

# Chapter 8

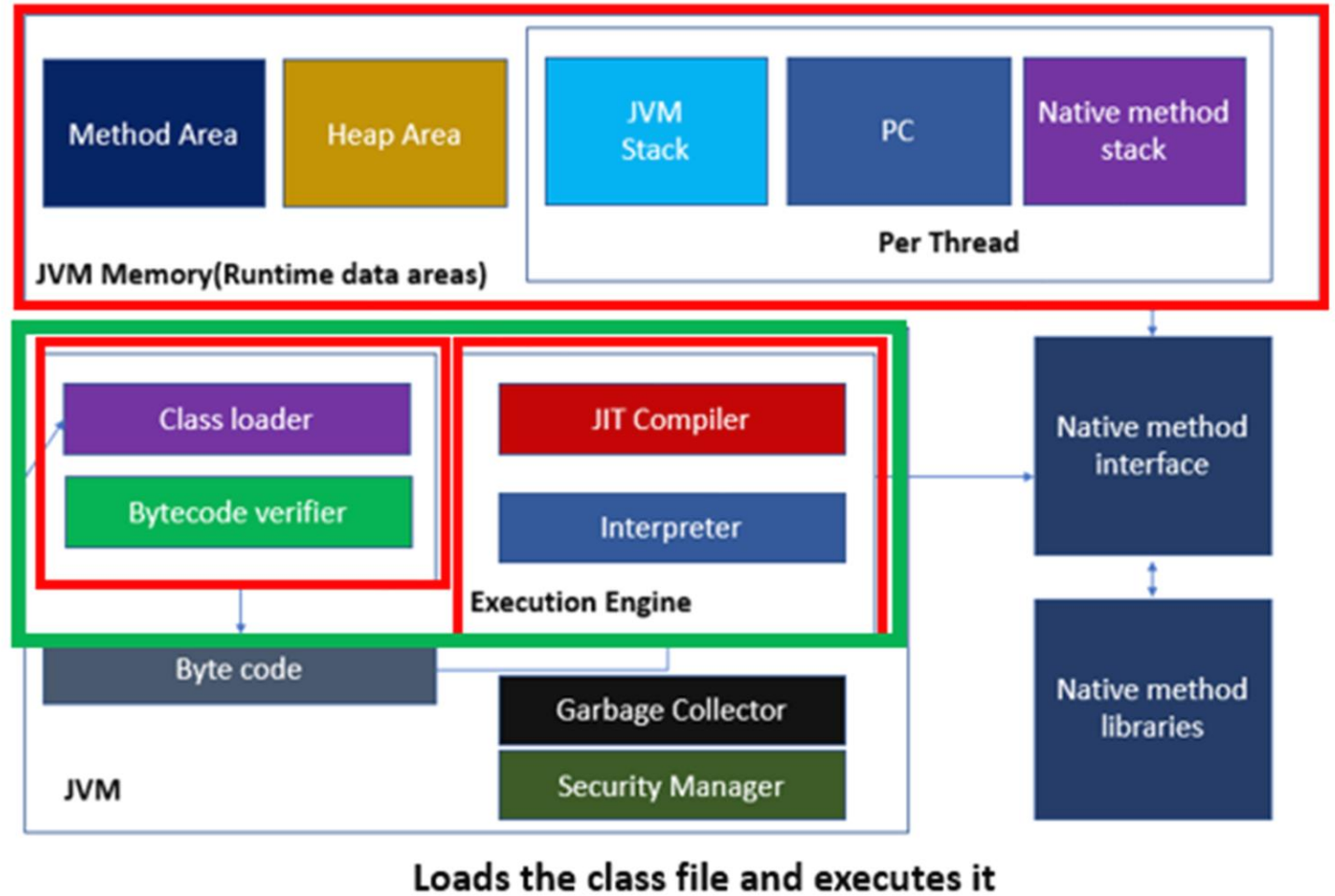
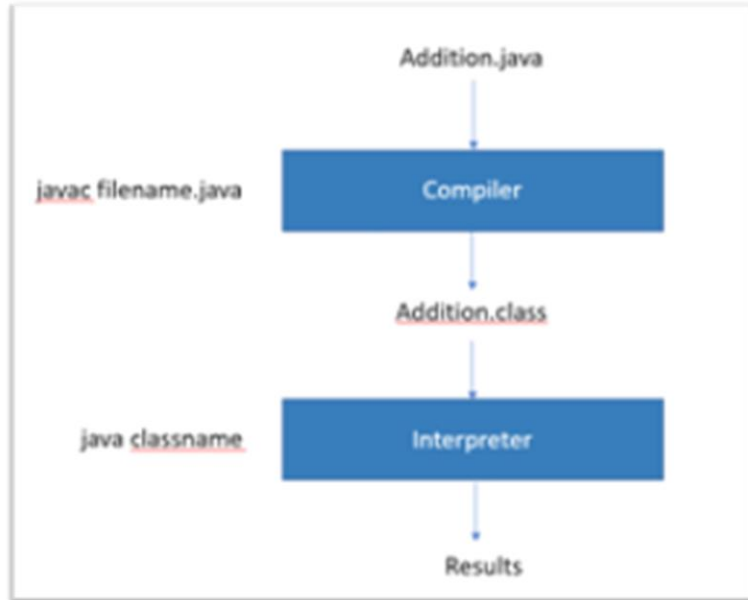
## Install Java



