

Java SE: Building Your First JavaFX Application

INTRODUCTION



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Outline



Understand what JavaFX is

Setup development environment

Write a Hello World program

Setup NetBeans IDE

Write Hello World again using IDE

Understand life cycle of applications



Console Applications



Operate within a console

Only way to interact is through keyboard

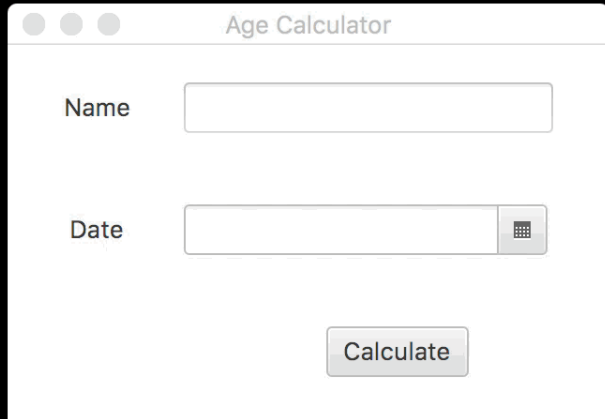
No Mouse or other input devices

Less tolerant towards errors

Super boring



UI Applications

A screenshot of a graphical user interface for an 'Age Calculator'. The window has a title bar with three standard macOS window control buttons (red, yellow, green) on the left and the text 'Age Calculator' in the center. Below the title bar, there are two input fields. The first is labeled 'Name' and is a simple text box. The second is labeled 'Date' and is a date picker with a small calendar icon on the right. Below these two fields is a single button labeled 'Calculate'.

Has a graphical user interface

Users can see the big picture

Can work with other input devices such as mouse, touch screen etc.,

More tolerant of user errors

Colorful and interactive

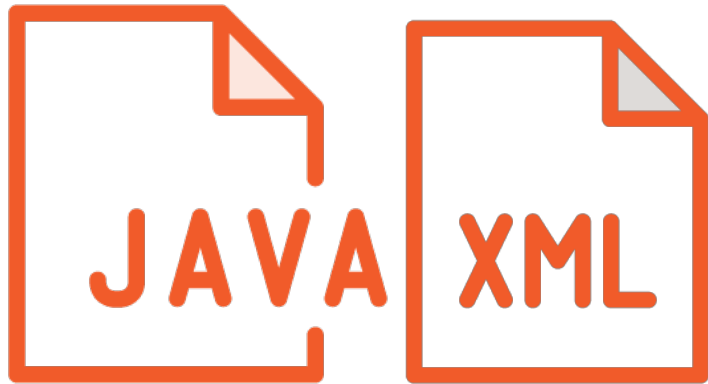
JavaFX

Library with a set of interoperable API written in Java for the purpose of creating User Interface Applications.



