugins
- Options**

page ×



Select builder home





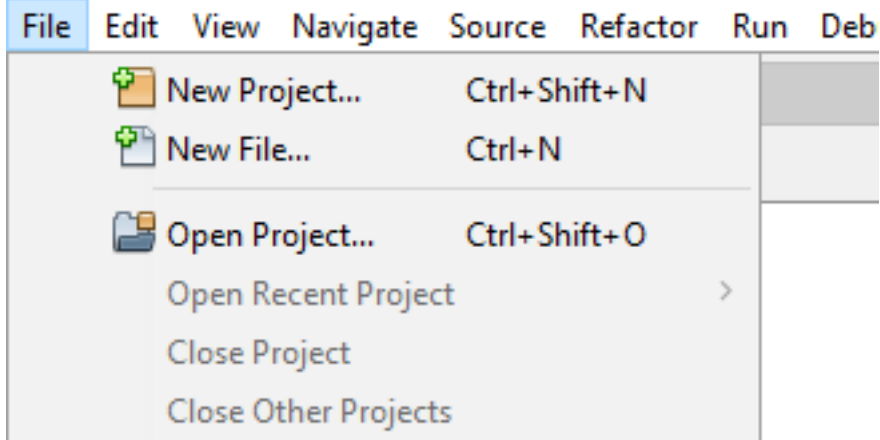
you can find old integration documentation here

Using JavaFX Scene Builder with Java IDEs: Using Scene Builder with NetBeans IDE | JavaFX 2 Tutorials and Documentation<sup>5</sup>

#### 2.2.4 4-Create First Application

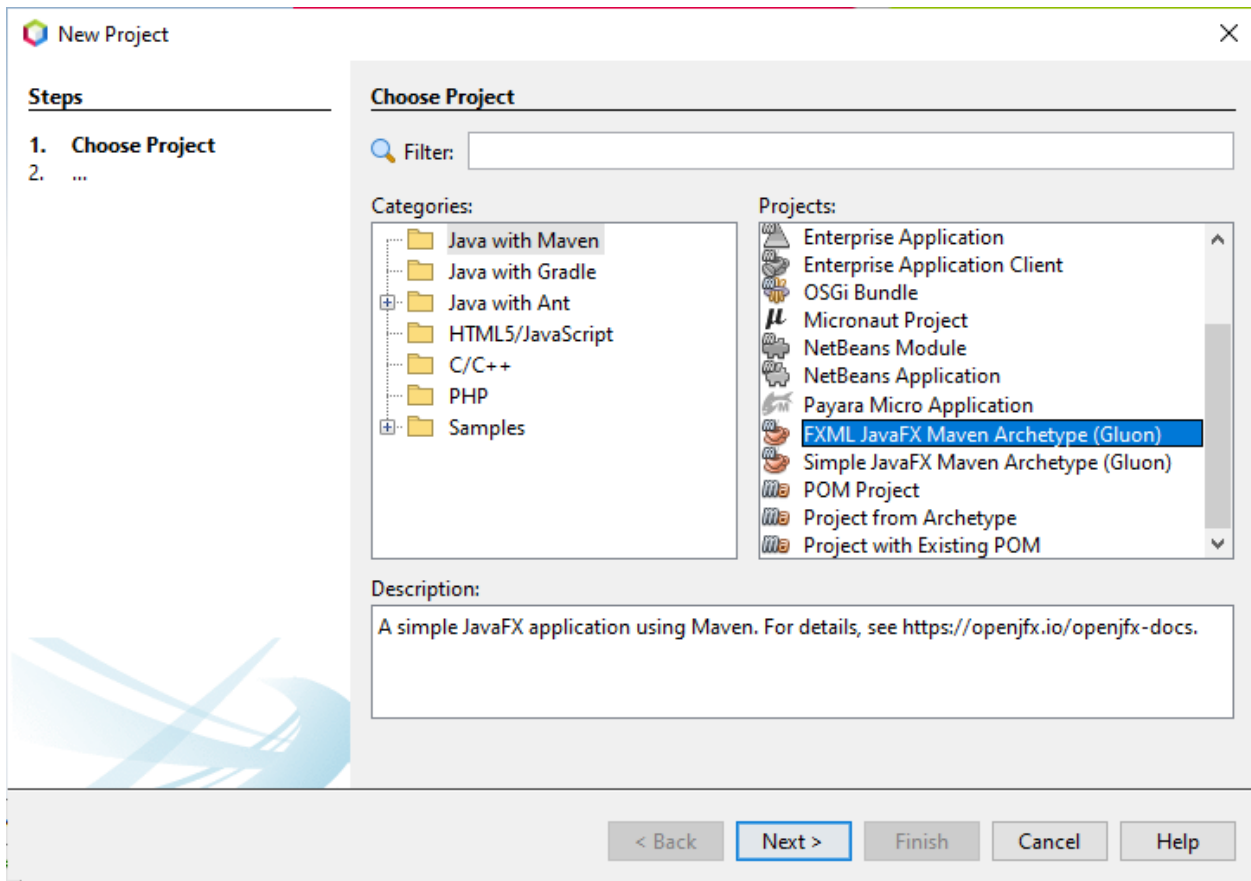
Select File->New Project

<sup>5</sup>[https://docs.oracle.com/javafx/scenbuilder/1/use\\_java\\_ides/sb-with-nb.htm](https://docs.oracle.com/javafx/scenbuilder/1/use_java_ides/sb-with-nb.htm)

