CE103 Algorithms and Programming I

Java GUI Programming

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# CE103 Algorithms and Programming I

# Week-15 (Java GUI Programming)

#### Fall Semester, 2021-2022

Download [DOC](ce103-week-15-java-gui.en.md_doc.pdf), [SLIDE](ce103-week-15-java-gui.en.md_slide.pdf), [PPTX](ce103-week-15-java-gui.en.md_slide.pptx)

## Java GUI Programming

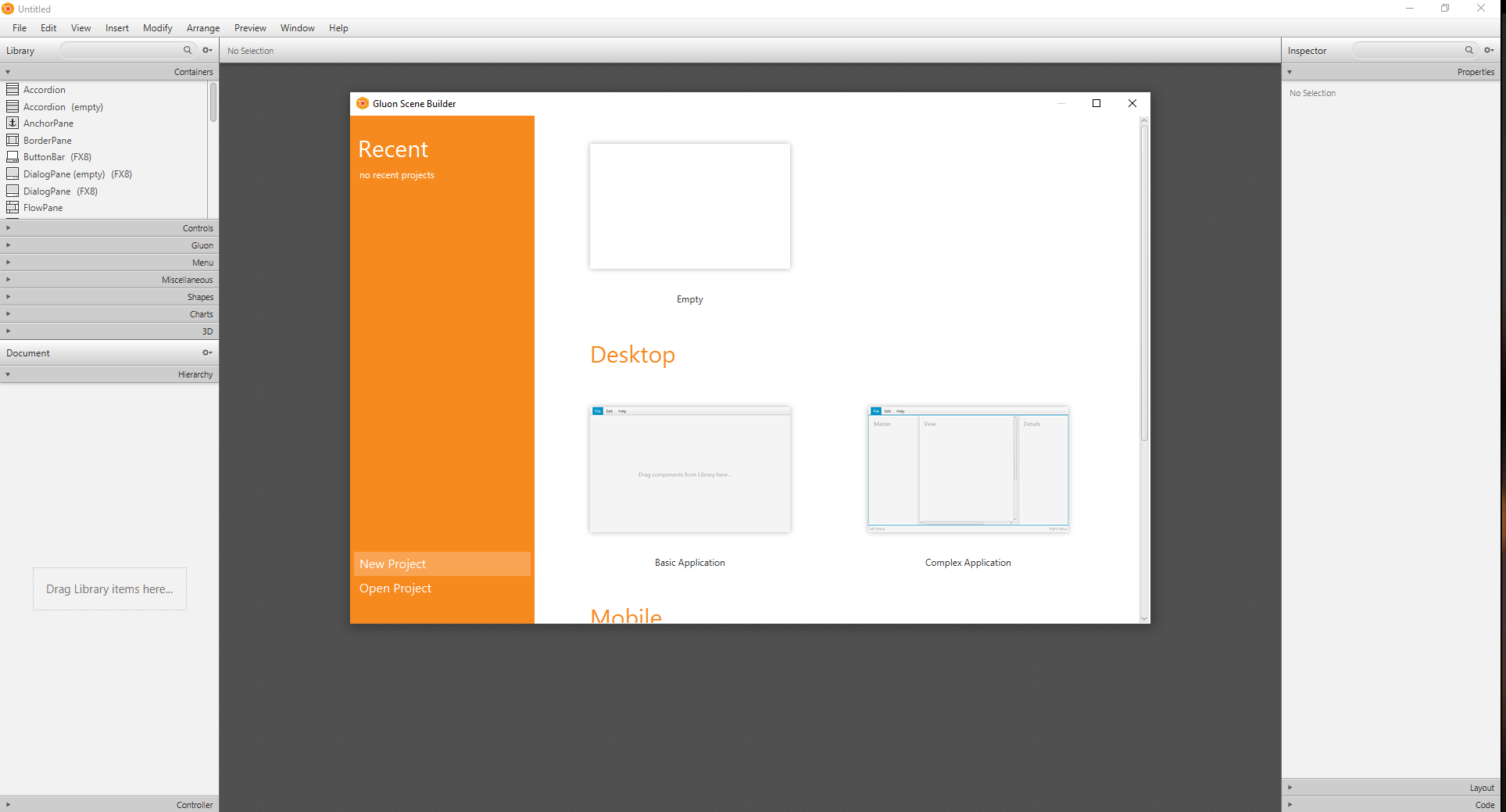
