INTRODUCTION IN JAVA

1. **What are the access specifier present in java?**

Ans: - There are four type of access specifier present in java:

1. Public
2. Protected
3. Default
4. Private
5. **Define the scope of each access specifier?**

Ans: - Public:

When a class, method, constructor, interface etc. declared as public, then we can access it from any other class.

Protected:

When a variable, method and constructor are declared as protected in a superclass, then it can be accessed any class within the package of protected member’s class or only by the subclass in other package.

Default:

When no access specifier are declared then we have to know it is a default access specifier. When something is default then it is visible to all within a particular package.

Private:

Private variable or methods may be used only by an instance of the same class that declares the variable or method; A private feature may only be accessed by the class that owns the feature.

1. **Give the details about public keyword in java?**

Ans: - Public is a Java keyword which declares member access as public. i.e. we can access it from any other class.

1. **Why private access specifier cannot access outside the class?**

Ans: - Private members are the member of same class and encapsulate within the same class object.

1. **What are the access specifier and access modifiers present in java?**

Ans: - There are 4 types of access specifier: -

1. Public
2. Private
3. Protected
4. Default

Access modifiers are:

* Final
* Static
* Synchronized
* Abstract
* Volatile
* Strictfp
* Native
* Transient

1. **Which modifiers may be used with top-level class?**

Ans: - Public and default modifiers are used with top-level class.

1. **What is nested class in java? Which access specifiers are allowed?**

Ans: - A class within a class is called as nested class. All the access specifiers i.e. public, protected, default and protected are allowed in nested class.

**8) Why protected and private access specifiers are not allowed in top-level?**

Ans: - A top class as private would be completely useless because nothing would have access to it.

Protected class member is just like package-private, except that it also can be accessed from subclasses of different package. Since there is no way to restrict this class being subclasses by only few classes, there is no use of protected access specifiers for top level class. Hence it is not allowed.

**9) How to declare default access specifier in Java?**

Ans: - Any class, Field, method or constructor that has no access specifier provides default access specifier.

**10) Define the rule if a class name is public in Java?**

Ans: - According to java specification, if the class is public then its name must be same with the corresponding file name.

**11) What is class in Java?**

Ans: - A class is a prototype that describes the behavior or state that the object of its type support.

**12) Define the rules of valid identifier in java?**

Ans: - Rule of valid identifier are:

* Each identifier must have at least one character.
* The 1st character must be alphabet, underscore or dollar sign.
* The 1st character can’t be a digit.
* Reserved words can’t be used as an identifier.
* Java identifiers are case sensitive.
* Except dollar or underscore sign other special character are not allowed.
* The name must not contain white space.

**13) State the naming conventions of a class name with example?**

Ans: - In a class name the start letter of each word should be capital.

E.g.: - BufferReader, BookRunner etc.

**14) State the naming conventions of a method with example?**

Ans: - In a method name the start letter of each word should be capital except first word.

E.g.: - getValue(), setValue() etc.

**15) State the naming conventions of a package with example?**

Ans: - In a package name all word must be lower case.

E.g.: - java, lang etc.

**16) State the naming conventions rule for a constant with example?**

Ans: - Each letter of the word must be capital.

E.g.: - SIZE, BOLD etc.

**17) Why main() method must be public in java give reason?**

Ans: - As JVM (Java Virtual Machine) access the main() method from different package, so main() method must be public in java.

**18) How to call a static and non-static variable in java?**

Ans: - Static member can be called by class name, object name and directly. Non-static member can be called by object name only.

**19) What is JVM?**

Ans: - JVM is known as Java Virtual Machine. It execute the byte code.

**20) What are the tasks of JVM?**

Ans: - The tasks of JVM are:

* JVM responsible for calling main method and running your program.
* It is also responsible for calling garbage collector for cleanup operation.
* Memory management, Thread management, process management, Device driver management.

**21) Why main() method is static in java?**

Ans: - Since the main method is static because JVM can call it without creating any instance of a class, which contains the main method.

**22) What is the return type of main() method in java? Explain?**