# Other courses in our channel

- 👉 C 18 Hours Full course: <https://youtu.be/3JF7ndGauZk>
- 👉 Python 11 hours complete course: <https://youtu.be/hXN0JBWlIya8>
- 👉 20 Programs for interview: <https://youtu.be/16MFbFib7v8>
- 👉 What is programming: <https://youtu.be/UGfuscUWi-E>
- 👉 Java in 10 minutes: [https://youtu.be/cM82qnE\\_TPc](https://youtu.be/cM82qnE_TPc)
- 👉 Git Telugu course: [https://youtu.be/LIhE7L\\_E6M](https://youtu.be/LIhE7L_E6M)
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1. Class loader subsystem
2. Runtime data areas
3. Execution Engine

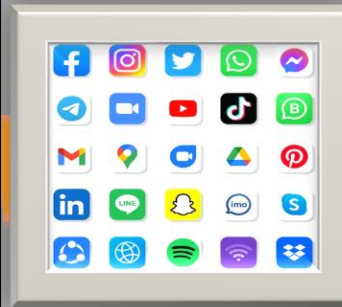
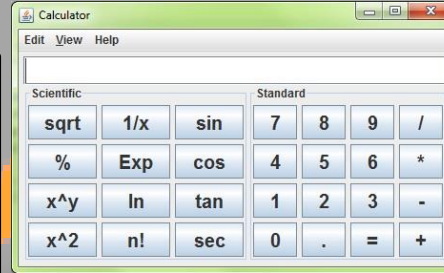


**JDK**  
**(Java Development Kit)**

# Install Java

To Develop applications

1. Desktop GUI Applications
2. Mobile Applications
3. Enterprise Applications
4. Scientific Applications
5. Web-based Applications
6. Embedded Systems
7. Big Data Technologies
8. Distributed Applications
9. Cloud-based Applications
10. Web servers and Application servers
11. Software Tools
12. Gaming Applications



Java Platforms/Editions

## CORE JAVA

- Java SE
  - Java **Standard Edition**
  - J2SE
  - Stand alone applications for desktops & servers
- Java EE
  - Java **Enterprise Edition**
  - J2EE
  - Large scale applications
- Java ME
  - Java **Micro Edition**
  - J2ME
  - Applications on small devices like mobile phones
- JavaFX
  - Java **Special Effects**
  - Graphics and media
  - Modern look and feel