## JavaFX GUI Programming

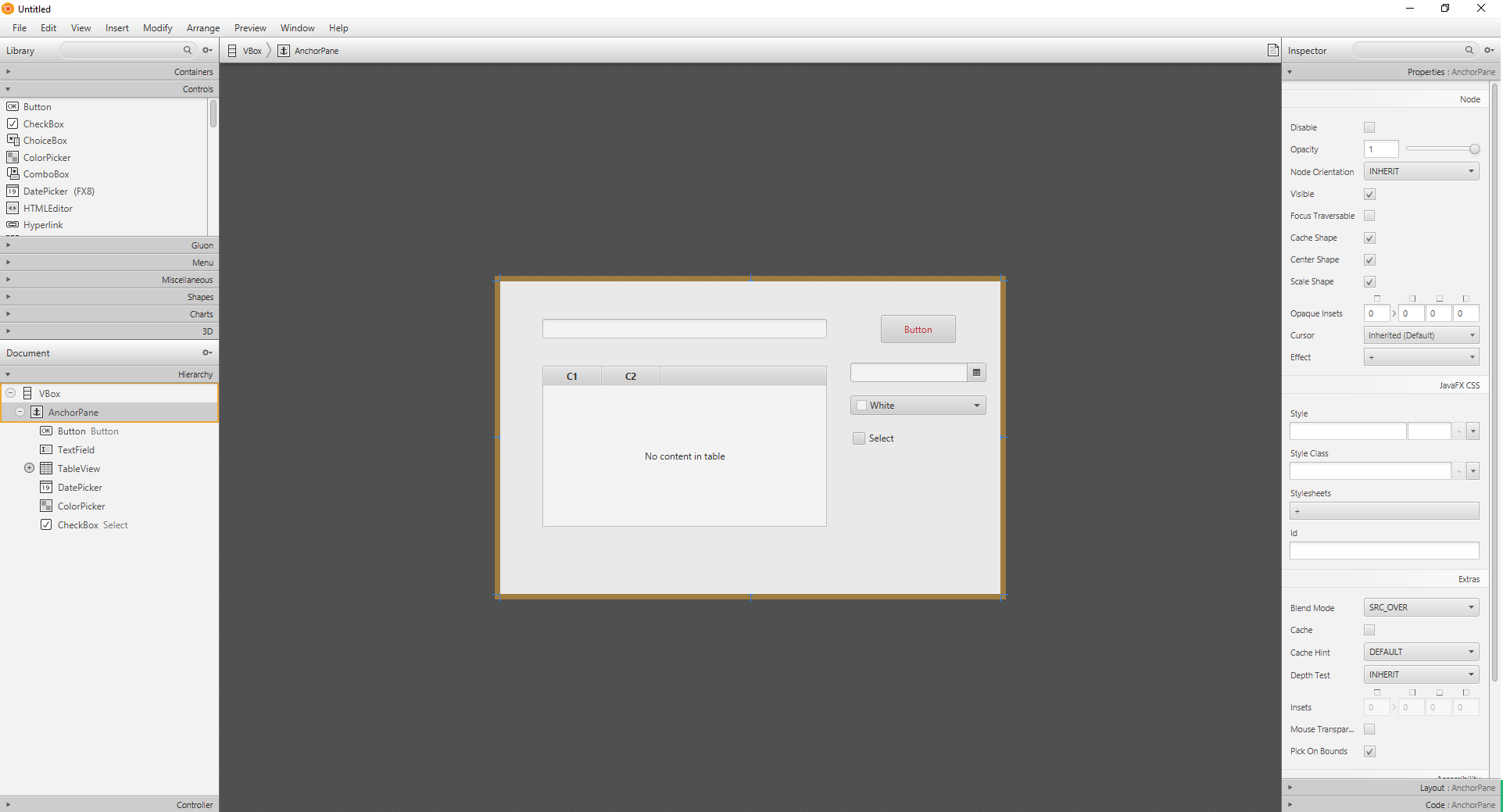
### 1-Install Gluon Scene Builder

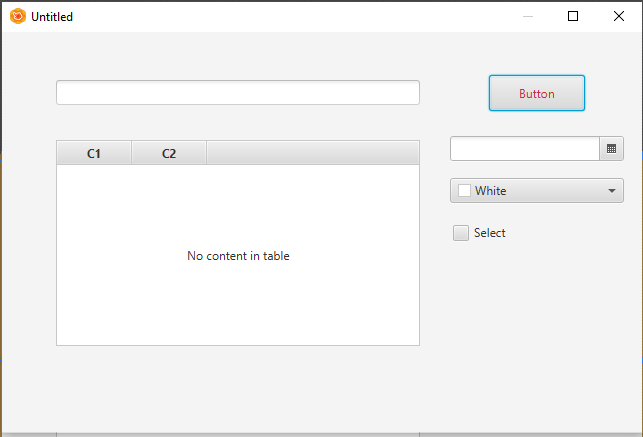
Download and Install Gluon Scene Builder from URL

[Scene Builder - Gluon](https://gluonhq.com/products/scene-builder/)

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





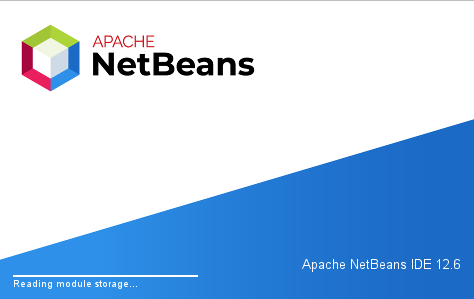


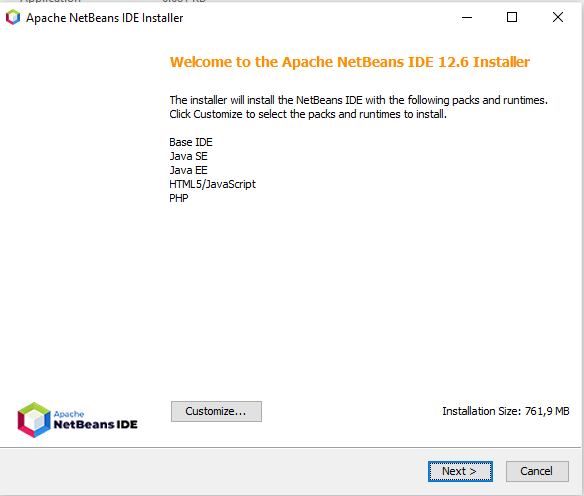
you can save this design as an FXML file from File->Save As

