

Day-1

Agenda

- . Agile
- . Git
- . About JAVA
- . JAVA Installation
- . Integrated Development Environment (IDE)
- . JDK , JVM , JRE
- . JAR , WAR , EAR
- . Data Types.
- . Literals *
- . Operators *

Agile

- ★ What is Agile
- ★ What is SCRUM
- ★ Benefits of Agile
- ★ What is User Story
- ★ What is Acceptance Criteria
- ★ What is Scrum Master
- ★ What is Product Owner

Quiz -Agile

★ Scrum is used for team Lunch - True/False

Quiz -Agile

★ In one scrum team more then one scrum master may exist - True/False

Quiz -Agile

★ Scrum meeting can be organised twice a day - True/False

Quiz -Agile

★ User Story can not be divide in to sub-task - True/False

Quiz (Answer) -Agile

- ★ Scrum is used for team Lunch - False
- ★ In one scrum team more then one scrum master may exist - False
- ★ Scrum meeting can be organised twice a day - False
- ★ User Story can not be divide in to sub-task - False

Git

- ★ What is Git
- ★ Life Cycle of Git
- ★ Benefits of Git
- ★ What is Build
- ★ What is Code Review
- ★ What is Pull, Push & Commit
- ★ What is Branching

Quiz : Git

★ Git is version controls system - True/False

Quiz : Git

★ Git is repository - True/False

Quiz : Git

★ Git clone does not create a copy of code - True/False

Quiz : Git

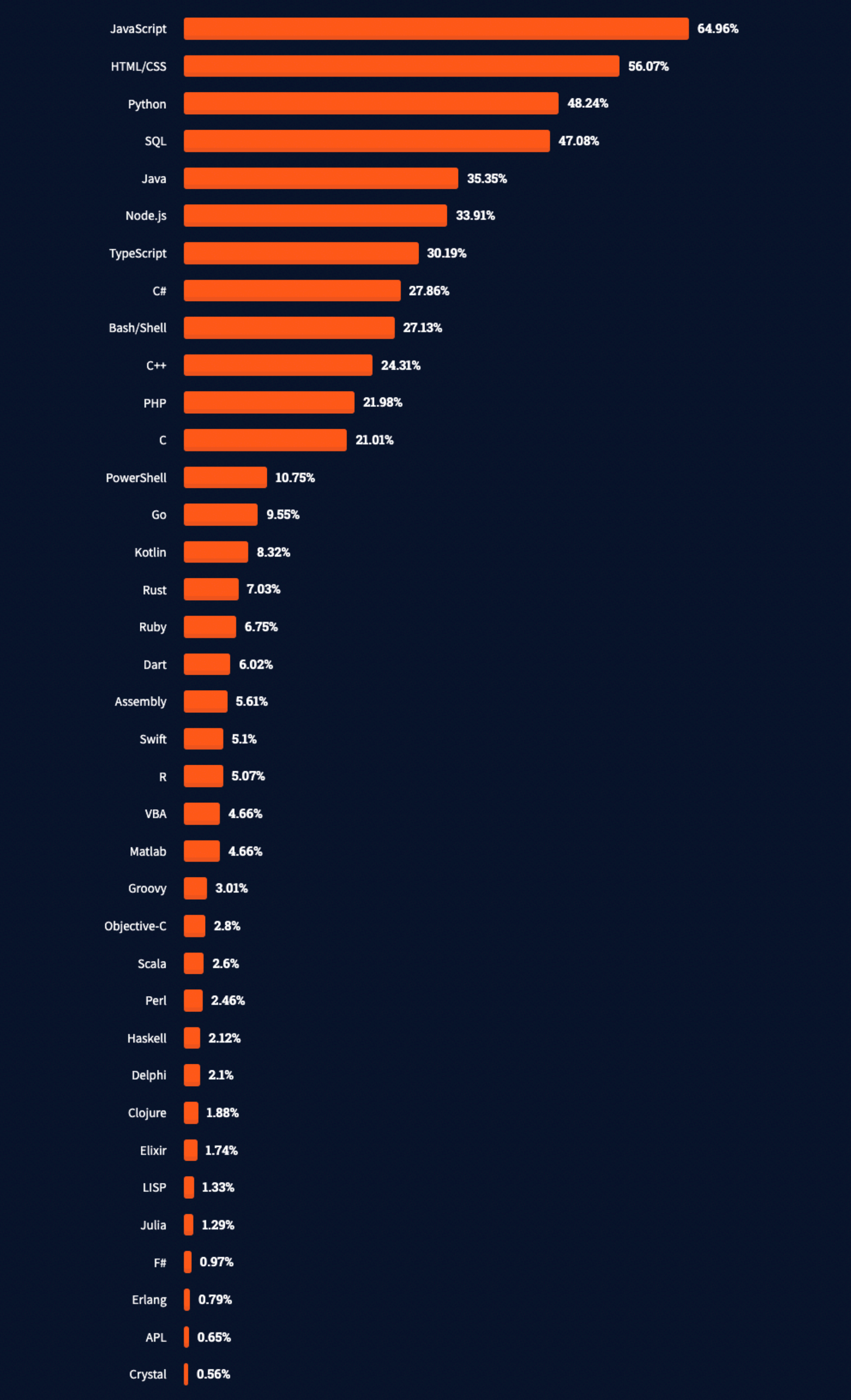
★ “Git status” will tell you if your code is updated or not - True/False