## Java Platforms / Editions

Let us Install JDK

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### Specifications



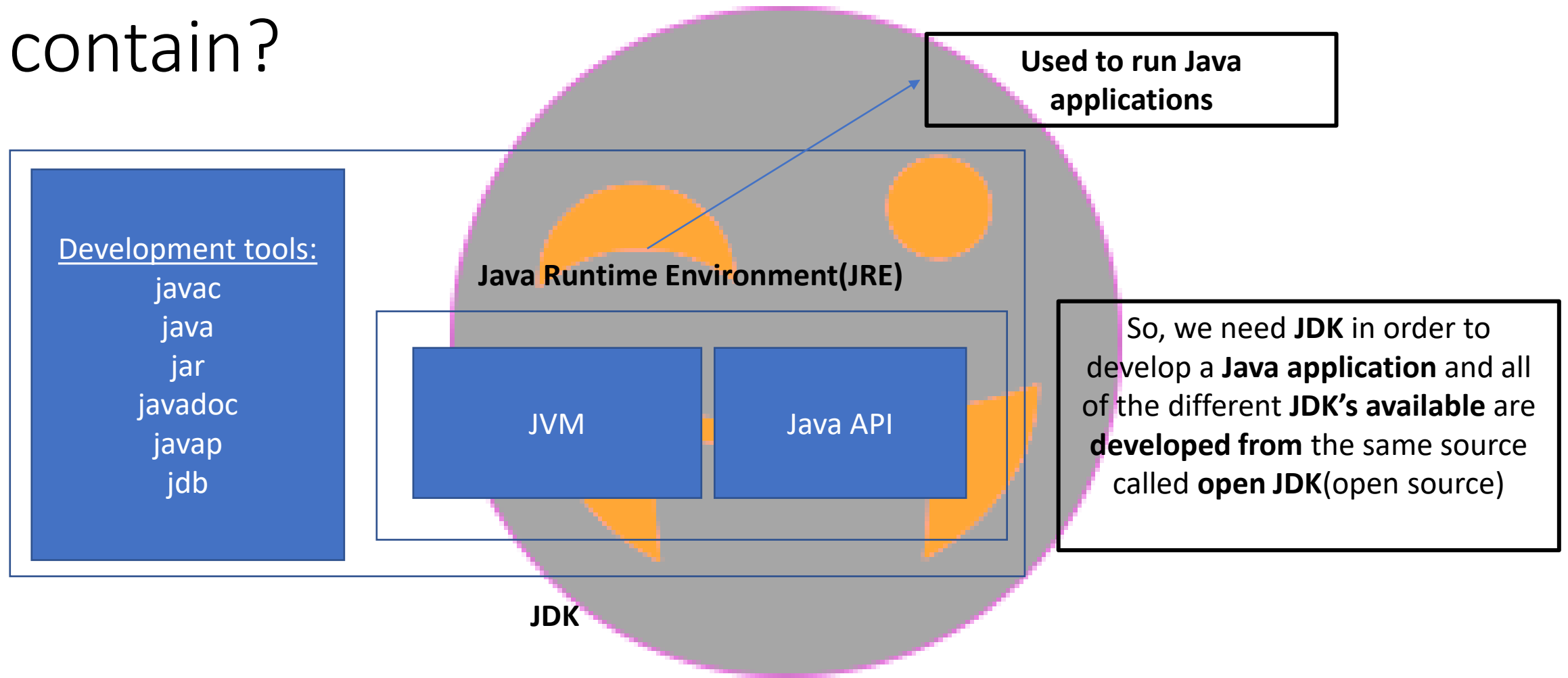
1. Java Language Specification (JLS)
  - Rules(Syntax and semantics)
2. Java Virtual Machine Specification (JVMS)
  - How a JVM should work, byte code instruction set
3. Java API Specification
  - Java library specifications

### Implementations

#### JDK (Java Development Kit)

1. Oracle **JDK**
  - **Free for learning**, Paid for commercial purpose
2. Oracle **OpenJDK**
  - Free even for commercial purpose
3. Adopt **OpenJDK**
  - Free
4. Red Hat's **Open JDK**
  - Free
5. IBM J9, Azul Zulu, Azul Zing