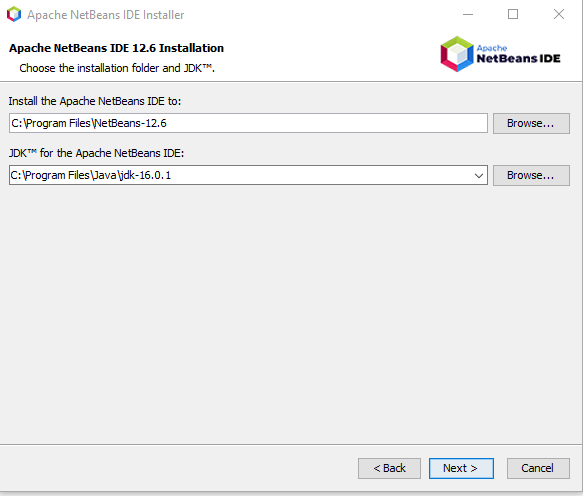
### 2-Install Apache Netbeans

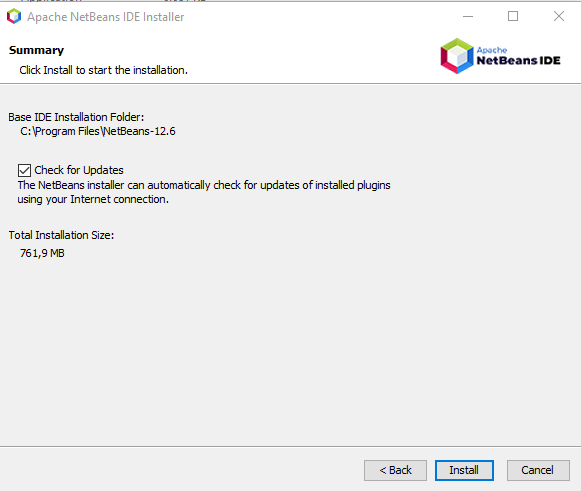
Download and install apache Netbeans

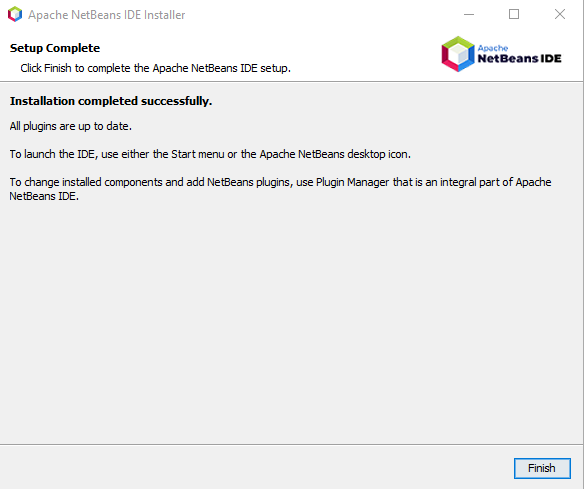
https://netbeans.apache.org/





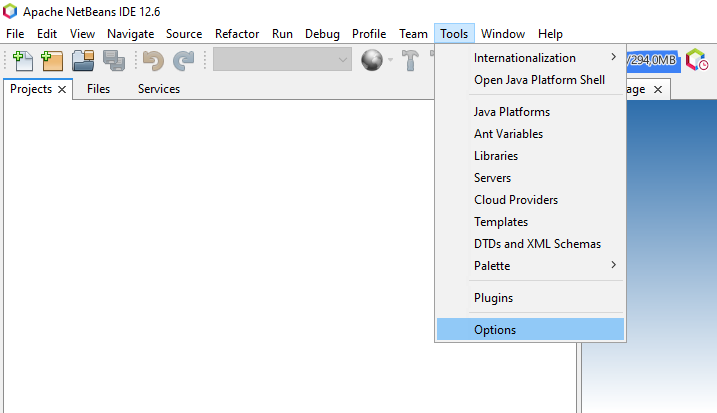


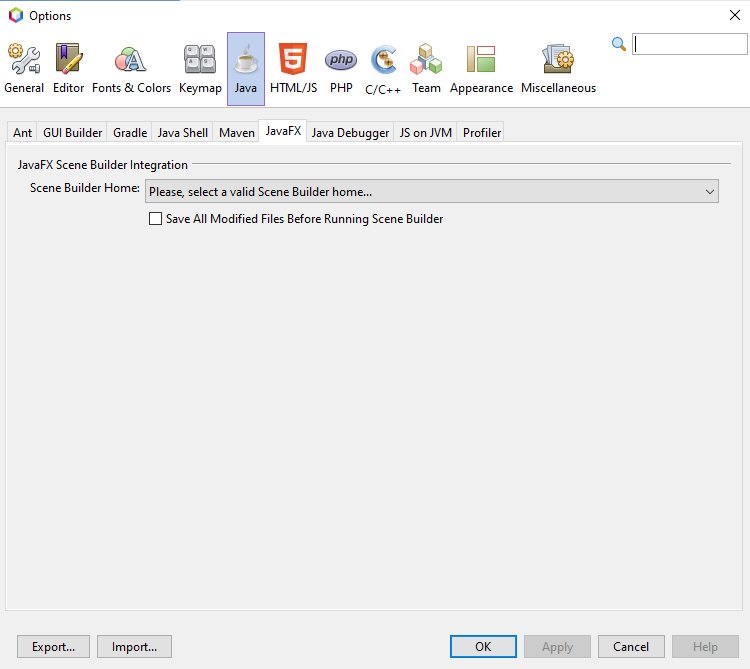




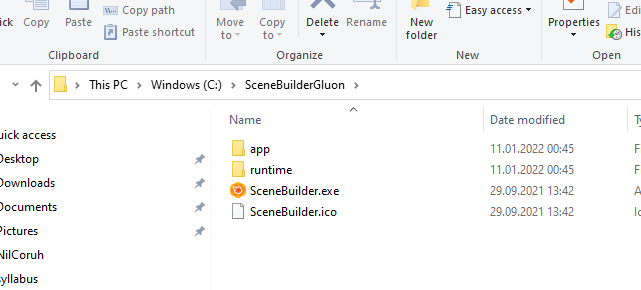
### 3- Configure JavaFX Scene Builder for Apache Netbeans