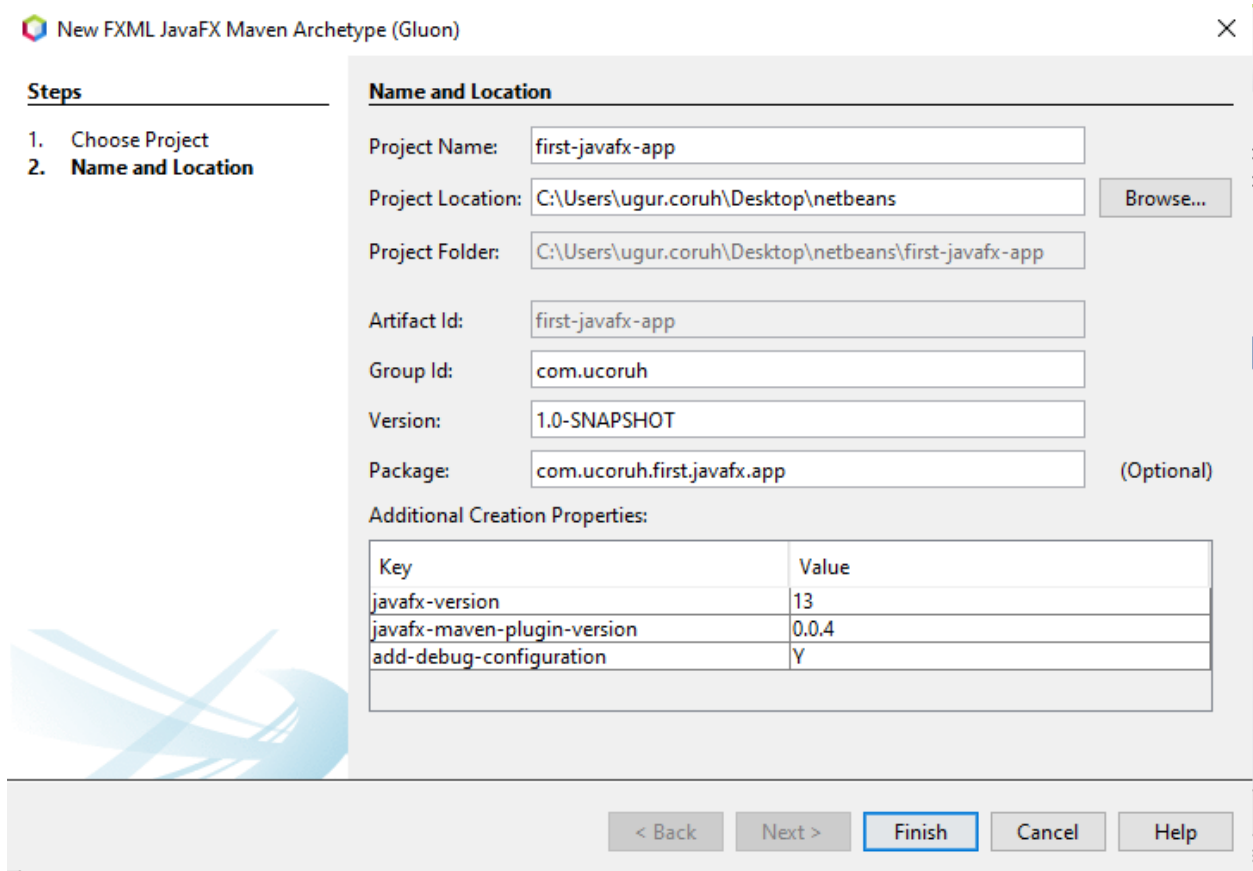


Select Java With Maven Types

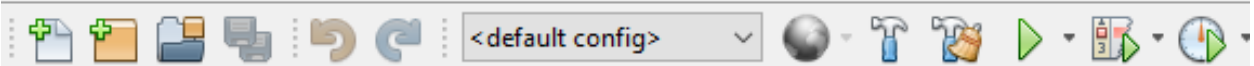
FXML JavaFX Maven Archetype (Gluon)



