1. **What is Debugging?**

 Debugging is the process of detecting and removing of existing and potential errors (also called as 'bugs') in a software code that can cause it to behave unexpectedly or crash. To prevent incorrect operation of a software or system, debugging is used to find and resolve bugs or defects.

1. **What are the default packages present in java?**

**java.lang:**Contains language support classes(e.g classed which defines primitive data types, math operations). This package is automatically imported.

**java.io:**Contains classed for supporting input / output operations.

**java.util:**Contains utility classes which implement data structures like Linked List, Dictionary and support ; for Date / Time operations.  
**java.applet:**Contains classes for creating Applets.  
 **java.awt:**Contain classes for implementing the components for graphical user interfaces (like button , ;menus etc).  
**java.net:**Contain classes for supporting networking operations.

1. **Can we have an else condition without if condition?**

You can't write else without an if condition. The if condition checks whether your statement is true or false.

1. **Other than boolean can we use anything in if condition?**

The condition must be a boolean expression. It must evaluate to either true or false. If the condition is true, the statement is executed. If it is false, the statement is skipped.

1. **why break is imp in switch case?**

When Java reaches a break keyword, it breaks out of the switch block. This will stop the execution of more code and case testing inside the block. When a match is found, and the job is done, it's time for a break. There is no need for more testing.

1. **understand the naming conventions in java.**

Type 1: Classes and Interfaces

* Class names should be nouns, in mixed cases with the first letter of each internal word capitalized. Interfaces names should also be capitalized just like class names.
* Use whole words and must avoid acronyms and abbreviations.

Type 2: Methods

* Methods should be verbs, in mixed case with the first letter lowercase and with the first letter of each internal word capitalized.

Type 3: Variables

* Variable names should be short yet meaningful.
* Should be mnemonic i.e, designed to indicate to the casual observer the intent of its use.
* One-character variable names should be avoided except for temporary variables.
* Common names for temporary variables are i, j, k, m, and n for integers; c, d, and e for characters.

Type 4: Constant variables

* Should be all uppercase with words separated by underscores (“\_”).
* There are various constants used in predefined classes like Float, Long, String etc.

Type 5: Packages

* The prefix of a unique package name is always written in all-lowercase ASCII letters and should be one of the top-level domain names, like com, edu, gov, mil, net, org.
* Subsequent components of the package name vary according to an organization’s own internal naming conventions.

1. **Compiler and interpreter**

**compiler**   
It is a translator which takes input i.e., High-Level Language, and produces an output of low-level language i.e. machine or assembly language.

* A compiler is more intelligent than an assembler it checks all kinds of limits, ranges, errors, etc.
* But its program run time is more and occupies a larger part of memory. It has slow speed because a compiler goes through the entire program and then translates the entire program into machine codes.

**Interpreter**

An interpreter is a program that translates a programming language into a comprehensible language. –

* It translates only one statement of the program at a time.
* Interpreters, more often than not are smaller than compilers.

1. **difference between sdk jre jdk**

The JDK (Java Development Kit) is an SDK (Software Dev Kit).It is used to build software/applications on Java and of course it includes the JRE (Java Runtime Edition) to execute that software. If you just want to execute a Java application, download only the JRE and leave the JDK part .  
The JRE is what you need in order to execute compiled java classes (also known as java byte codes). It consists of the "java" executable and JAR files containing the compiled classes of the core java library .

1. **difference between 3 tools eclipse/sts/IntelliJ**

IntelliJ IDEA is a dedicated Java IDE developed by JetBrains. It is among the best Java IDEs. The Java IDE focuses on developer productivity and flaunts an ergonomic design. It provides support for JVM-based languages to the likes of Groovy and Kotlin.

IntelliJ IDEA comes with all the benchmark features that are expected from a top IDE. This includes code completion, multi-language support, inbuilt debugger, syntax highlighting, support for frontend and backend frameworks, and VCS integration.

**STS** is an **Eclipse**-based development environment that is customized for the development of Spring applications. It provides a ready-to-use environment to implement, debug, run and deploy your applications. **STS** is built as an addition on top of the latest **Eclipse** releases.

The main difference between Eclipse and IntelliJ lies in their intended use. While IntelliJ is a Java IDE for professionals and students, Eclipse focuses on open-source development with its wide range of optimized IDEs. Compared to IntelliJ IDEA, Eclipse comes in 40+ languages. Also, it is a bigger project than IntelliJ IDEA. While IntelliJ focuses primarily on Java and JVM languages (like Kotlin and Scala) Eclipse offers support for non-JVM languages too, such as C, C++, Julia, and Perl. IntelliJ IDEA offers the Community Edition as the production-ready variant of its IDE while no commercial IDE is offered by Eclipse. Unlike IntelliJ IDEA, Eclipse is also available as a cloud-based IDE.

1. get to know commands for windows

#1. Access System Configuration — “msconfig”

#2. Access Resource Monitor — “resmon”

#3. Open System Information — “msinfo32”

#4. Access Backup and Restore window — “sdclt”

#5. Access mouse properties — “main. ...

#6. Open Windows Registry — “regedit”

#7. Access System Properties — “sysdm.cpl”

#8. Open Control Panel — “control”

1. **What is ASCII value?**

ASCII stands for the "American Standard Code for Information Interchange".

It was designed in the early 60's, as a standard character set for computers and electronic devices.

ASCII is a 7-bit character set containing 128 characters.

It contains the numbers from 0-9, the upper and lower case English letters from A to Z, and some special characters.

The character sets used in modern computers, in HTML, and on the Internet, are all based on ASCII.