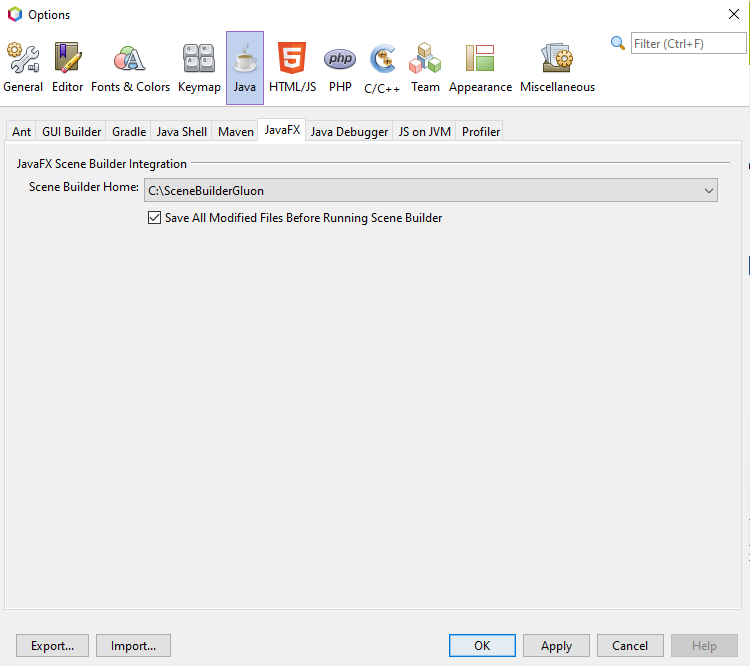
Open Tools->Options->Java->JavaFX





Select builder home



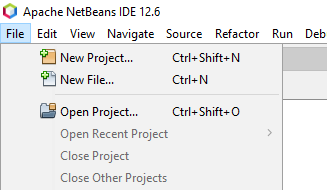


you can find old integration documentation here

[Using JavaFX Scene Builder with Java IDEs: Using Scene Builder with NetBeans IDE | JavaFX 2 Tutorials and Documentation](https://docs.oracle.com/javafx/scenebuilder/1/use_java_ides/sb-with-nb.htm)

