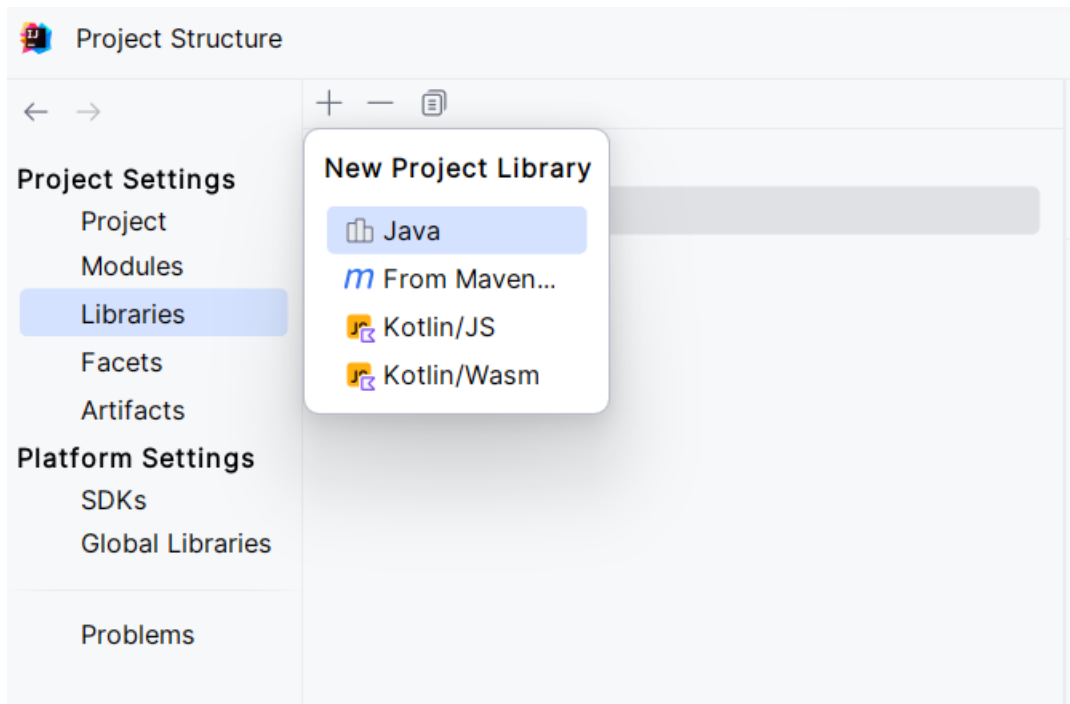
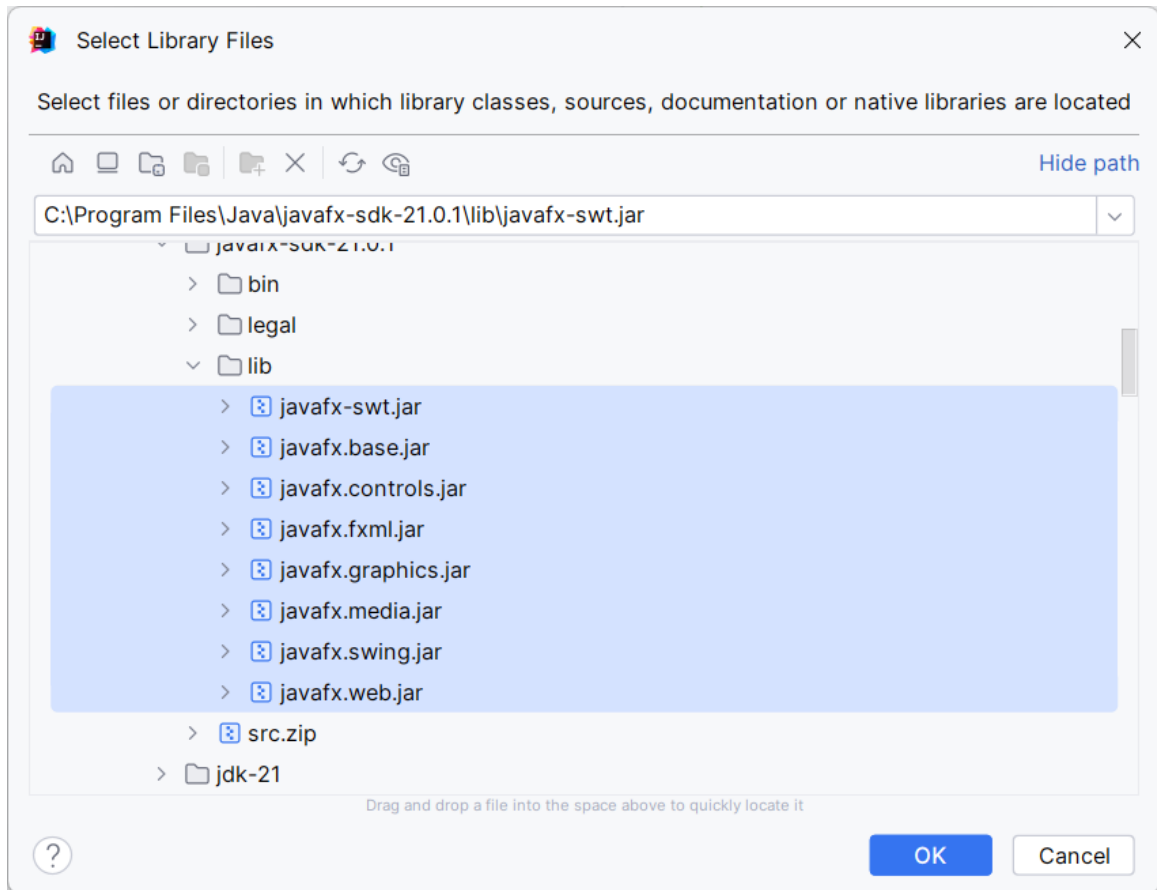


Setting up and using JavaFX

1. Download JavaFX SDK (<https://wiki.openjdk.org/display/OpenJFX>) and unzip the files in a folder of choice. In my example, I will use: c:\Program Files\Java\javafx-sdk-21.0.1\
2. In your existing project, go to File → Project Structure → Libraries → New Project Library → Java and select all .jar files in the **Lib** folder of JavaFX.