Set project properties

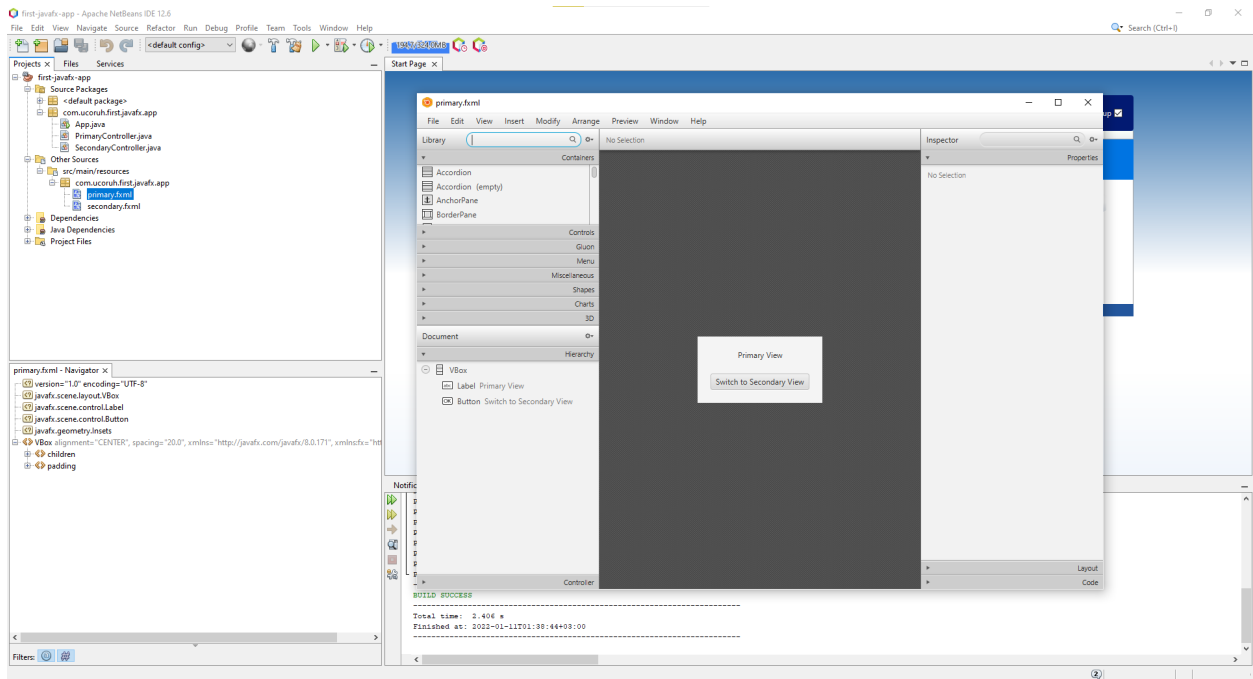


Open Project Resources and Click FXML files to run Scene Builder

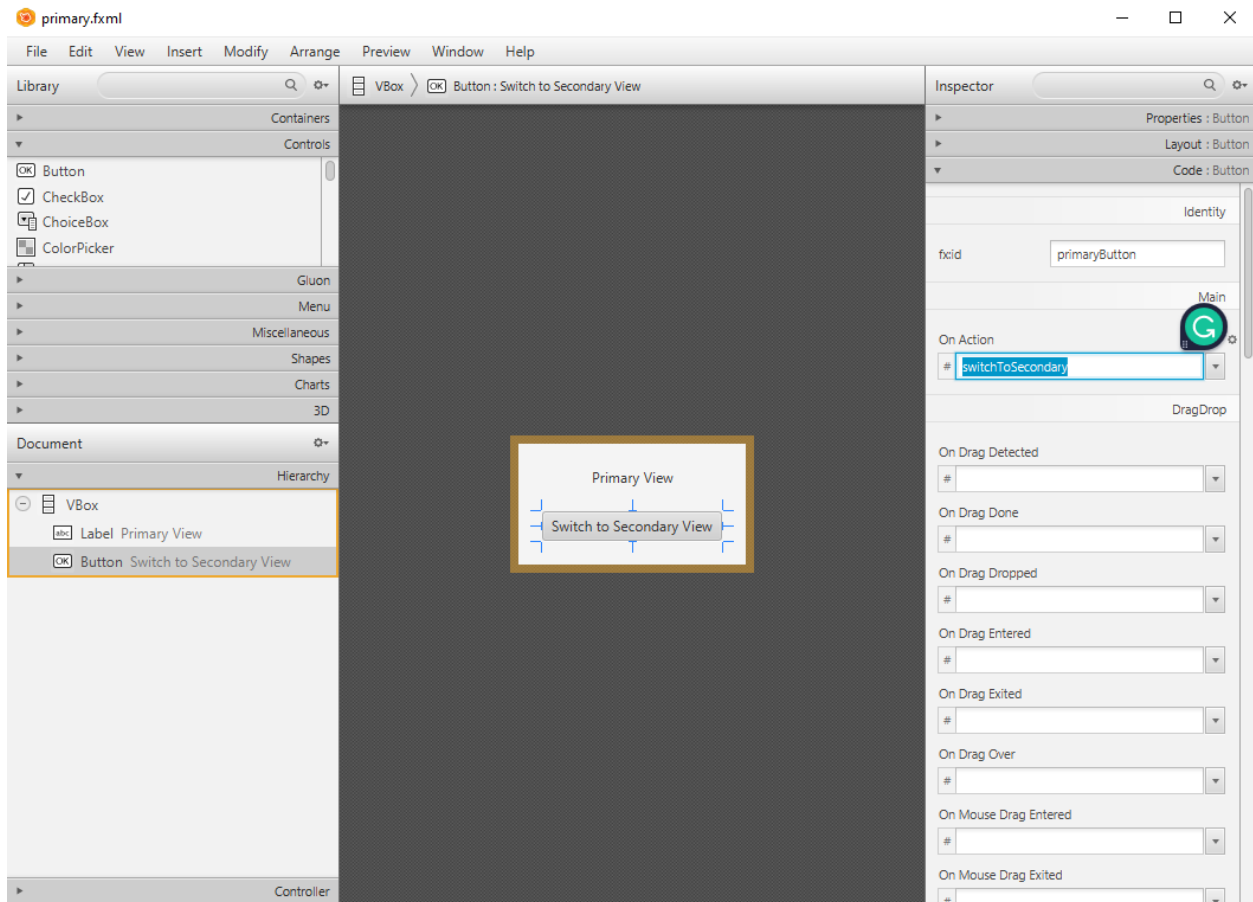


Projects x Files Services

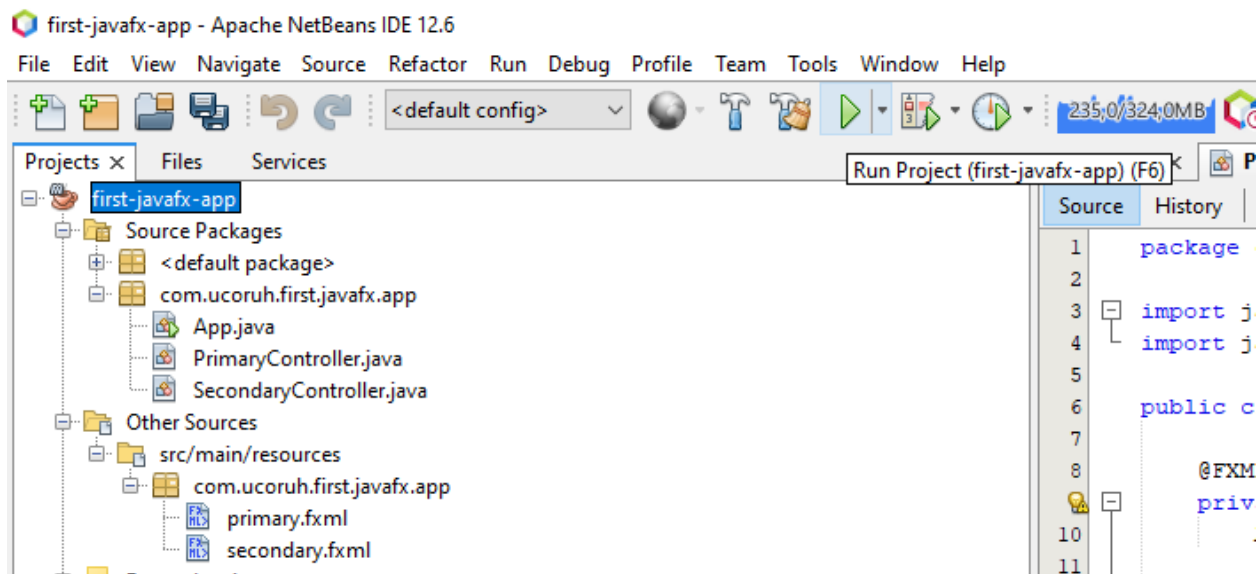
- first-javafx-app
  - Source Packages
    - <default package>
    - com.ucoruh.first.javafx.app
      - App.java
      - PrimaryController.java
      - SecondaryController.java
  - Other Sources
    - src/main/resources
      - com.ucoruh.first.javafx.app
        - primary.fxml
        - secondary.fxml
  - Dependencies
  - Java Dependencies
  - Project Files