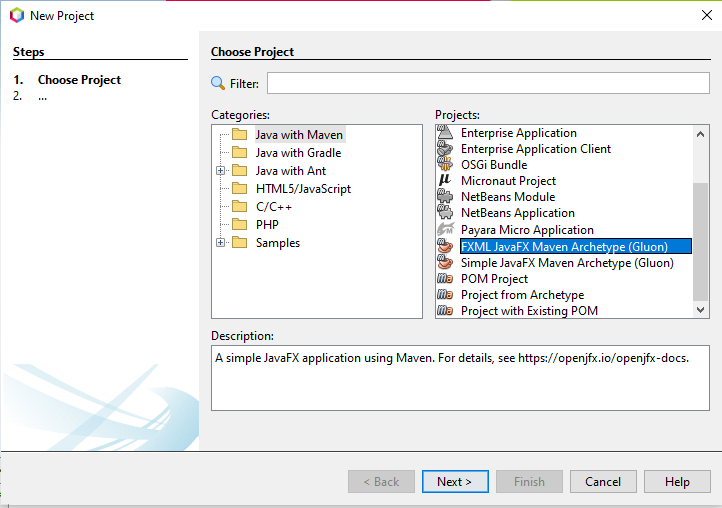
### 4-Create First Application

Select File->New Project

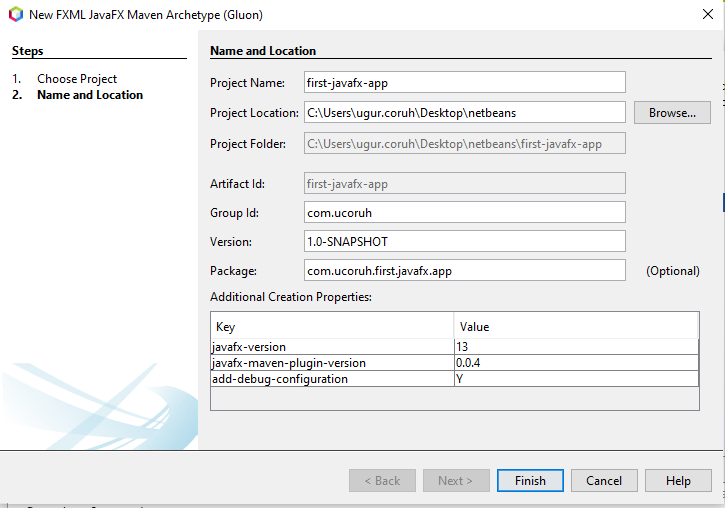


Select Java With Maven Types

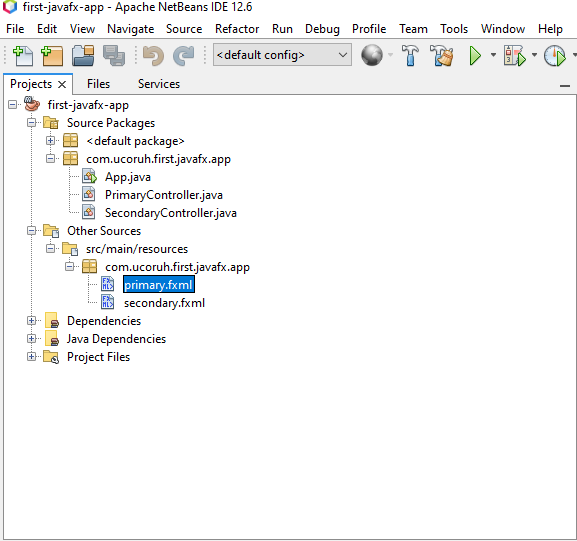
FXML JavaFX Maven Archetype (Gluon)