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Popular Languages



Consistent UI



CSS Styling

UI Development Frameworks

AWT

SWING

JavaFX



UI Development Frameworks

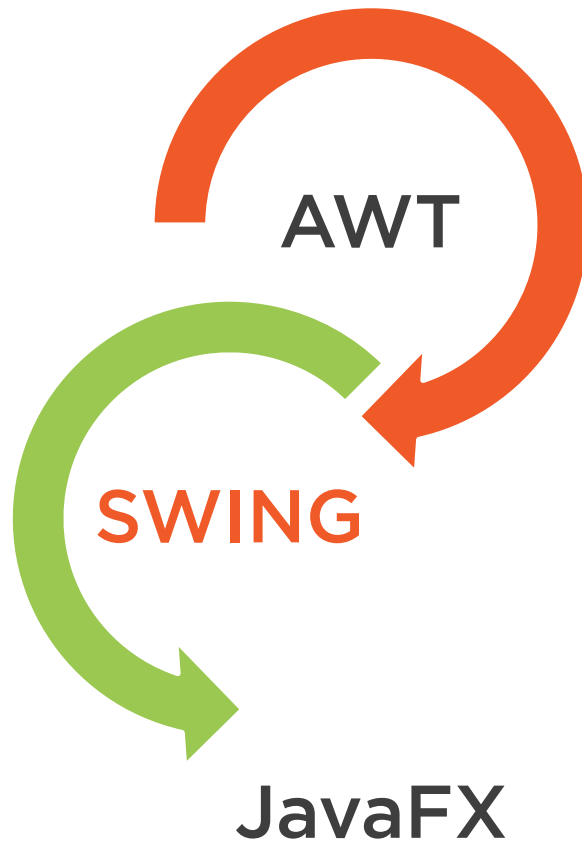


JavaFX

1995



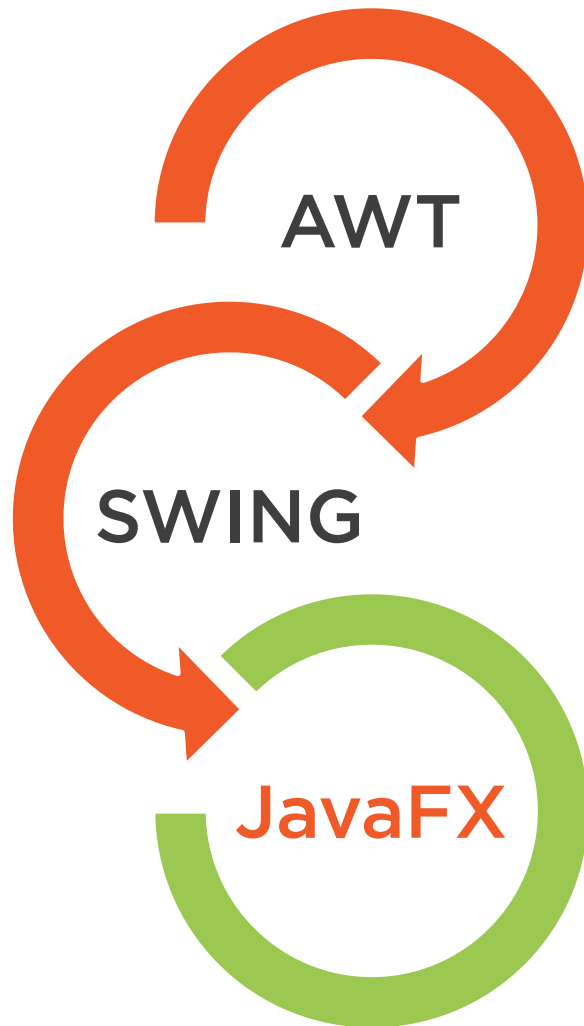
UI Development Frameworks



1997



UI Development Frameworks



2008



Rich History of JavaFX

Early 2000s