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 - YouTube<sup>6</sup>

JavaFX Library Management System Development #0: Introduction - YouTube<sup>7</sup>

for more information about JavaFX please check the following

JavaFX Tutorial - javatpoint<sup>8</sup>

## 2.3 Java Swing GUI Programming

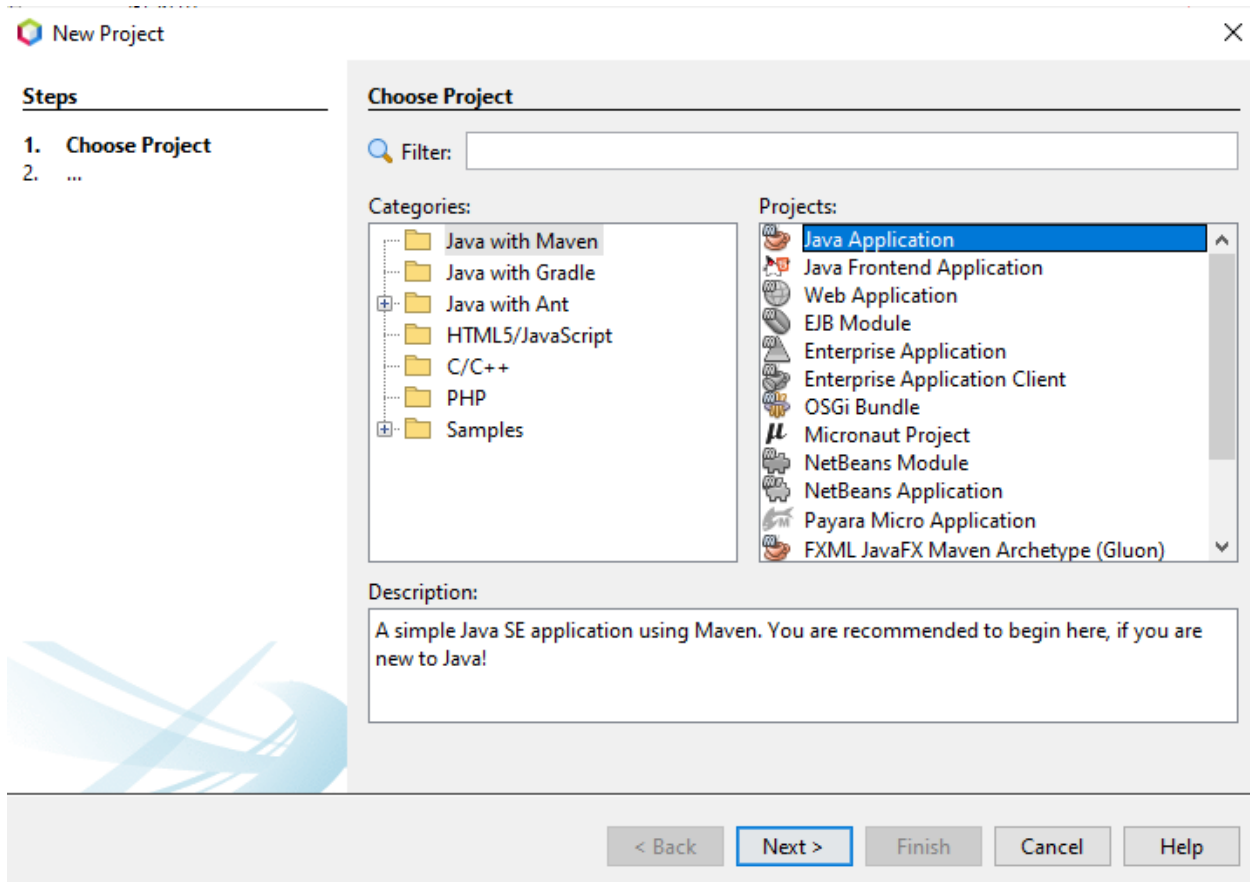
Select File->New Project -> Java with Maven -> Java Application

<sup>6</sup>[https://www.youtube.com/watch?v=oWk9fwRgV\\_k&ab\\_channel=qBit](https://www.youtube.com/watch?v=oWk9fwRgV_k&ab_channel=qBit)

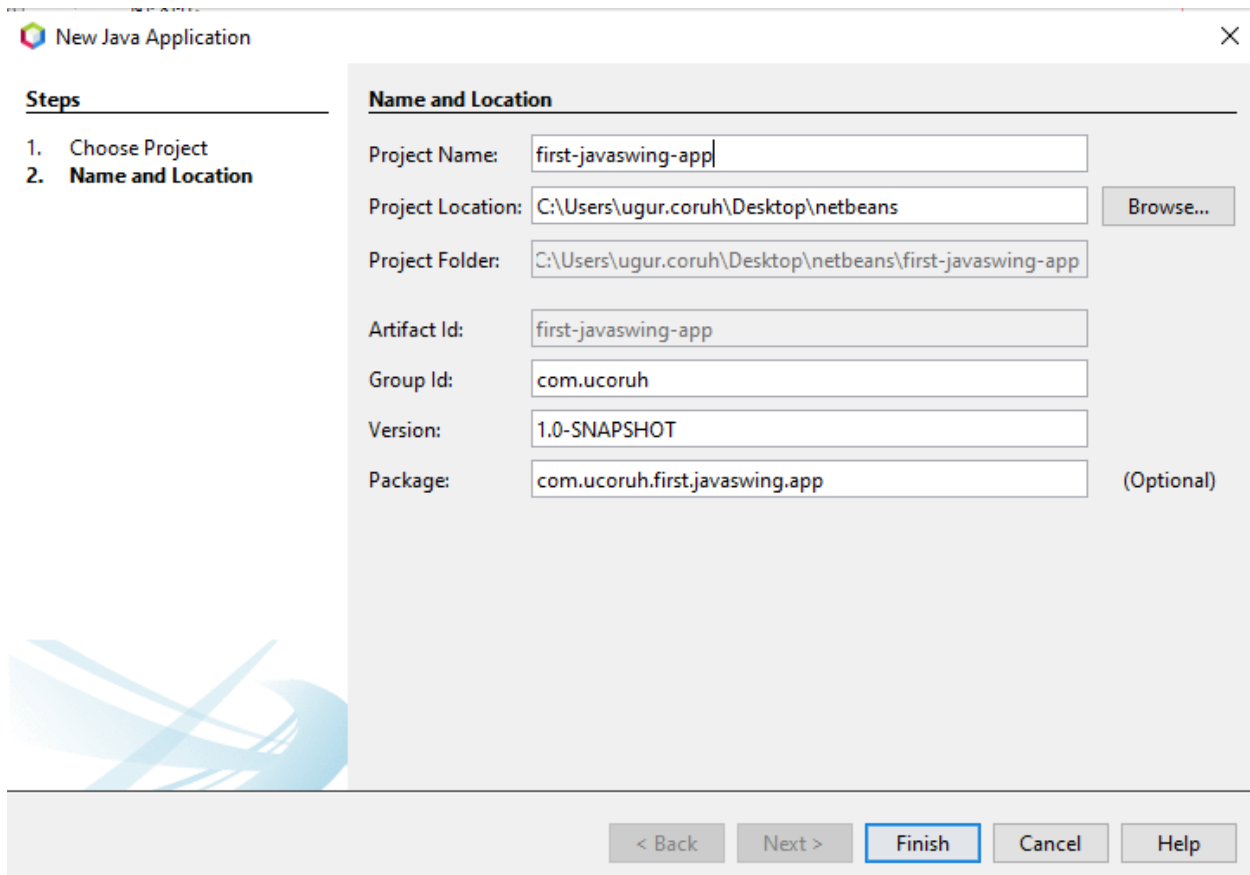
<sup>7</sup>[https://www.youtube.com/watch?v=9d3X8eBov1M&ab\\_channel=GenuineCoder](https://www.youtube.com/watch?v=9d3X8eBov1M&ab_channel=GenuineCoder)

