

Java Vs. JavaFX

Done by: AL – Muiayed AL -
Ansari

1. Definition and Purpose

Java: A high level or an object-oriented programming language utilized to create applications on high platform such as desktop, web, mobile and server side applications.

- JavaFX: An interface framework of Java that enables applications to develop rich and interactive desktop interfaces including visual components such as buttons, sliders, charts and other animation.

2. Core Functionality

Feature	Java	JavaFX
Purpose	General logic and backend	GUI and frontend
Output	Console-based or server-side	Window-based with visual components
UI Support	Limited (via Swing or AWT)	Advanced (modern UI with CSS, FXML)
Media & Animation	Not built-in	Built-in support for video, audio, transitions

3. GUI Capabilities

- Java has been using older libraries such as AWT and Swing in basic GUI operations.

JavaFX JavaFX is a replacement of Swing based on a more modern, flexible system:

- Uses Scene Graph for layout
- Supports CSS styling
- Supports FXML as a declarative UI design.
- It has an embedded controls such as charts, tables and web views.

4. Integration and Usage

JavaFX is not an independent language, and is a collection of Java classes and libraries.

- JavaFX is a programming language written within Java projects.

JavaFX The JavaFX applications have a Stage and Scene as a starting point, as opposed to a main() in Java.