**Day-04**

**20-02-2025**

**================**

**Java Version History:**

**==============**

Java software has three components:

 1) JDK (Java Development Kit)

 2) JRE (Java Run-time Environment)

 3) JVM (Java Virtual Machine)

JDK 1.0 ==> 1996

JDK 1.1 ==> 1997

J2SE 1.2 ==> 1998

J2SE 1.3

J2SE 1.4

J2SE 5.0 (1.5)

J2SE 6.0

J2SE 7.0

J2SE 8.0 (LTS) ==> 2014

J2SE 11.0 (LTS) ==> 2018

J2SE 17.0 (LTS) ==> 2021

JSE 21 ==> 2023 ==> LTS (Long Term Support)

JSE 22 ==> 2024

Current Version of the java software ==> JSE 23 ==> 2024

**Java 17 installation Procedure:**

**=====================**

1) Use the below link to navigate for java 17 software location for downloading.

 https://www.oracle.com/java/technologies/javase/jdk17-archive-downloads.html

2) After the navigation, we need to start download the java software according to our system configuration.

 My system configuration:

 Windows x64 version

I have selected "Windows x64 MSI Installer"

 and click on that corresponding link to get start download.

3) After the downloading of the file:

 we need to downloads folder

 double click on that downloaded file

 in the new wizard:

 click on "next"

 in the new wizard:

 click on change(if you want to specify the folder for java installation)

 if you want to install the software into "C-drive + program files" no need to click on "change".

 after the selecting the folder/without selecting, click on "next"\

 click on "next"

 click on "install"

 click on "close".

4) After the installation, we need to confirm:

 whether the java software has installed or not:

 open the command prompt

 type a command:

 java --version

**How to write Java programs:**

**===================**

-> There are two types of java programs:

 1) Static program

 2) Dynamic program

-> When the program can give the same output in every execution time is called as "Static program".

-> When the program can give the output based on input, that program is called as "Dynamic program".

-> Java program has a structure:

 this structure can include with different sections:

 1) Package section ==> optional

 2) Importing section ==>optional

 3) Class definition section ==> mandatory

 4) main method ==> mandatory

-> Syntax for the class definition section is:

 class ClassName{

 }

-> Syntax for main() method

 main method ==> switch

 main() method can control the starting point and ending point of java program.

 Syntax:

 public static void main(String[] args){

 statement-1;

 statement-2;

 }

-> Final java program structure:

 class ClassName{

 public static void main(String[] args)

 {

 statement-1;

 statement-2;

 }

 }

**Where we can write the java program?**

**=========================**

-> we can write java programs using:

 1) Text Editors

 2) IDE (Integrated Development Environment)