Chris Oliver @ SeeBeyond
Created a language F3

2007

Sun @ JavaOne
JavaFX was announced

2009

JavaFX 1.1 released
Mobile support introduced

2005

Sun Acquired SeeBeyond
F3 is renamed as JavaFX

2008

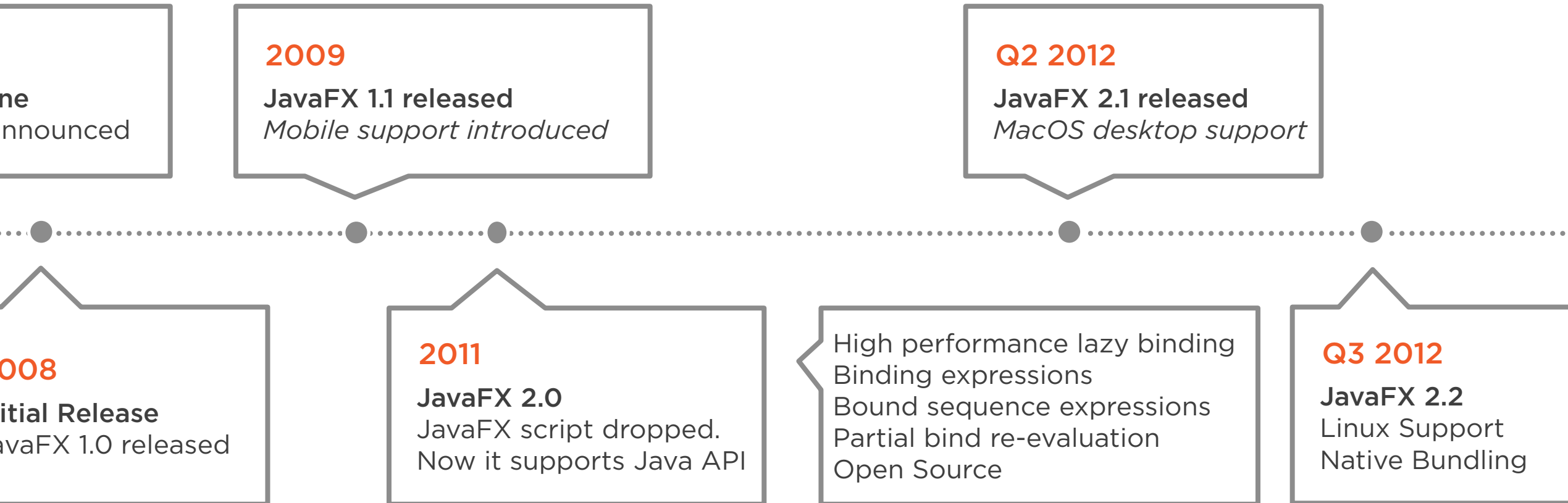
Initial Release
JavaFX 1.0 released

2011

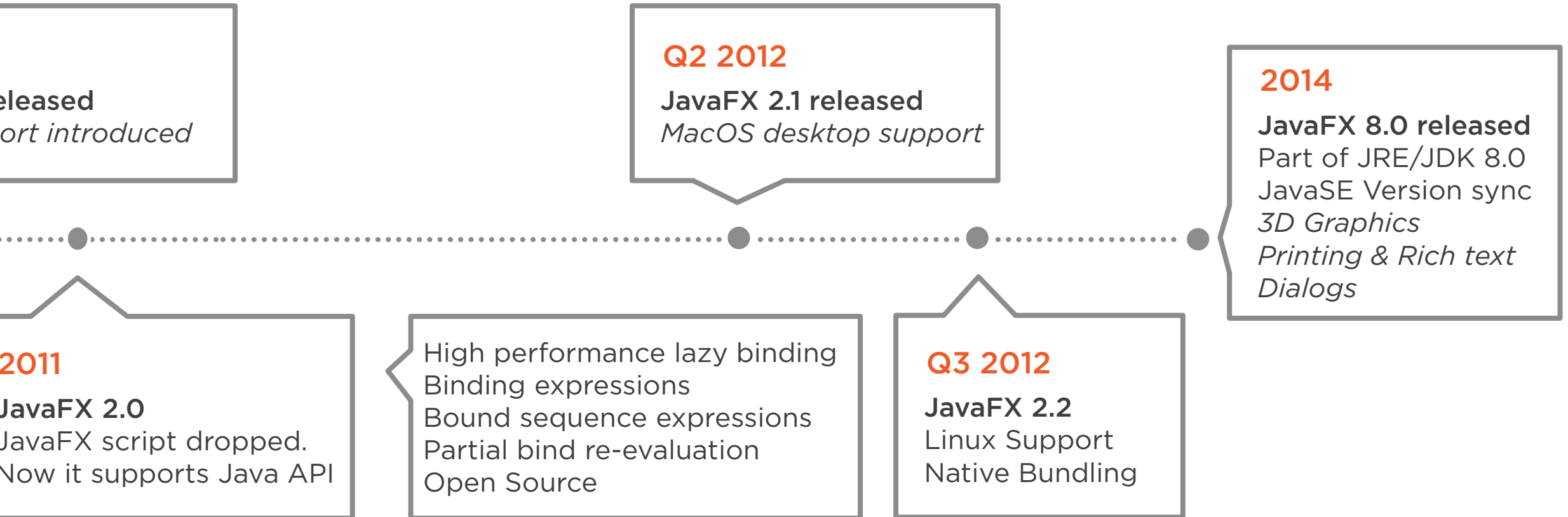
JavaFX 2.0
JavaFX script dropped.
Now it supports Java API