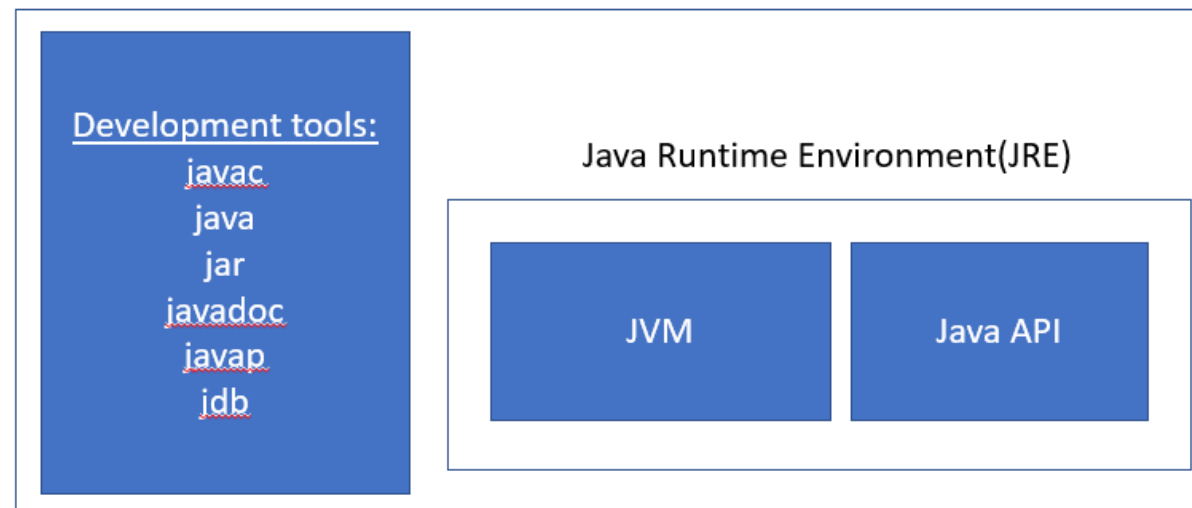
# JDK (Java Development Kit) – What a JDK contain?



**NOTE:** Oracle used to provide separate JRE folder till Java 8 (1.8) but from Java 11 onwards a concept of jlink was introduced using which we create custom JRE's which are smaller in size.

# (V. IMP) Difference between JDK, JVM and JRE

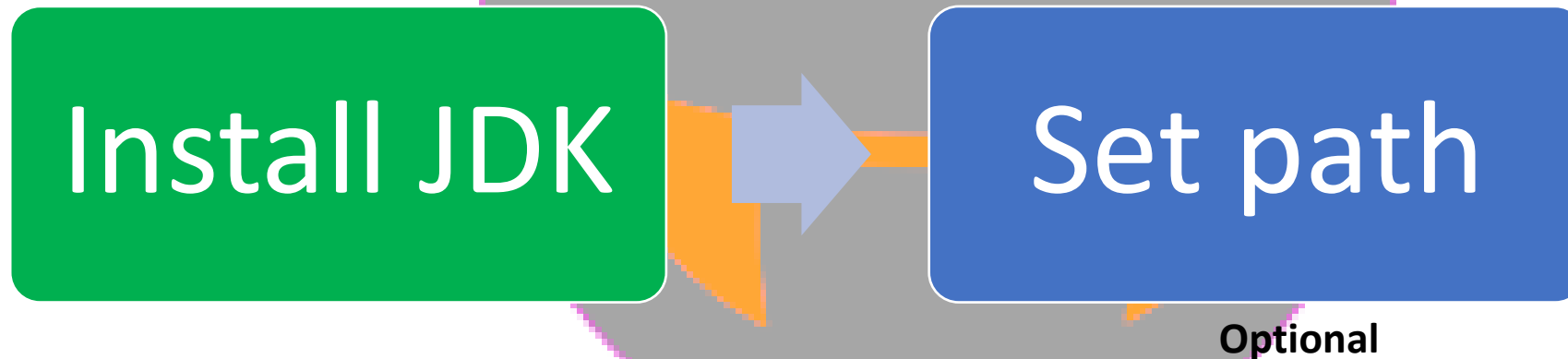
JDK	JRE	JVM
Java Development Kit	Java Runtime Environment	Java Virtual Machine
Used to develop java applications	Used to run java applications	Executes java byte code
JDK contains JRE	JRE contains JVM and is part of JDK	JVM is part of JRE