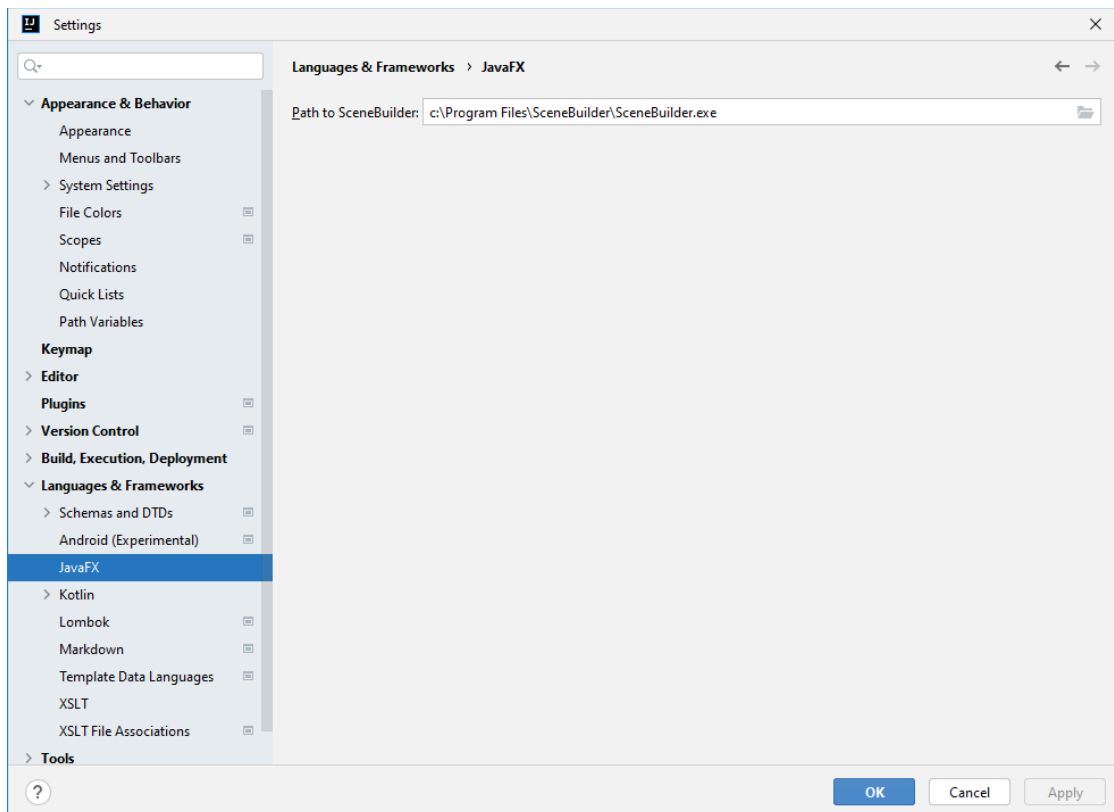


3. Add a new package to your project, for the GUI (in this example, the package is called **gui**). This package will contain the main JavaFX application, the FXML file for the interface, as well as the Controller.
4. Add another new package, which will contain the Main java file (in this example, the package is called **main**).
5. Create a new module-info.java file (in the **src** folder), as follows:

```
module gui {  
    requires javafx.controls;  
    requires javafx.fxml;  
    requires java.sql;  
    requires org.xerial.sqlitejdbc;  
  
    opens gui to javafx.fxml;  
    opens main to javafx.fxml;  
  
    exports gui;  
    exports main;  
}
```

For more information on Java 9 modules, please see this: <https://www.oracle.com/corporate/features/understanding-java-9-modules.html>

6. In package **gui**, create a new FXML file (which will represent your graphical user interface) and a new java class for the Controller. In this example, these are called "*BooksGUI.fxml*" and "*BooksGUIController.java*".
7. If you have already installed SceneBuilder (see Lecture 7), to be able to use it directly from IntelliJ, do the following: in Settings → Languages & Frameworks → JavaFX – set the path to SceneBuilder:



8. Right click on your *BooksGUI.fxml* file, open it in SceneBuilder and start building your graphical user interface.
9. In SceneBuilder you can get the code for the Controller class by going to View → Show Sample Controller Skeleton.
10. The *BooksGUIController* class will use the existing service (which will be passed through the constructor).
11. Create the *Main.java* (which extends *javafx.application.Application*) class in the **main** package.

12. In the start method in your Main application make sure to provide the service to your “controller” class and set the controller to the FXML loader, as follows:

```
@Override
public void start(Stage stage) throws Exception {
    IRepository<Book, Integer> repo = getRepository();
    BooksService serv = new BooksService(repo);
    BooksGUIController controller = new BooksGUIController(serv);

    FXMLLoader loader = new
FXMLLoader(getClass().getResource("/gui/BooksGUI.fxml"));
    loader.setController(controller);
    Scene scene = new Scene(loader.load());
    stage.setScene(scene);
    stage.show();
}
```