Rich History of JavaFX



Rich History of JavaFX



Demo



Setup development environment

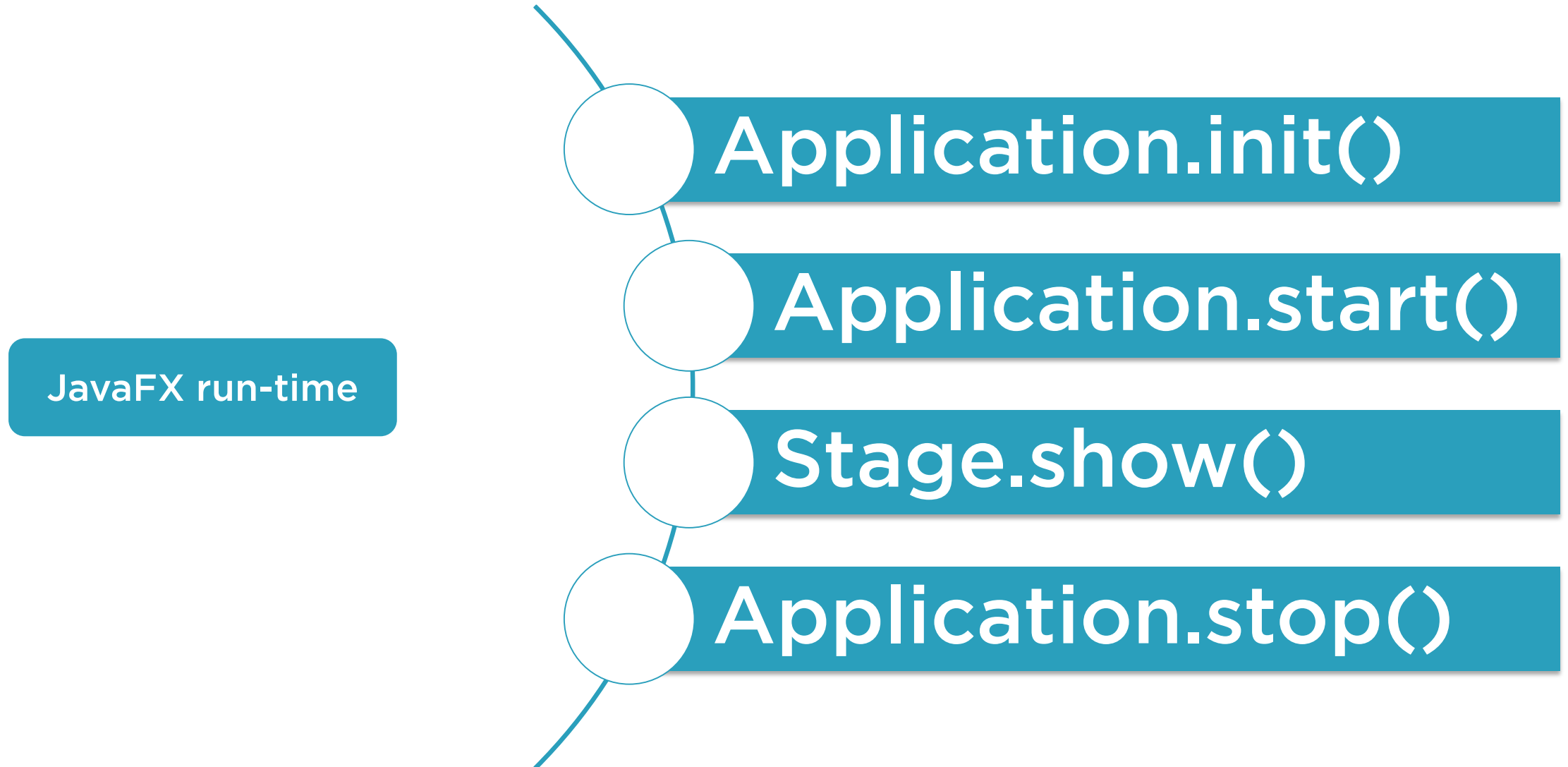
- Install JDK

Hello world using a text editor

- Writing a program