Quiz (Answer) : Git

- ★ Git is version controls system - True
- ★ Git is repository - True
- ★ Git clone does not create a copy of code -False
- ★ “Git status” will tell you if your code is updated or not - True

About JAVA

https://en.wikipedia.org/wiki/Java_version_history



Installation

JAVA 8 Installation

Download Link	https://www.oracle.com/java/technologies/javase/javase8u211-later-archive-downloads.html
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Integrated Development Environment (IDE)

★ Eclipse*

★ MyEclipse

★ IntelliJ

★ NetBeans Etc....

Eclipse : 2021-12 (4.22.0) Platform Runtime Binary	https://archive.eclipse.org/eclipse/downloads/drops4/R-4.22-202111241800/
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JAR , WAR , EAR

- ★ **JAVA Archive File (JAR)** : It Contain group of “.class” file
- ★ **Web Archive File (WAR)** : It represent a web application which may contain Servlet, JSP,HTML,CSS, JS etc...
- ★ **EAR (Enterprise Archive File)** : It represent an enterprise application which may contain Servlet , JSP , EJB,JNS component etc...

Quiz - JAR , WAR , EAR

★ Which of the following is usually not part of EAR File

- a. Server Configuration File
- b. HTML , JSP File
- c. Application configuration file
- d. Class file

Quiz - JAR , WAR , EAR

- ★ JAR file allow JAVA Runtime Environment(JRE) to deploy an entire application including class file.

TRUE / FALSE

Quiz - JAR , WAR , EAR

★ To deploy **WAR** file web server required .

TRUE / FALSE

Quiz - JAR , WAR , EAR

★ To deploy EAR file Application server required .

TRUE / FALSE

Quiz (Answer) - JAR , WAR , EAR

- ★ Which of the following is usually not part of EAR File **a. Server Configuration File**
- ★ JAR file allow JAVA Runtime Environment(JRE) to deploy an entire application including class file. **TRUE**
- ★ To deploy WAR file web server required . **TRUE**
- ★ To deploy EAR file Application server required . **TRUE**

Web Server , Application Server

★ Web Server

Apache Tomcat

★ Application Server

JBoss

Oracle WebLogic

IBM WebSphere

Etc....

JDK, JRE , JVM



JDK, JRE , JVM

★ JDK (JAVA Development Kit)