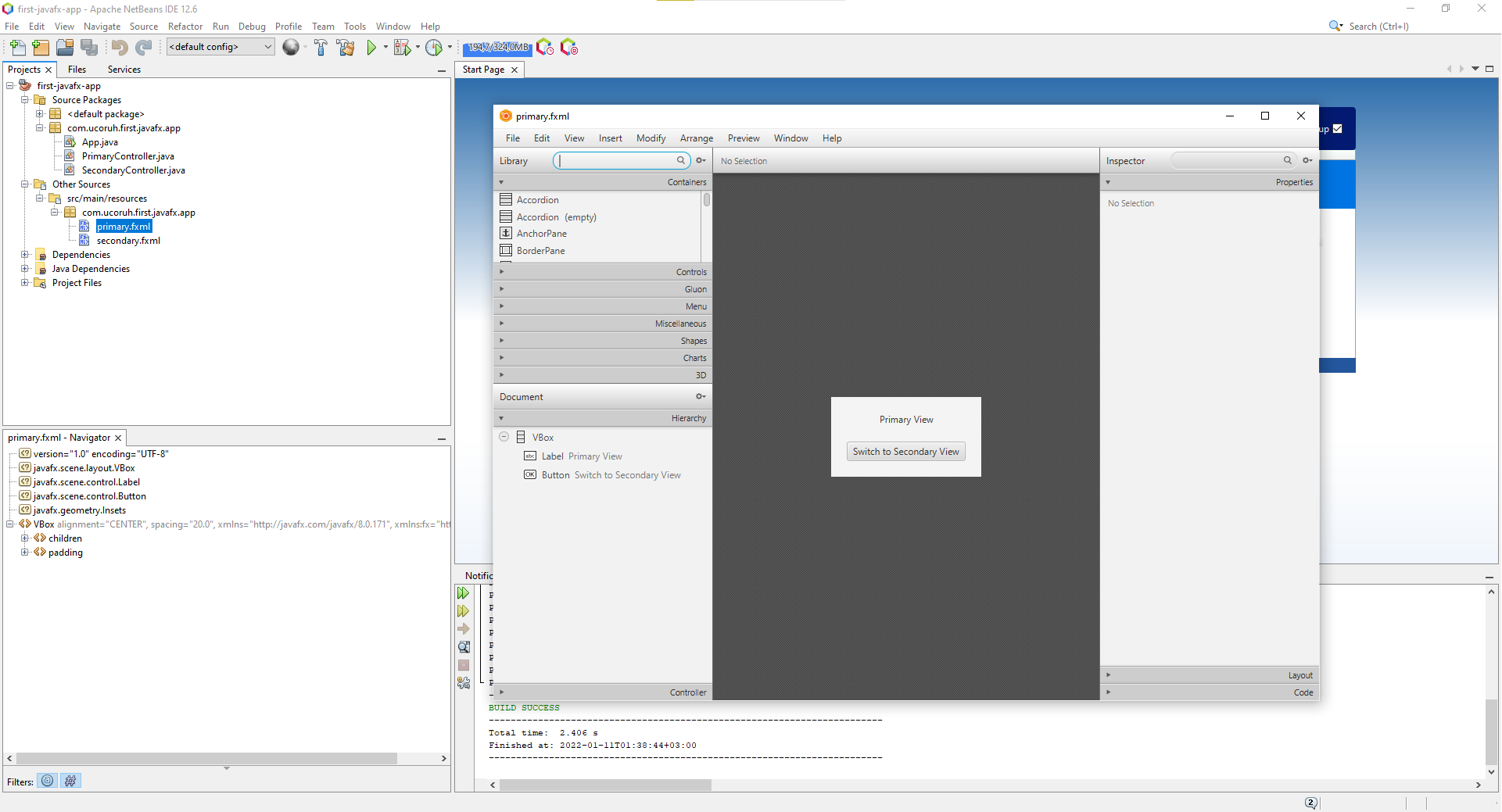


Set project properties

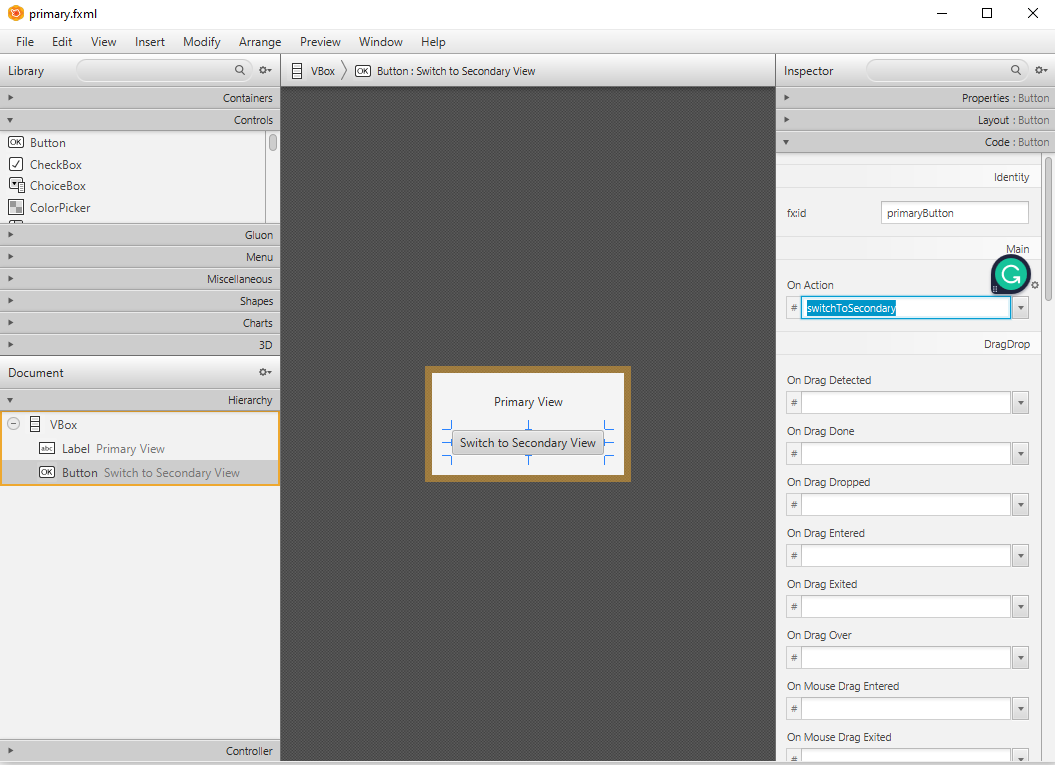


Open Project Resources and Click FXML files to run Scene Builder

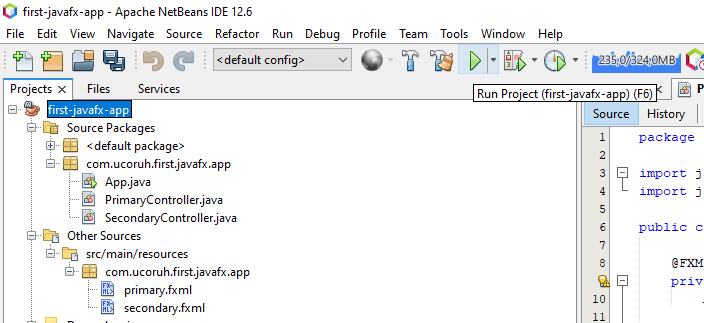




In designer properties tab will show control properties, code tab will show action bindings



Then you can run applications from Netbeans.



for introduction level information please check the following examples

[JavaFX Simple Calculator - Design and Code - YouTube](https://www.youtube.com/watch?v=oWk9fwRgV_k&ab_channel=qBit)

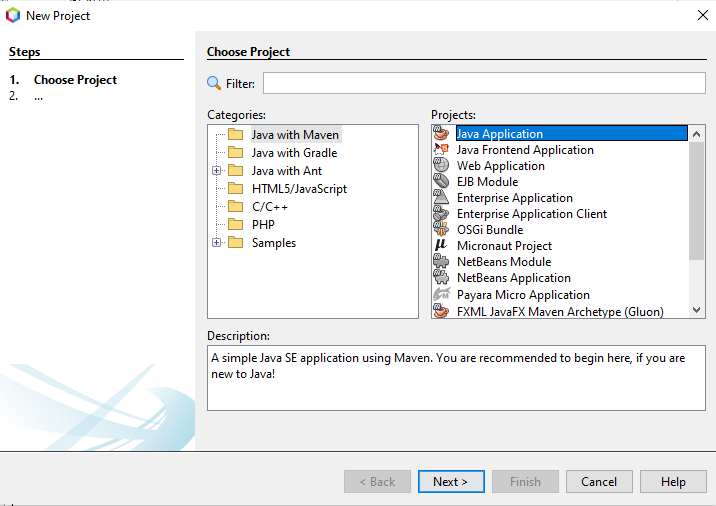
[JavaFX Library Management System Development #0: Introduction - YouTube](https://www.youtube.com/watch?v=9d3X8eBov1M&ab_channel=GenuineCoder)

for more information about JavaFX please check the following

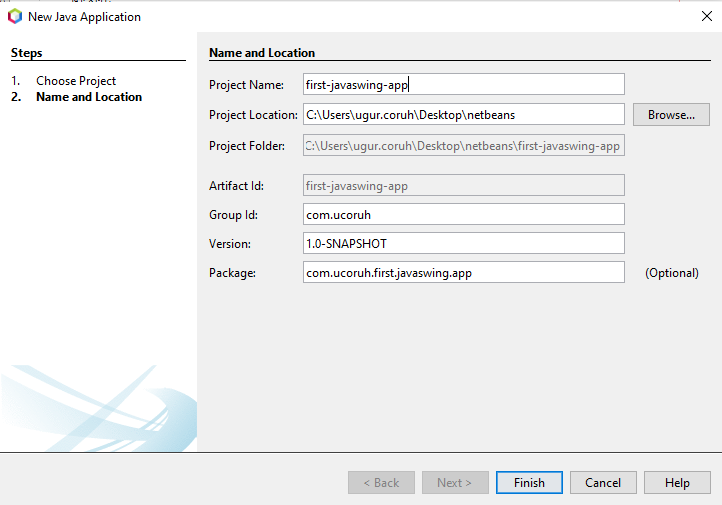
[JavaFX Tutorial - javatpoint](https://www.javatpoint.com/javafx-tutorial)