- Running a program



Life-cycle of a JavaFX Application



Life-Cycle of a JavaFX Application

JavaFX run-time

Application.init()

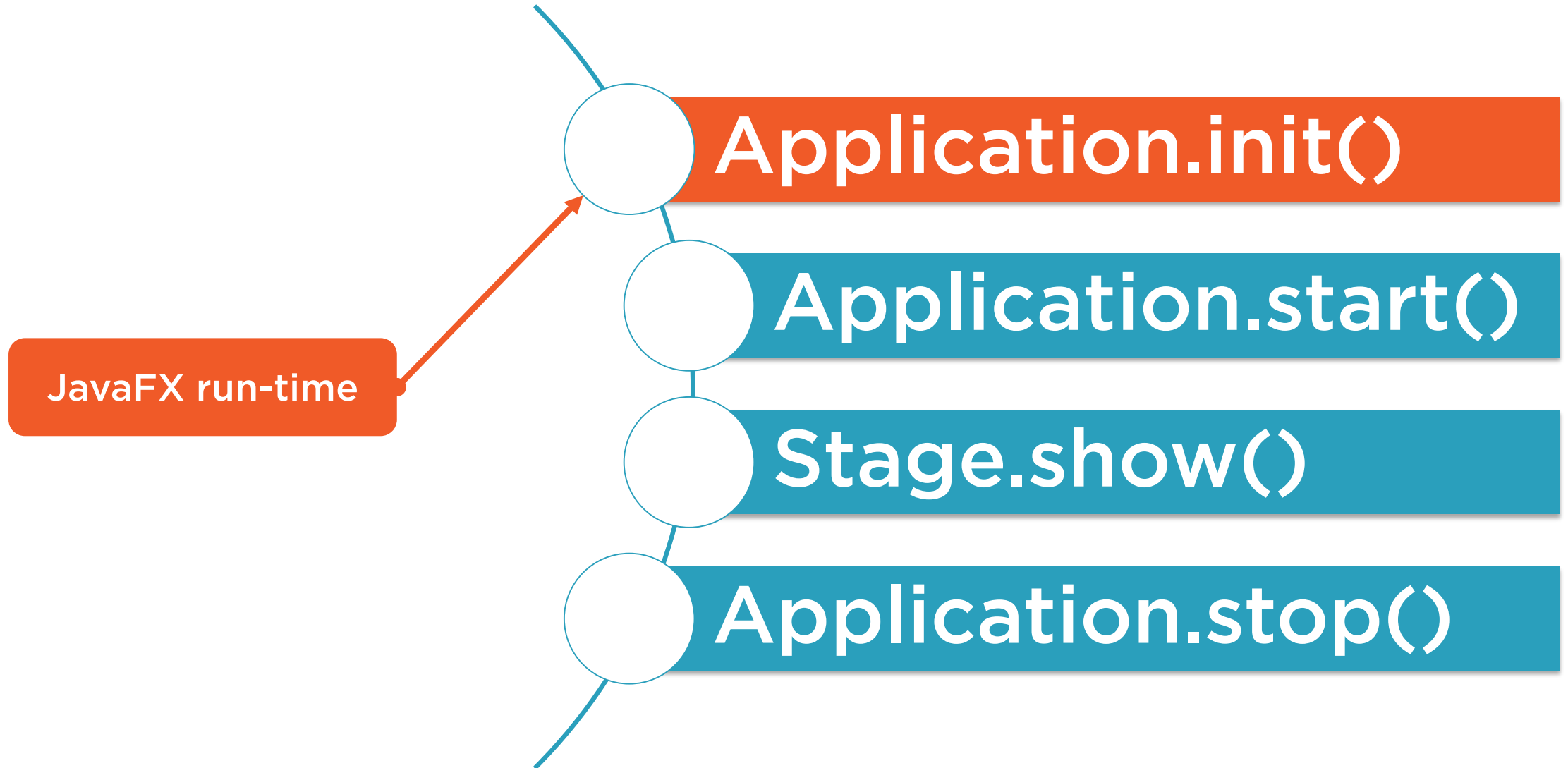
Application.start()

