

Week 2

Introduction and software requirements for HTML/JavaScript PHP programs:

1# What are the softwares that helps to run java programs.

To run Java programs, you need the following:

- **Java Development Kit (JDK)** – for writing, compiling, and running Java programs.
- **Java Runtime Environment (JRE)** – to run compiled Java applications.
- **Java Virtual Machine (JVM)** – interprets the bytecode and executes it on the host machine.
- **Code Editors/IDEs** – e.g., Eclipse, NetBeans, IntelliJ IDEA, BlueJ (optional but makes coding easier).
- **Command-line interface (CLI)** – e.g., Command Prompt (Windows), Terminal (Linux/Mac).

2# What is JDK and JRE.

JDK (Java Development Kit)

- A complete package for developing Java applications.
- Includes **JRE**, **compiler (javac)**, debugging tools, and development libraries.
- Needed when you want to **create and compile** Java programs.

JRE (Java Runtime Environment)

- A subset of the JDK.
- Includes **JVM** and runtime libraries but **no compiler**.
- Needed when you only want to **run** Java programs, not develop them.

3# What is eclipse IDE.

Eclipse is a popular open-source **Integrated Development Environment (IDE)** used for Java and other programming languages.

Features:

- Code editor with syntax highlighting and auto-completion.
- Built-in compiler and debugger.
- Project management tools.
- Plugin support for extra features (e.g., web development, database tools).

4# How to run the java program in eclipse/netbeans IDE.

In Eclipse

1. **Install JDK** and configure it in Eclipse.
2. Open Eclipse → File → New → Java Project.
3. Give your project a name → click **Finish**.
4. Right-click on the src folder → New → Class.
5. Enter a class name and check the box **public static void main(String[] args)** → click **Finish**.
6. Write your Java code inside the main method.
7. Click the green **Run** button (or press Ctrl + F11) to execute.

In NetBeans

1. **Install JDK** and NetBeans IDE.
2. Open NetBeans → File → New Project.
3. Select **Java** → **Java Application** → click **Next**.
4. Enter the project name → click **Finish**.
5. In the main method, write your Java code.
6. Press Shift + F6 to run the program.