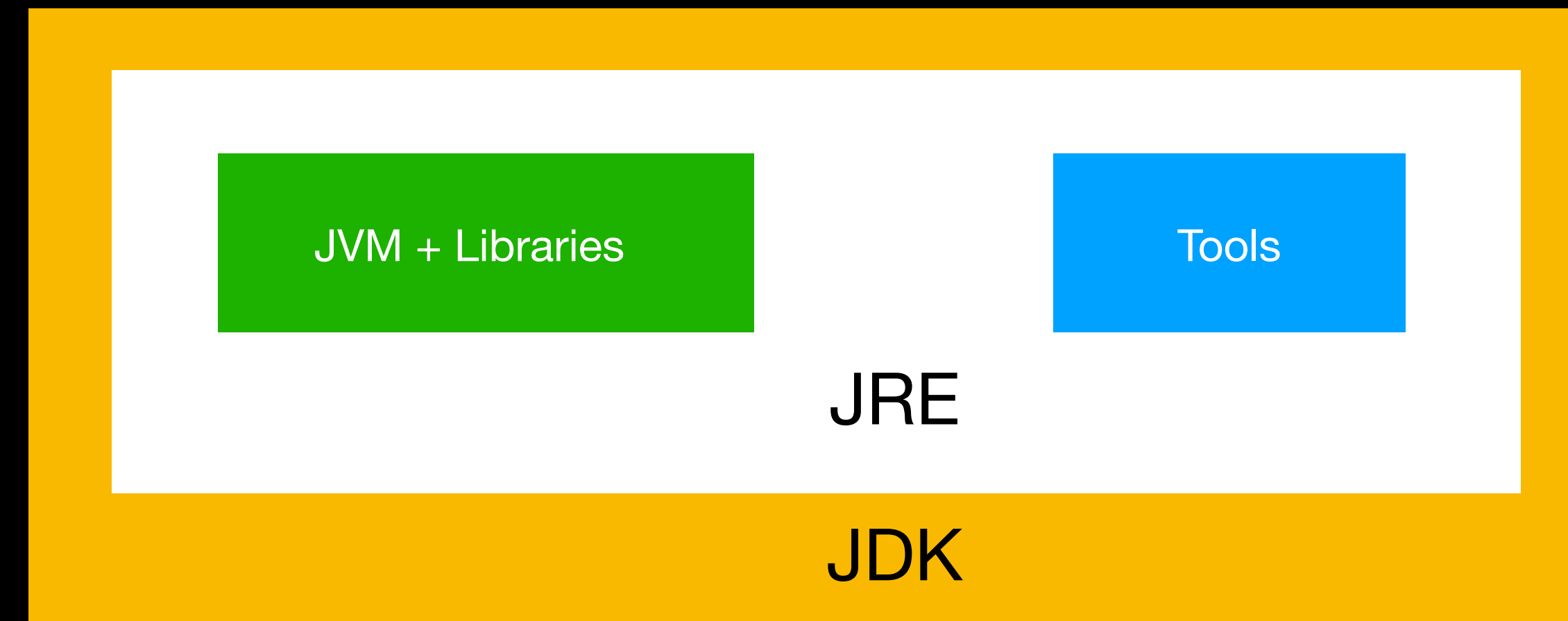
To develop & run java application

★ JRE (JAVA Runtime Environment)

To run java application

★ JVM (JAVA Virtual Machine)

This machine is responsible to execute the JAVA program



JDK, JRE , JVM

- ★ $\text{JDK} = \text{JRE} + \text{TOOLS}$
- ★ $\text{JRE} = \text{JVM} + \text{Libraries}$
- $\text{JRE} = \text{JVM} + \text{Libraries} + \text{TOOLS}$



Quiz - JDK, JRE , JVM

1. $\text{JDK} = \text{JRE} + ?$

2. $? = \text{JVM} + \text{Libraries}$

3. Minimum Requirement to Run JAVA Program

.....

4. Minimum Requirement to develop the JAVA Program

.....