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

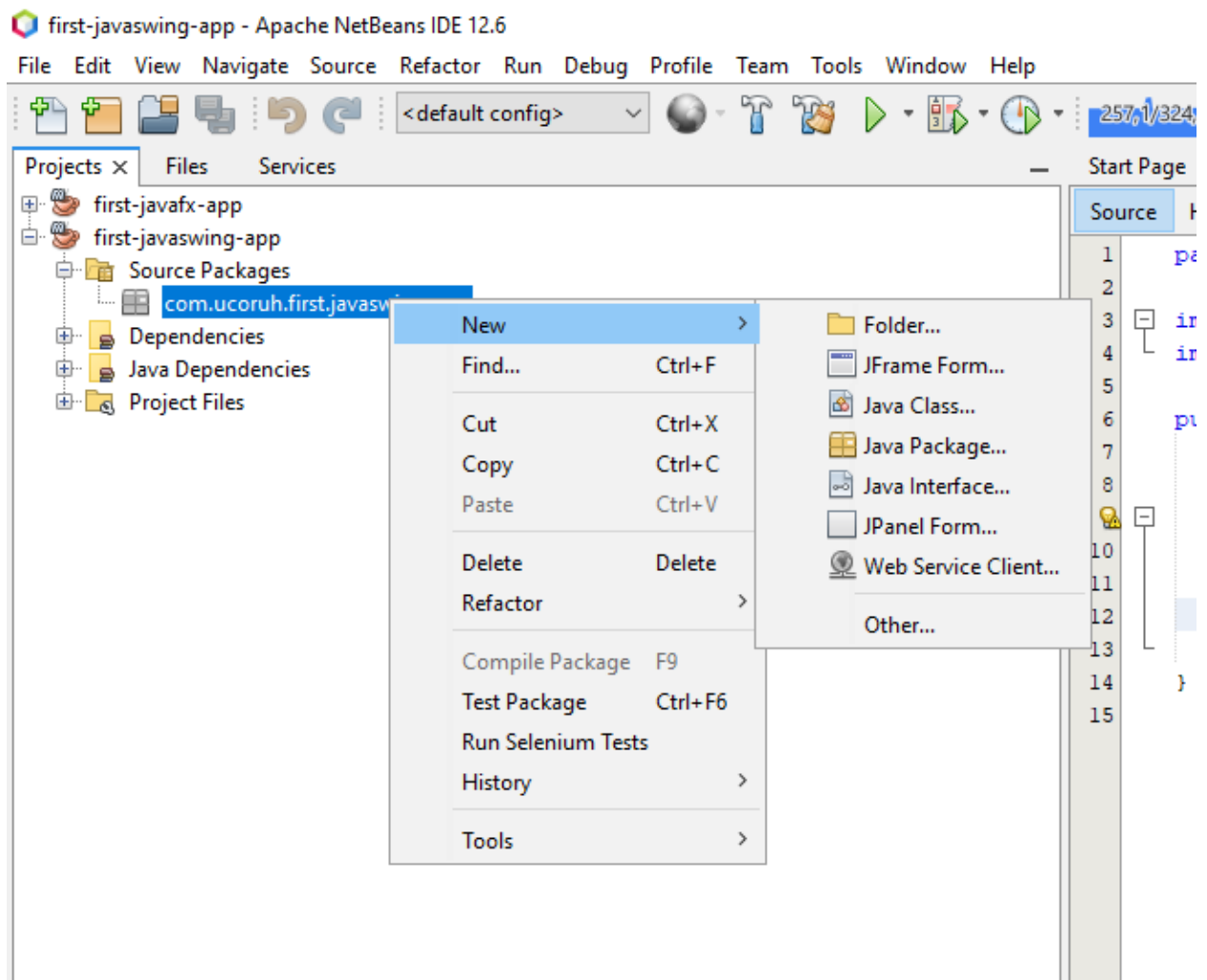




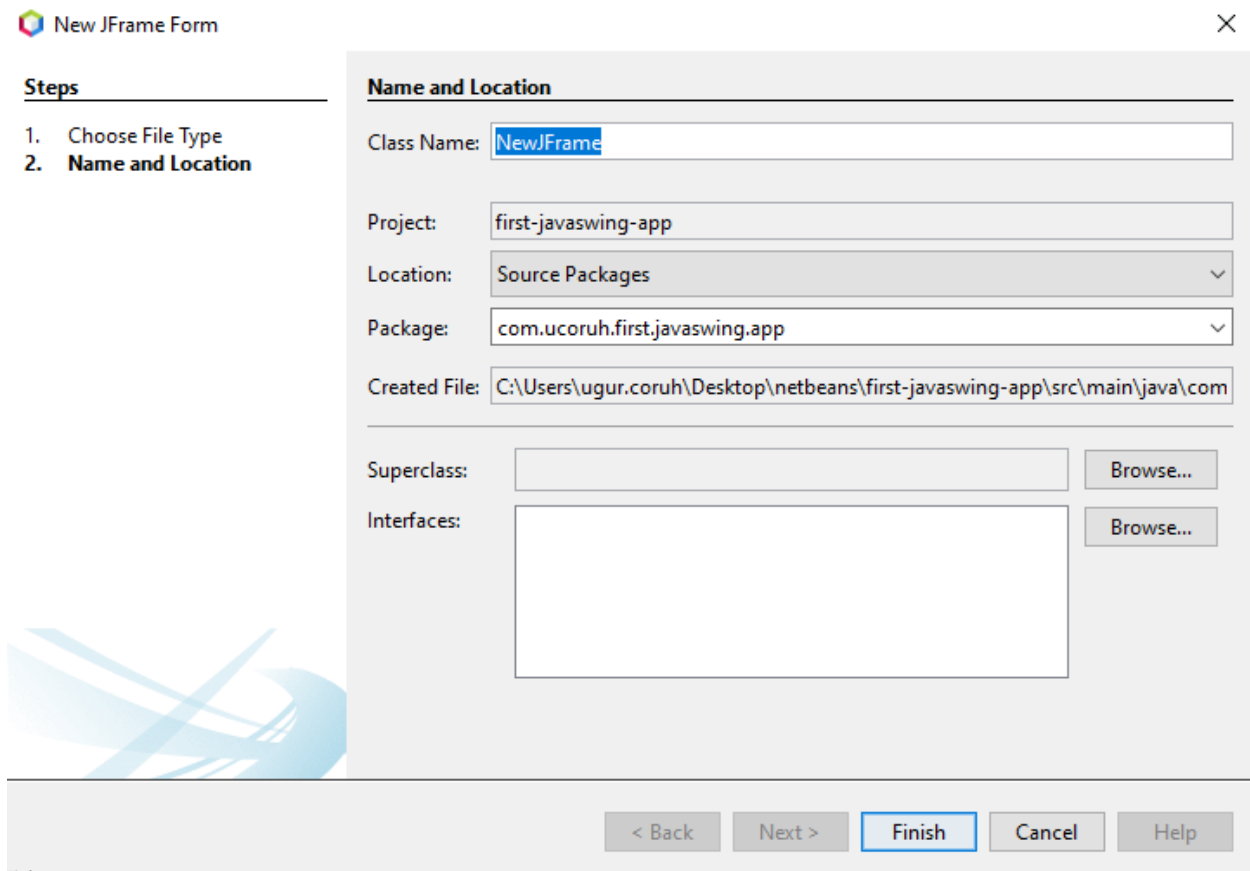
