

# **St Francis Institute of Technology, Mumbai-400 103**

**Class: SE-ITA/ITB Semester: III; A.Y. 2020-2021**

**Subject: Java Labs**

## **Title-10: Java Program to implement GUI using JavaFX.**

### **1. Aim:**

- i. Write a Java program to design a Login Form using JavaFX Controls.

### **2. Prerequisite:** Knowledge of AWT,Swings and JavaFX GUI components.

### **3. Requirements:** Personal Computer (PC), Windows Operating System, Net beans 8.0.

### **4. Pre-Experiment Exercise:**

#### **Theory:**

#### **a. JavaFX:**

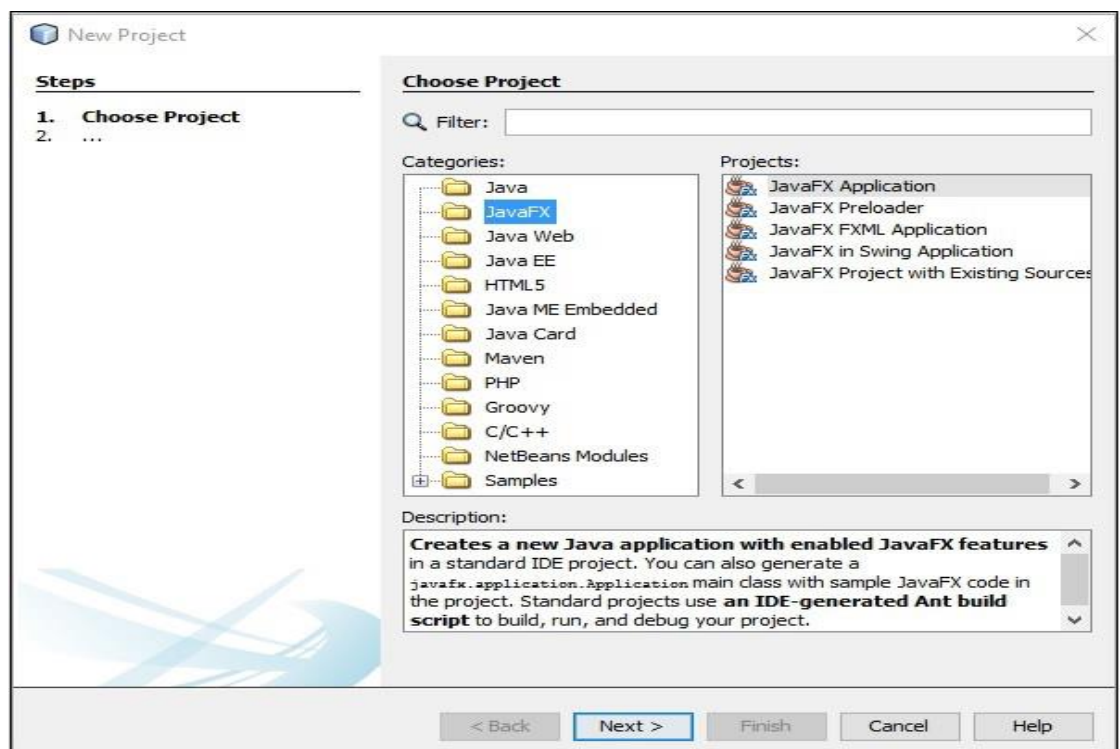
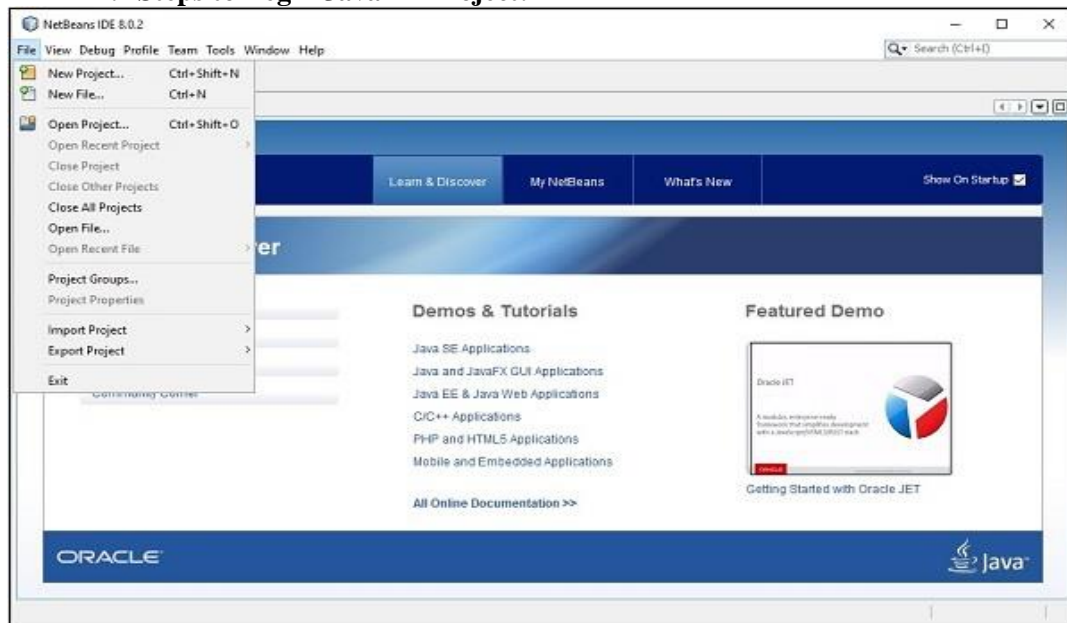
JavaFX is a Java library used to develop Desktop applications as well as Rich Internet Applications (RIA). The applications built in JavaFX, can run on multiple platforms including Web, Mobile and Desktops.