Stage.show()

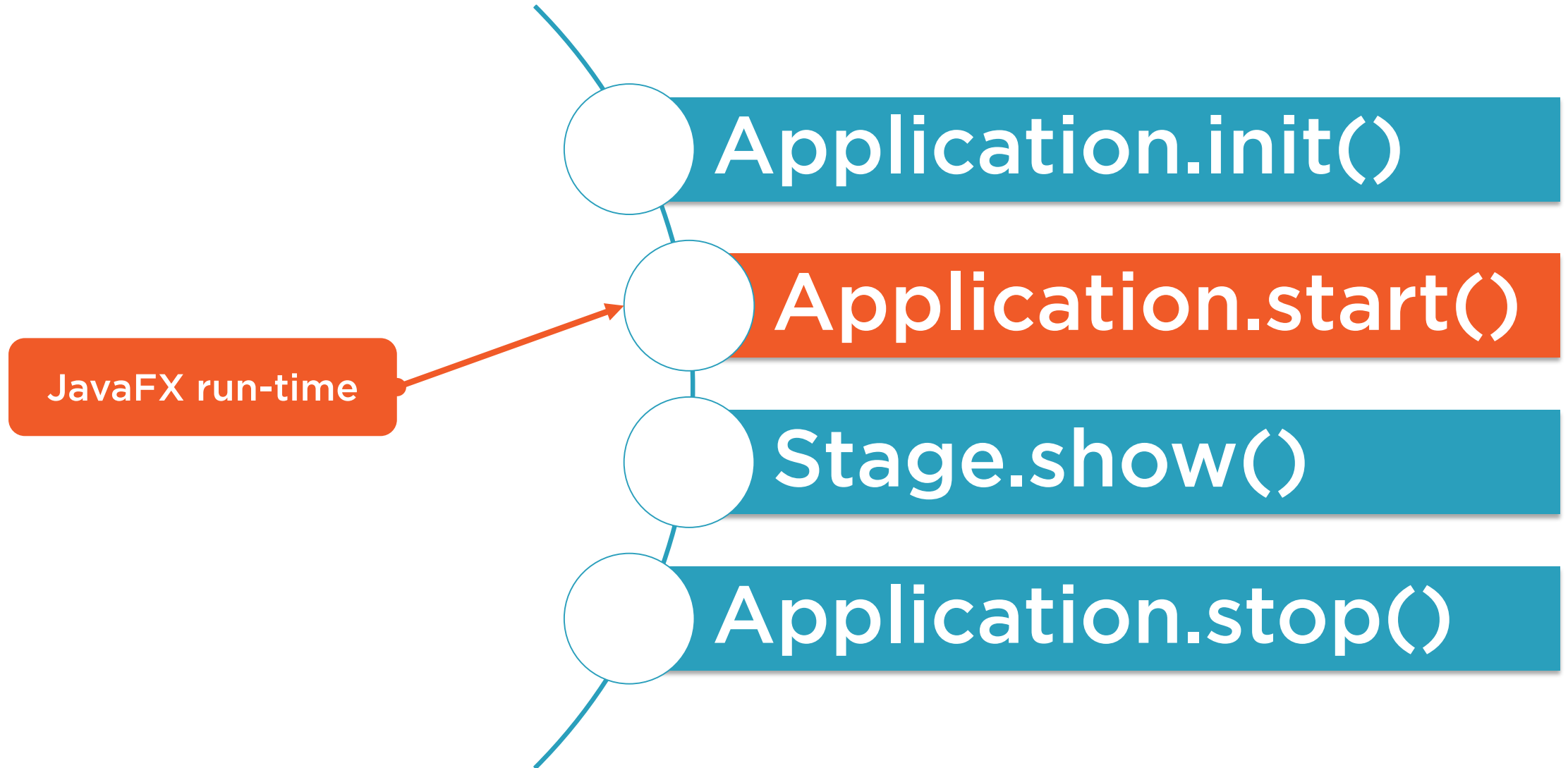
Application.stop()