Configure Project



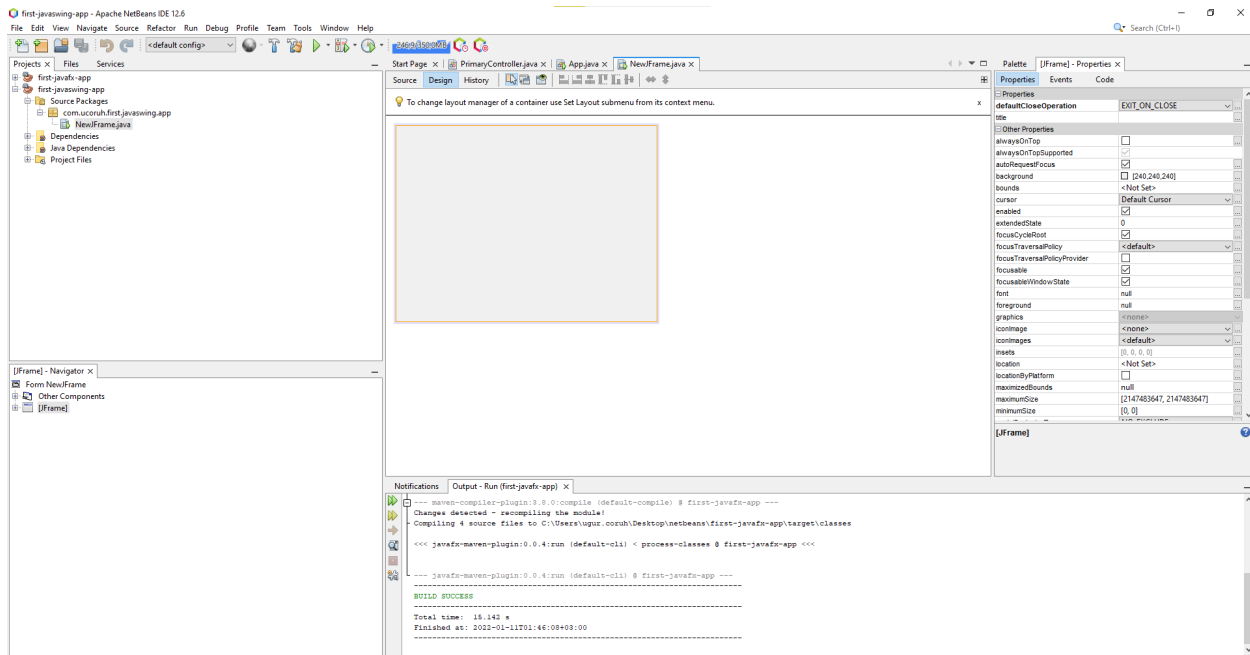
Open project and select package then select right-click -> New -> JFrame Form



