

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.