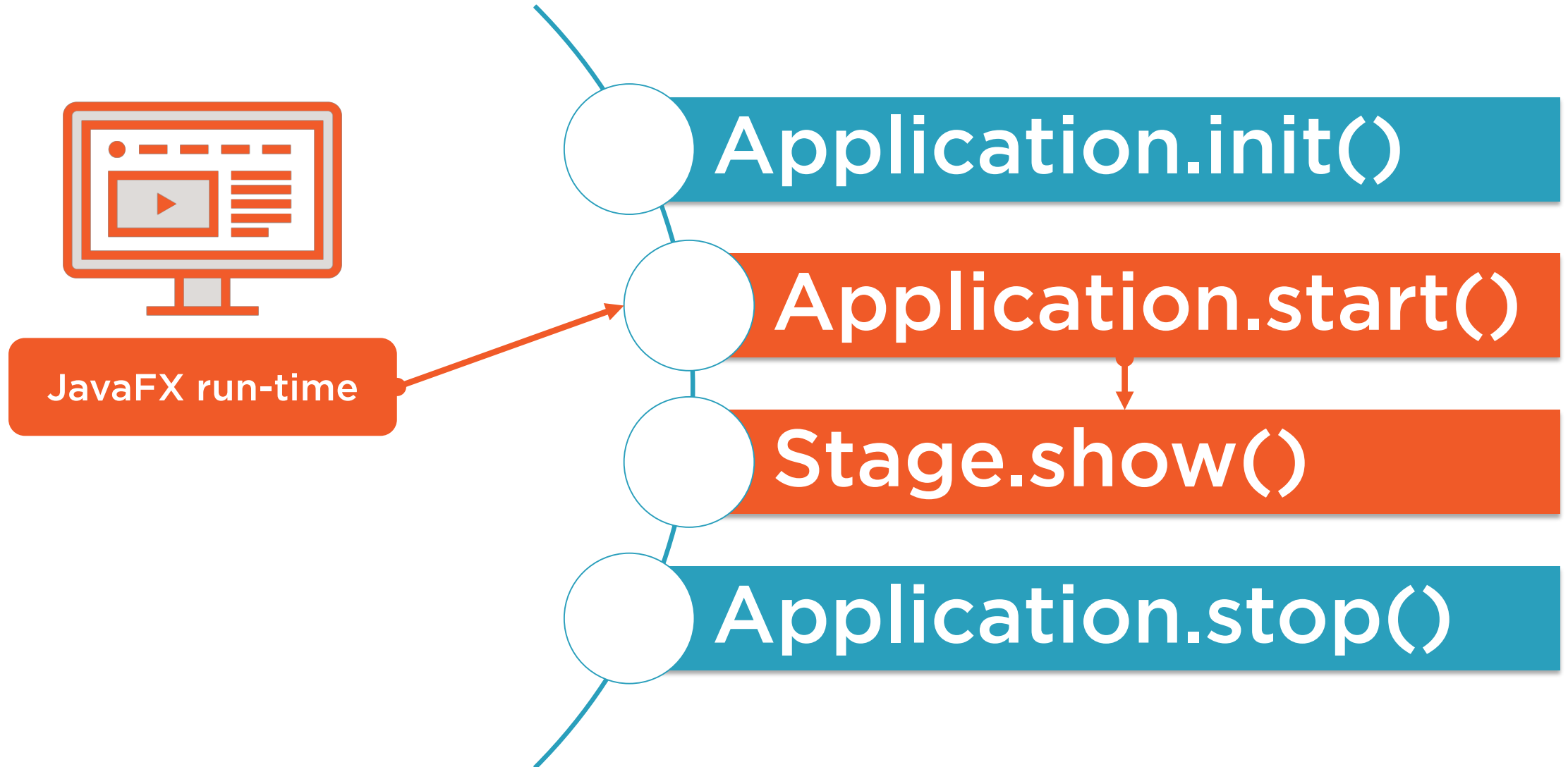
Life-Cycle of a JavaFX Application



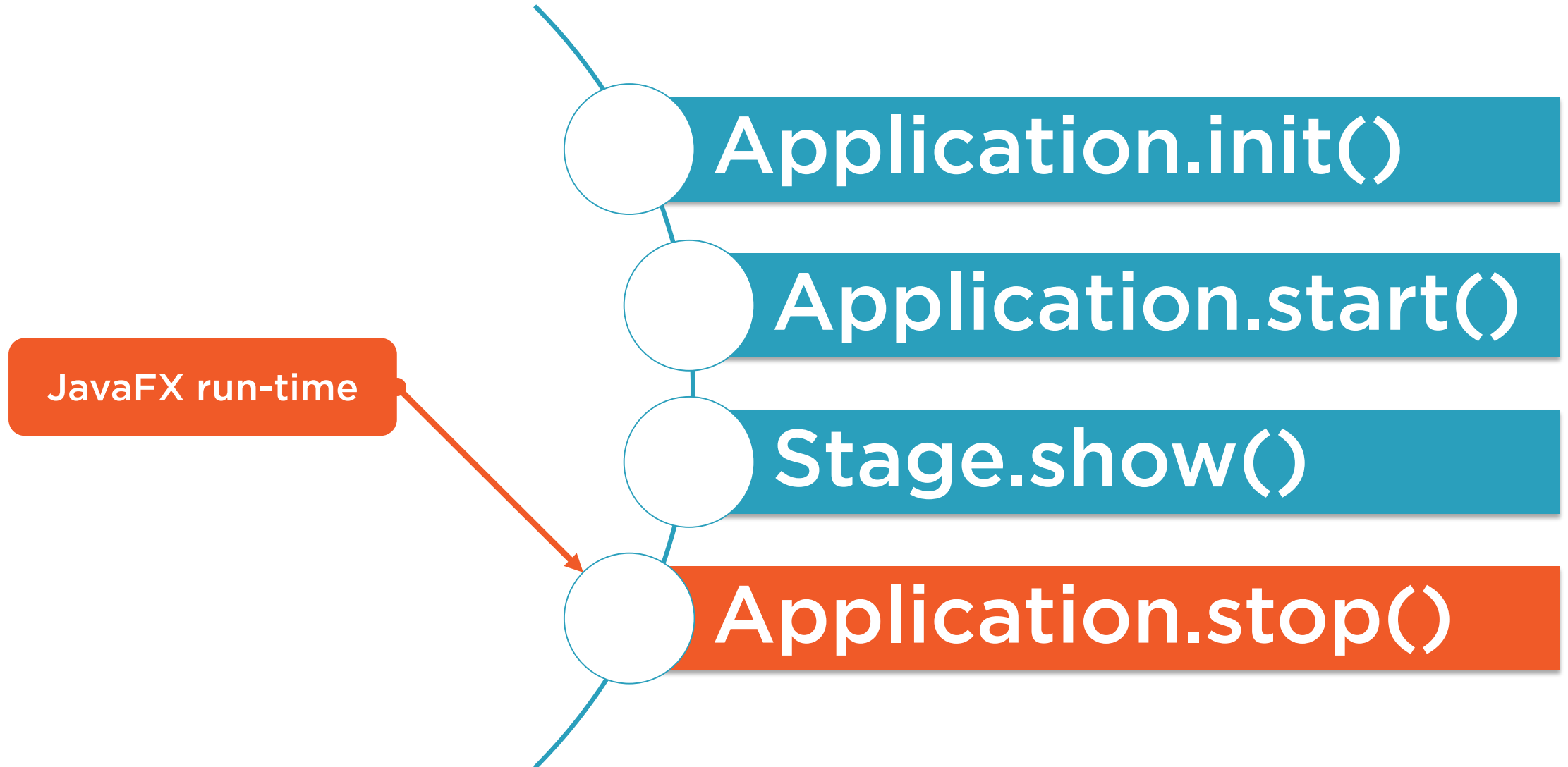
Life-Cycle of a JavaFX Application



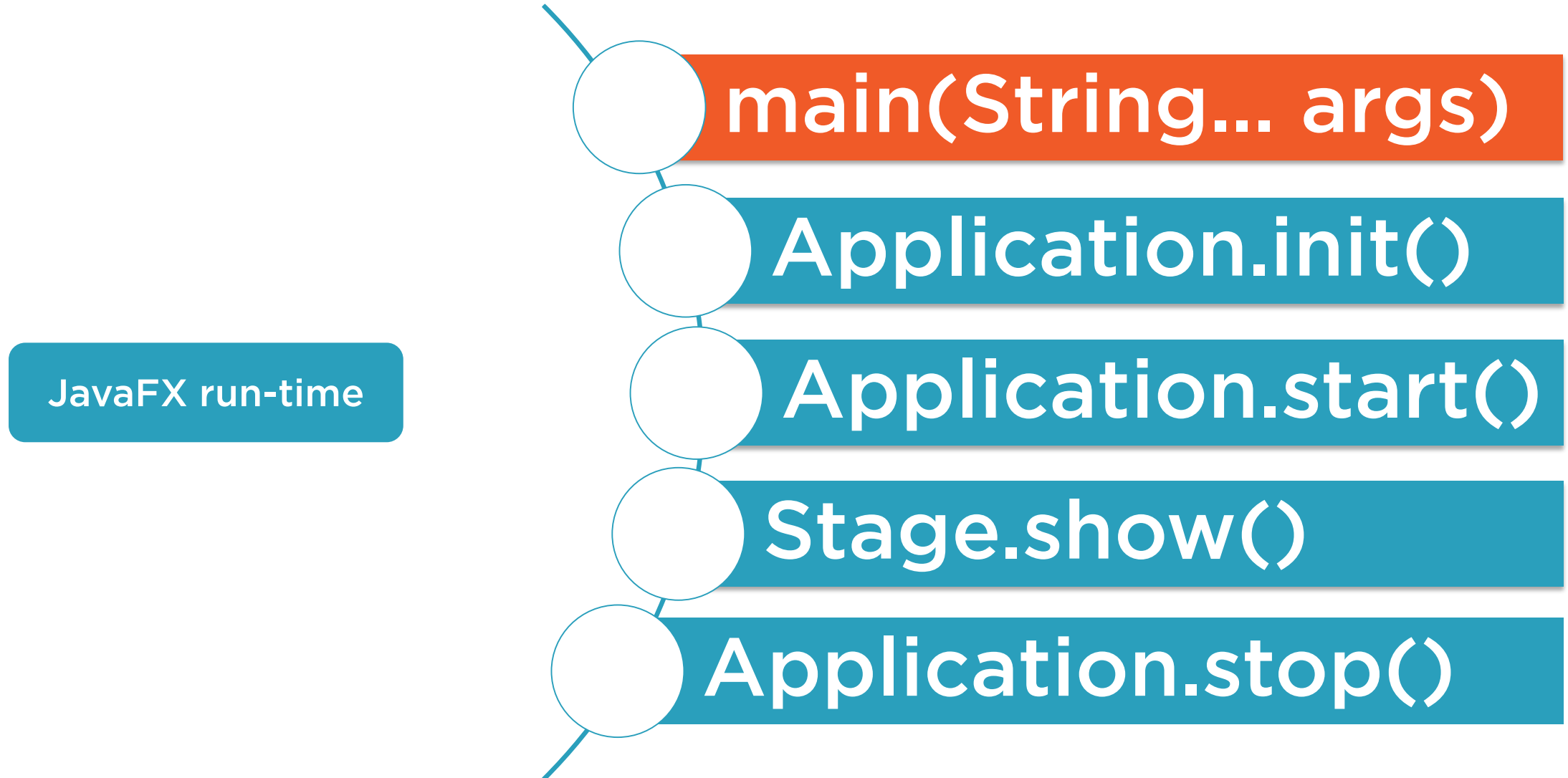
Life-Cycle of a JavaFX Application



Life-Cycle of a JavaFX Application



Life-Cycle of a JavaFX Application



Demo



Command Line Arguments

- Understand usage
- Update our program to accept CLA



Integrated Development Environment



Eclipse

Free open source(OS)
IDE with lot of plugins
but lacks in JavaFX



NetBeans

Free OS IDE with
superb support for
JavaFX & latest Java



IntelliJ IDEA

Proprietary IDE with a
toned down free
community edition



Demo



Install NetBeans

New JavaFX project with IDE



Summary



Understood the need for JavaFX

Wrote a hello world program

Installed NetBeans

Recreated the hello world program