JDK

# Let's install JDK

- **Oracle JDK – Free for learning**, Paid for commercial purpose
- Open JDK – Total Free (Even for commercial purpose)



## Let's look at the current Java version

[https://en.wikipedia.org/wiki/Java\\_version\\_history](https://en.wikipedia.org/wiki/Java_version_history)



# Before installing JDK, let's check if you already have it installed

- Open command prompt
- `javac -version`
- `java -version`



## Let's Install Java (JDK)

# Set the path

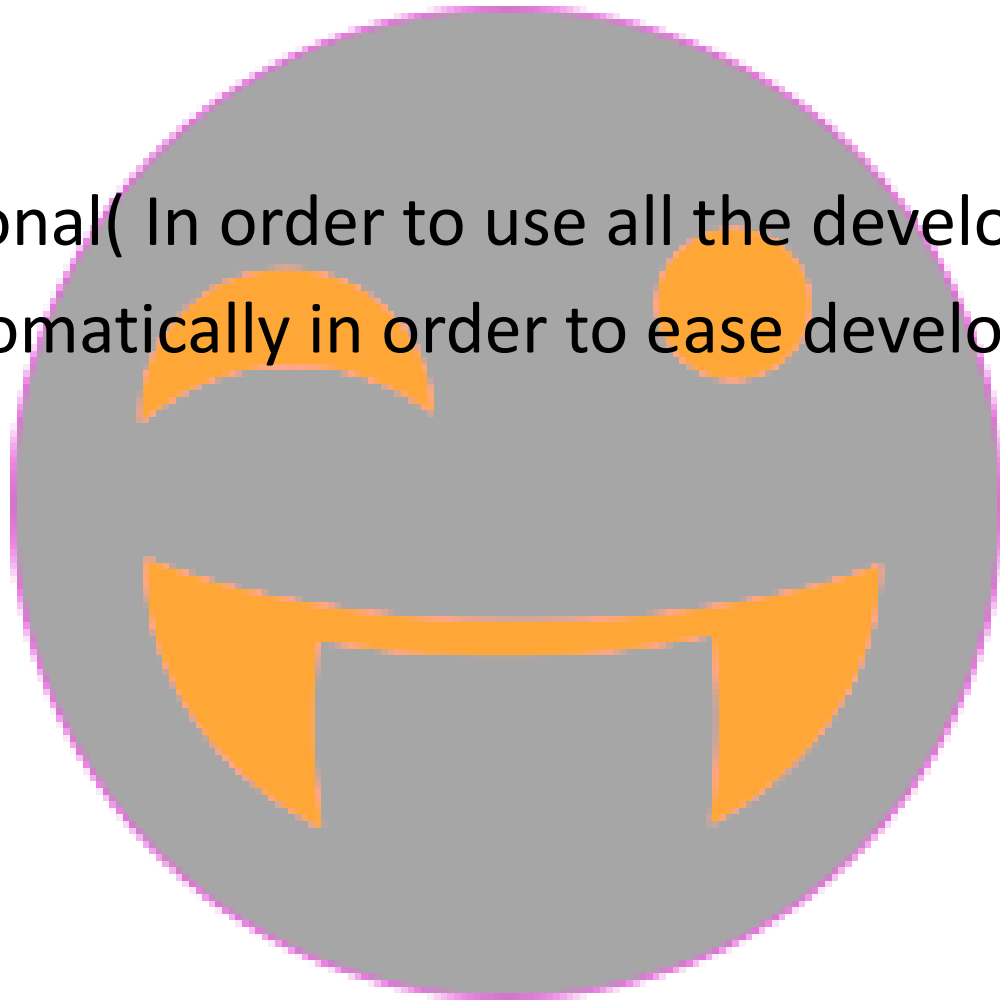
- Setting path is optional( In order to use all the development tools )
- Path will be set automatically in order to ease developer

 java

 javac

 javaw

 jshell





# What next?

Write your **first Java application**



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