Quiz (Answer)- JDK, JRE , JVM

1. **JDK = JRE + Tools**

2. **JRE = JVM + Libraries**

3. **Minimum Requirement to Run JAVA Program**

JRE

4. **Minimum Requirement to develop the JAVA Program**

JDK

Interview Question - JDK, JRE , JVM

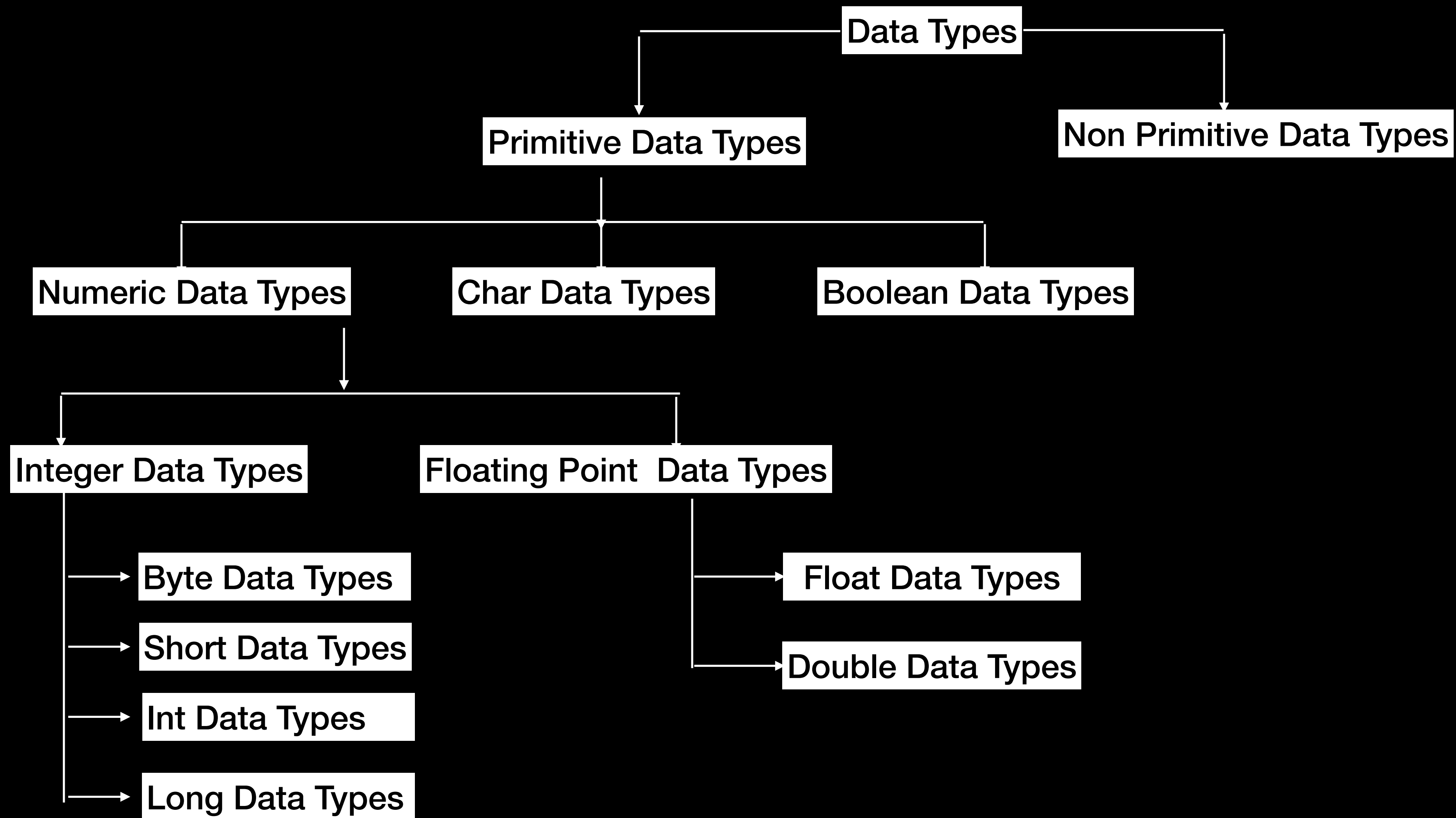
1. What is difference between JDK , JRE, JVM

2. How to create the executable jar

3. What is the purpose of JAR file

4. JAVAC is used for

Data Types



byte Data Types

Size	8 bits or 1 byte
Max Value	127
Min Value	-128
Range	-128 to +127
Syntax	byte variable_Name = value
Example	byte b = 110

short Data Types

Size	2 bytes or 16 bits
Max Value	32767
Min Value	-32767
Range	-32767 to +32767
Syntax	short variable_Name = value
Example	short b = 32767

int Data Types

Size	4 bytes
Max Value	2,147,483,648 or $2^{31}-1$
Min Value	-2,147,483,648 or -2^{31}
Range	-2,147,483,648 to +2,147,483,648
Syntax	int variable_Name = value
Example	int b = 5

long Data Types

Size	8 bytes
Max Value	9,223,372,036,854,775,807 or $2^{63} - 1$
Min Value	-9,223,372,036,854,775,808 or -2^{63}
Range	-9,223,372,036,854,775,808 to +9,223,372,036,854,775,807
Syntax	long variable_Name = value
Example	long b = 5000

float Data Types

Size	4 bytes
Max Value	$3.40282347 \times 10^{38}$
Min Value	$1.40239846 \times 10^{-45}$
Range	$1.40239846 \times 10^{-45}$ to $3.40282347 \times 10^{38}$
Syntax	float variable_Name = value
Example	float b = 10.5f

double Data Types

Size	8 bytes
Max Value	$1.7976931348623157 \times 10^{308}$
Min Value	$4.9406564584124654 \times 10^{-324}$
Range	$4.9406564584124654 \times 10^{-324}$ to $1.7976931348623157 \times 10^{308}$
Syntax	double variable_Name = value
Example	double b = 10.5d

char Data Types

Size	2 byte
Max Value	65535
Min Value	0
Range	0 to 65535
Syntax	char variable_Name = value
Example	char initialName = 'a'

boolean Data Types

Size	NA
Max Value	NA
Min Value	NA
Range	NA
Value	true or false
Example	boolean isPass = true

Literals

Operators