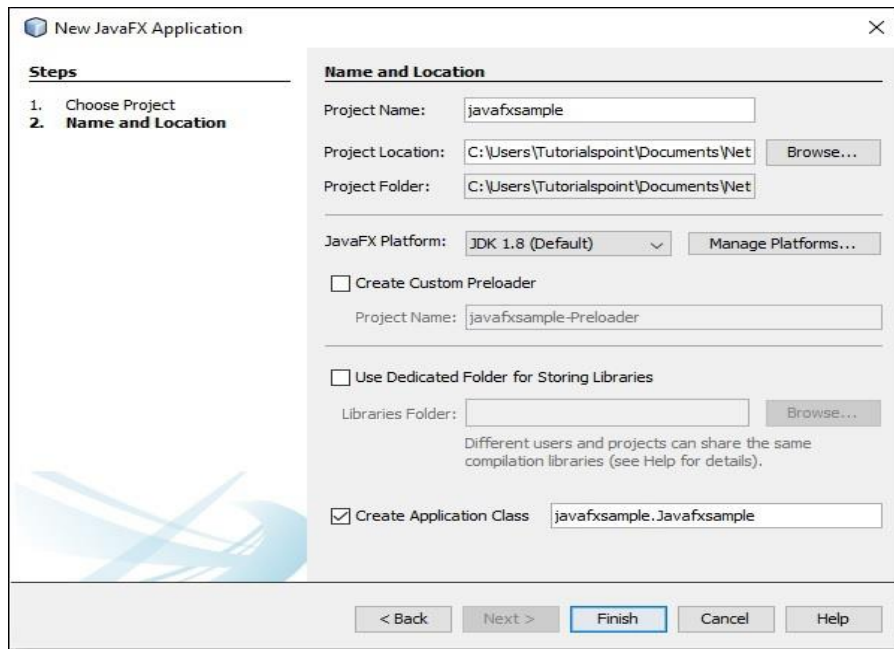
#### **b. JavaFX Features:**

- i. **FXML** – JavaFX features a language known as FXML, which is a HTML like declarative markup language.
- ii. **Built-in UI controls** – JavaFX library caters UI controls using which we can develop a full-featured application.
- iii. **Canvas**-Within the package **javafx.scene.canvas** it holds a set of classes for canvas, using which we can draw directly within an area of the JavaFX scene. JavaFX also provides classes for Printing purposes in the package **javafx.print**.
- iv. **Integrated Graphics library** – JavaFX provides classes for **2d** and **3d** graphics.

## 5. Laboratory Exercise

### A. Steps to Begin JavaFX Project:





## B. Program code with comments:

Write and execute your program code to achieve the given aim and attach it **with your own comments with neat indentation.**

## C. Post-Experiments Exercise

### A. Extended Theory:

1. Explain the lifecycle methods of JavaFX.

### B. Results/Observations/Program output:

Present the program input/output results and comment on the same.

### C. Questions/Programs:

Write Java program to draw various shapes on Canvas using JavaFX.

### D. Conclusion:

1. Write what was performed in the experiment/program.
2. What is the significance of experiment/program?
3. Mention few applications of what was studied.

### E. References

1. Java 8 Programming-Black Book,by-Dreamtech Publications.
2. [www.programmingsimplified.com](http://www.programmingsimplified.com)
3. [www.javatpoint.com](http://www.javatpoint.com)

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