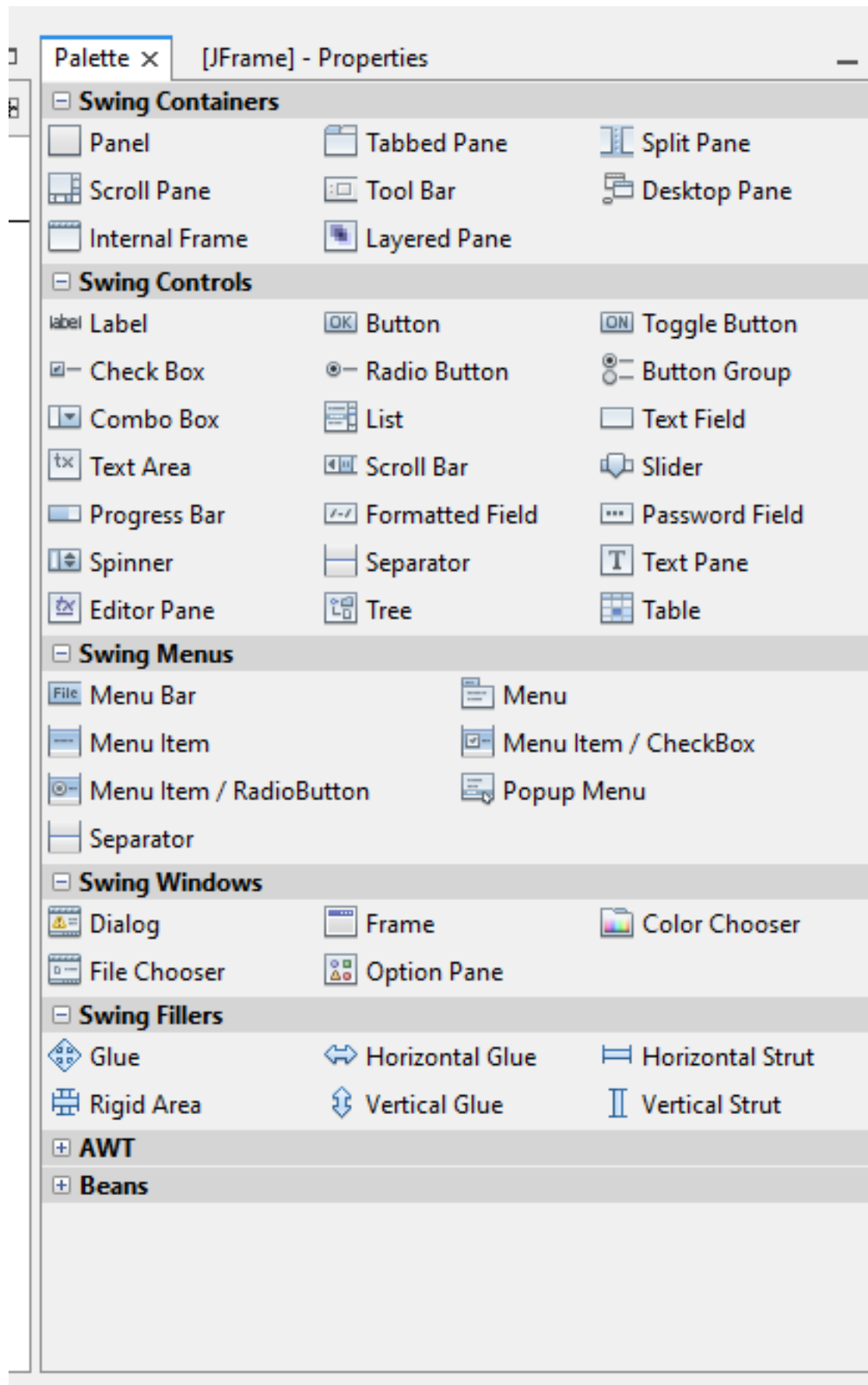
Give a name to your frame



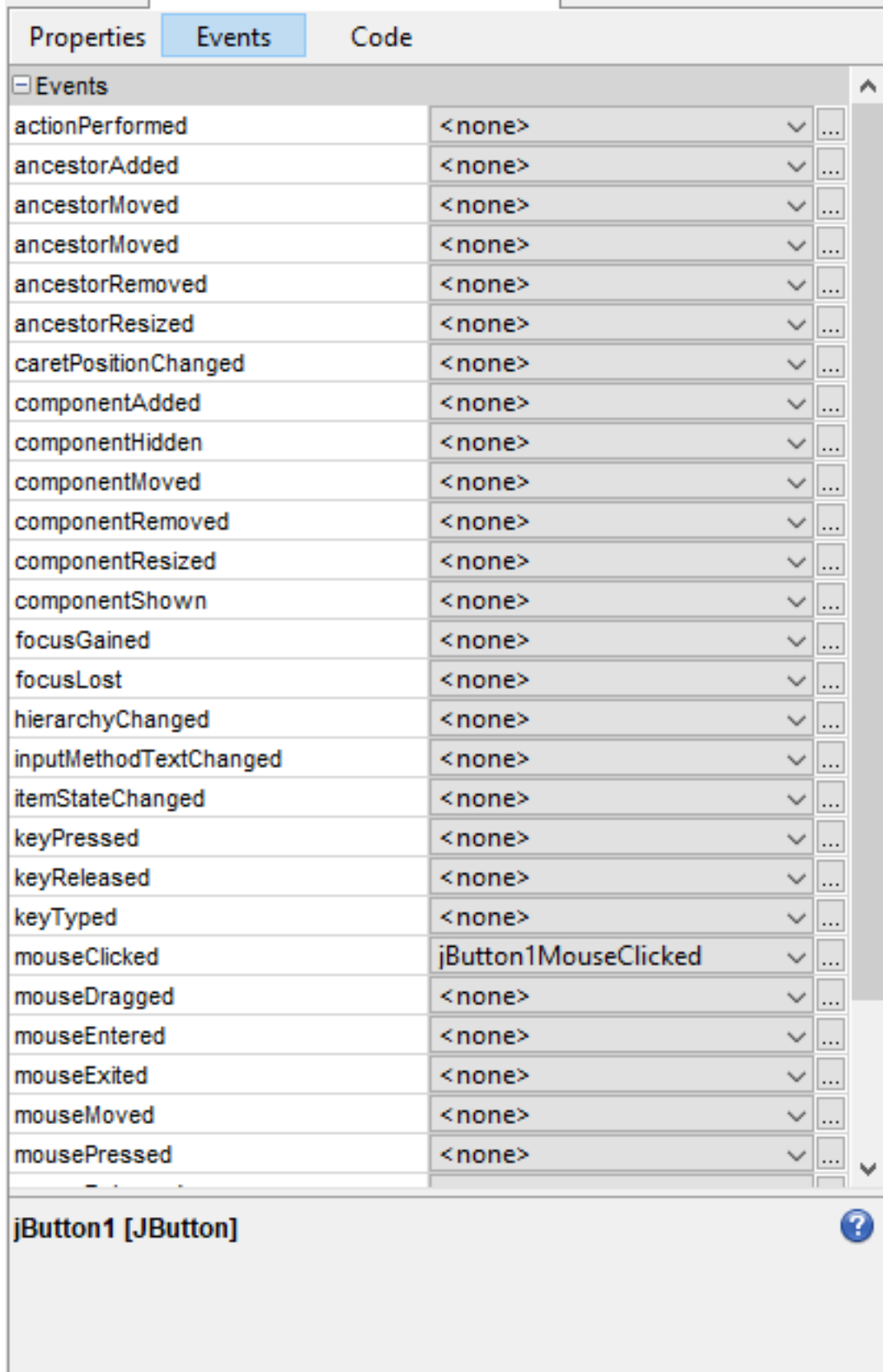
Swing GUI Builder is integrated with Netbeans