## Java Swing GUI Programming

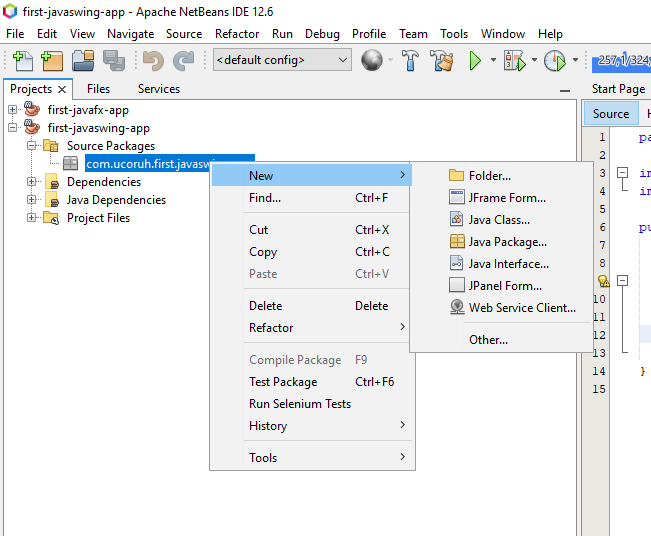
Select File->New Project -> Java with Maven -> Java Application



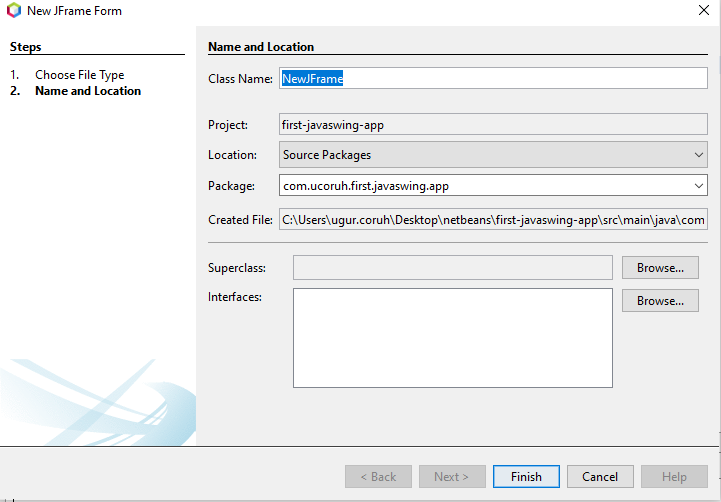
Configure Project



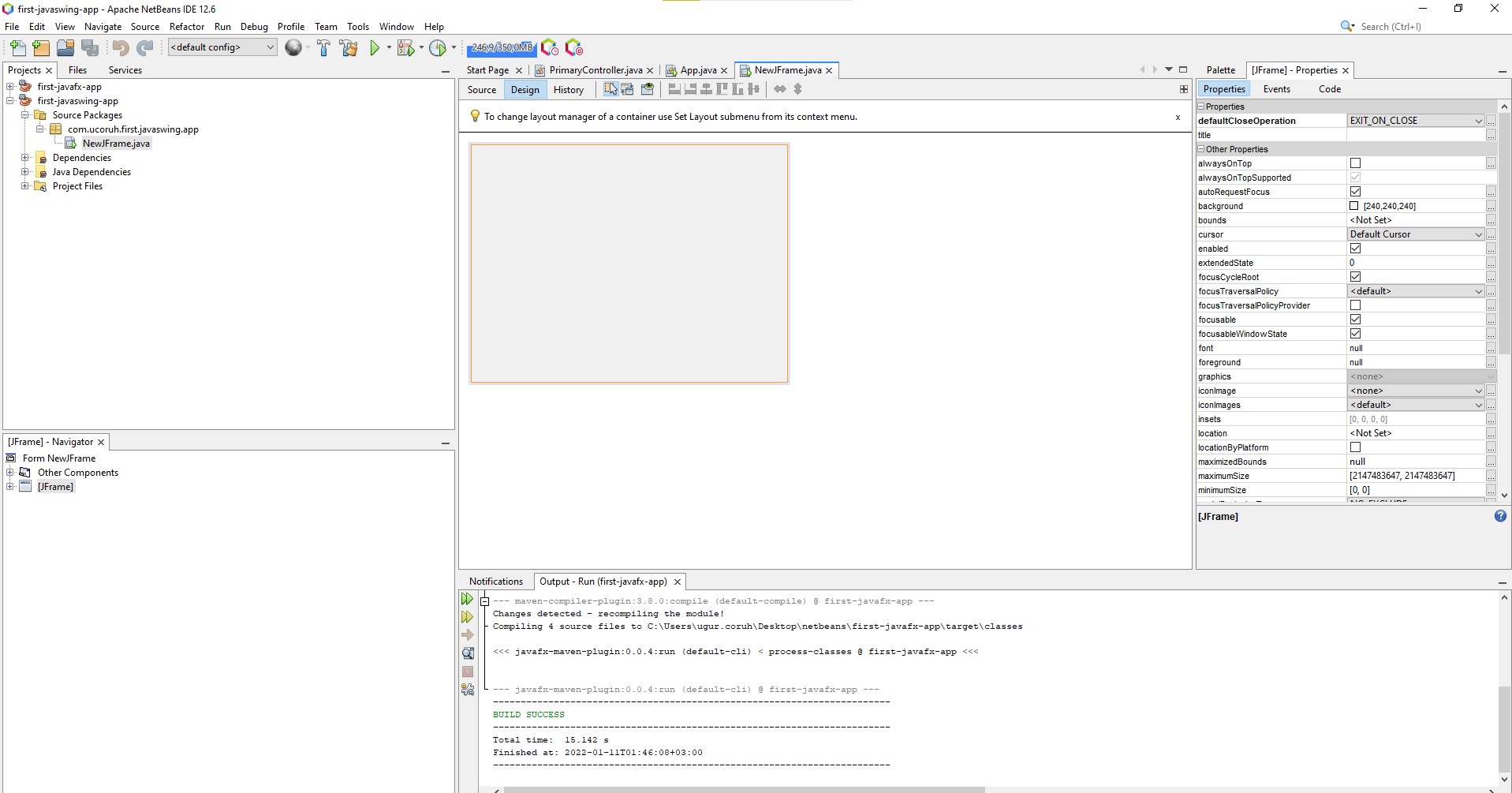
Open project and select package then select right-click -> New -> JFrame Form



