

# Java Interview Questions & Answers (EP-01)

Topics: Programming Basics, JDK Installation, Java Program Execution

## **Q: What is programming?**

A: Programming is the process of giving instructions to a computer to perform specific tasks.

## **Q: What is Java?**

A: Java is a high-level, object-oriented programming language used to build secure, scalable applications.

## **Q: Why is Java platform-independent?**

A: Java is platform-independent because it compiles code into bytecode, which runs on any system with JVM.

## **Q: What is JDK?**

A: JDK (Java Development Kit) is a software package used to develop and run Java programs.

## **Q: What are the main components of JDK?**

A: JDK includes JRE, JVM, compiler (javac), and development tools.

## **Q: What is JRE?**

A: JRE (Java Runtime Environment) provides libraries and JVM to run Java programs.

## **Q: What is JVM?**

A: JVM (Java Virtual Machine) executes Java bytecode and makes Java platform-independent.

## **Q: Difference between JDK and JRE?**

A: JDK is used for development and execution, while JRE is used only to run Java programs.

## **Q: What is bytecode?**

A: Bytecode is the intermediate code generated after compiling Java source code.

## **Q: How is a Java program executed?**

A: Java source code is compiled into bytecode, then JVM interprets or compiles it into machine code.

## **Q: What is the role of javac?**

A: javac is the Java compiler that converts .java files into .class bytecode files.

## **Q: Why is main() method important?**

A: main() is the entry point of a Java program where execution starts.

## **Q: What is PATH environment variable in Java?**

A: PATH allows the system to locate Java tools like javac and java commands.

**Q: What happens if JDK is not installed?**

A: Without JDK, you cannot compile or run Java programs.

**Q: Is Java compiled or interpreted?**

A: Java is both compiled and interpreted: compiled to bytecode and interpreted by JVM.