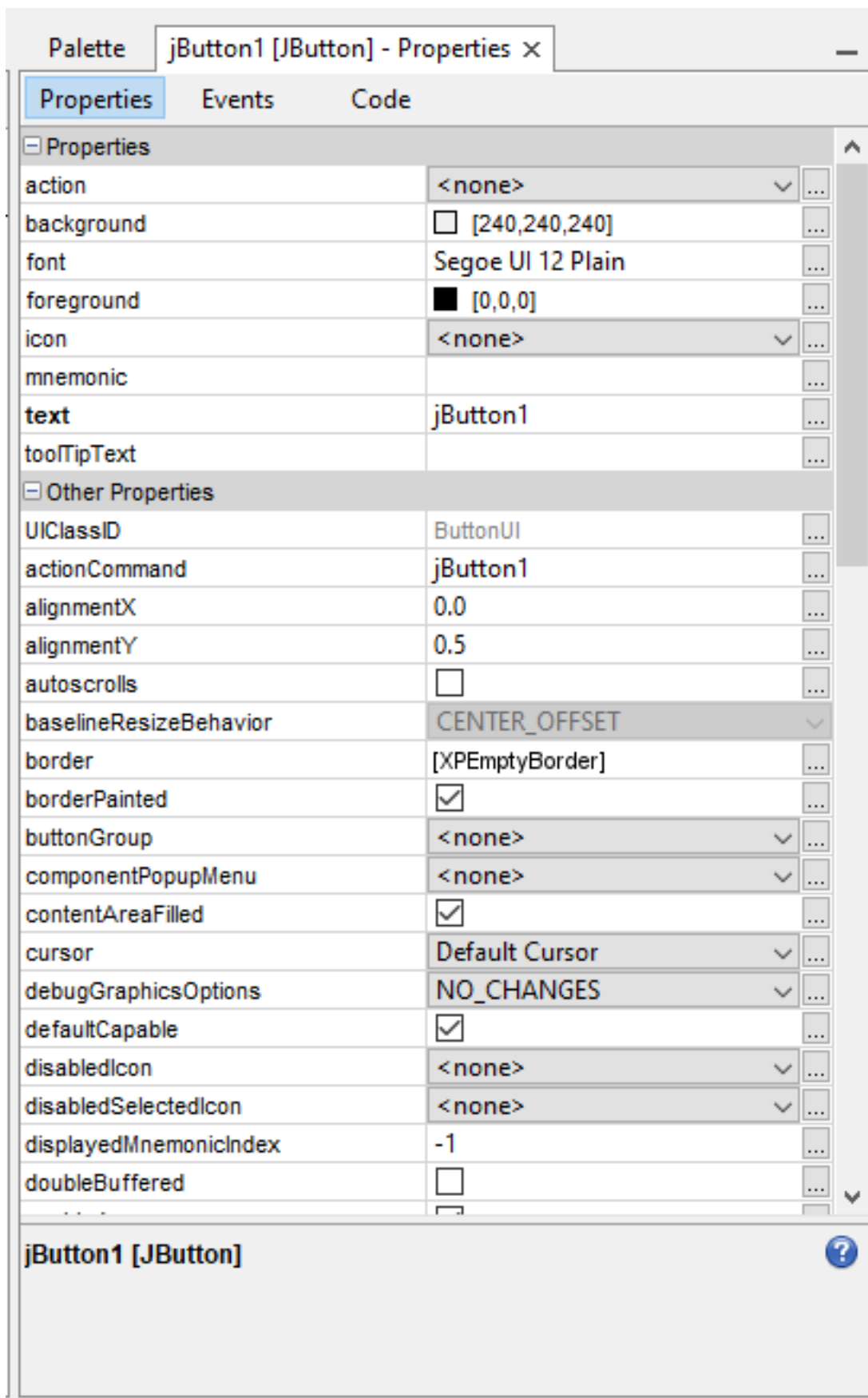
Drag-and-drop controls to panel from the palette



And from the events tab, add custom actions.



you can configure control properties from the properties screen

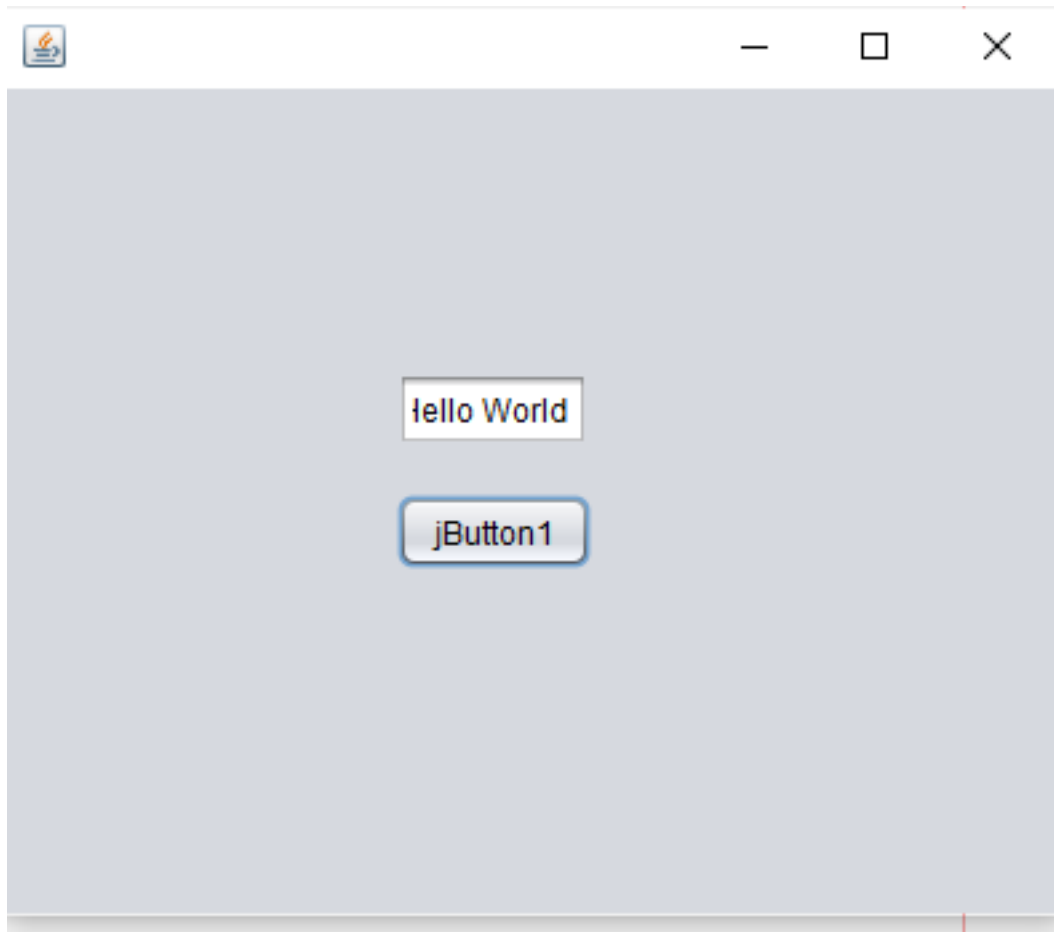


We can add simple events such as when the mouseClicked to button write text on the text field

“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



### 2.3.1 References

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