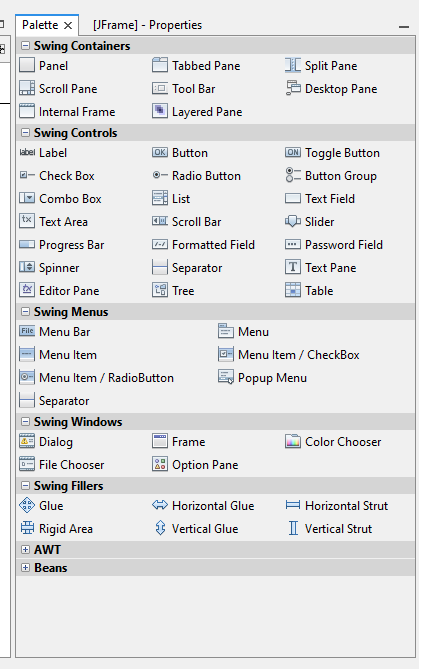
Give a name to your frame



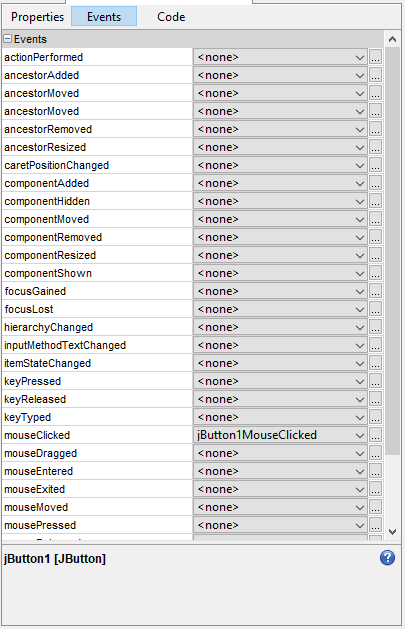
Swing GUI Builder is integrated with Netbeans



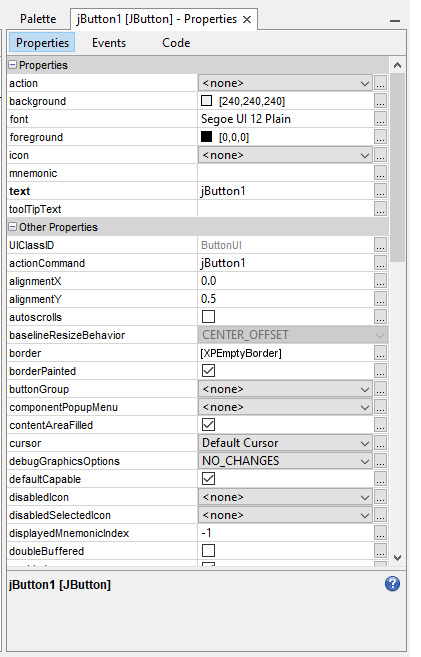
Drag-and-drop controls to panel from the palette



And from the events tab, add custom actions.

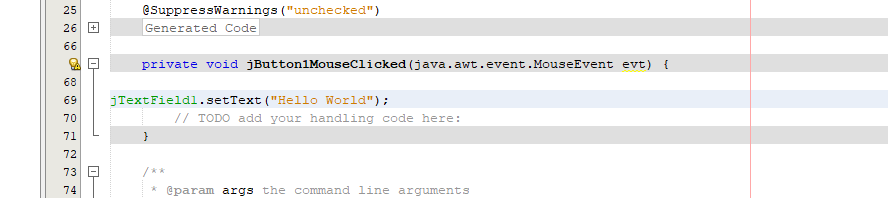


you can configure control properties from the properties screen

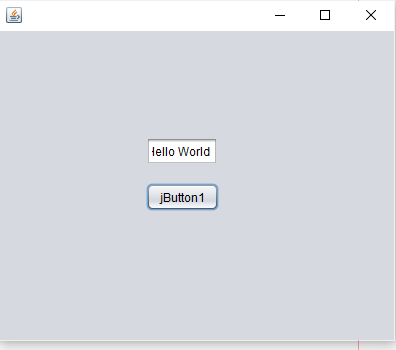


We can add simple events such as when the moclickscked to button write text on the text field

“Hello World”



When you run application, you will see the following screen



### References

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