# What is a Class?

A class is a group of objects which have common properties. It is a template or blueprint from which objects are created. A class in java can contain Field,Methods and Constructors,Block of code.

# How to declare a class:

public class FirstProgram{

-

--Block of code----

}

here,

public ---> AccessModifiers class ---> Keyword FirstProgram ---> ClassName **2.What is an Object?**

1. An Instance of a class is called Object.
2. An object is a real-world entity.

Syntax for Object:

ClassName objectName=new ClassName();

# Explain about the main method in java

Main() method is the entry point of any standalone java application. The syntax

of main method is **public static void main(String args[]){---}**. Main method is public

and static so that java can access it without initializing the class. The input parameter is an array of String through which we can pass runtime arguments to the java program.

**public :** Public is an access modifier, which is used to specify who can access this method. Public means that this Method will be accessible by any Class.

**static :** It is a keyword in java which identifies it is class based. i.e it can be accessed without creating the instance of a Class.

**void :** It is the return type of the method. Void defines the method which will not return any value.

**main :** It is the name of the method which is searched by JVM as a starting point for an application with a particular signature only. It is the method where the main execution occur.

**String args[] :** It is the parameter passed to the main method.

# Data Types in Java

Data types specify the different sizes and values that can be stored in the variable.

There are two types of data types in Java.

1. **Primitive data types:** The primitive data types include boolean, char, byte, short, int, long, float and double.
2. **Non-primitive** data types: The non-primitive data types include **Classes, Interfaces,** and **Arrays**.

# What are the access modifiers available in java

The access modifiers in Java specifies the accessibility or scope of a field, method, constructor, or class. We can change the access level of fields, constructors, methods, and class by applying the access modifier on it. There are four types of Java access modifiers:

**Private**: The access level of a private modifier is only within the class. It cannot be accessed from outside the class.

**Default**: The access level of a default modifier is only within the package. It cannot be accessed from outside the package. If you do not specify any access level, it will be the default.

**Protected**: The access level of a protected modifier is within the package and outside the package through child class. If you do not make the child class, it cannot be accessed from outside the package.

**Public**: The access level of a public modifier is everywhere. It can be accessed from within the class, outside the class, within the package and outside the package.

# A java class can only have public or default access modifier.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Access Modifier** | **within class** | **within package** | **outside package by subclass only** | **outside package** |
| **Private** | Y | N | N | N |
| **Default** | Y | Y | N | N |
| **Protected** | Y | Y | Y | N |
| **Public** | Y | Y | Y | Y |

1. **Variables:**

A variable is a container which holds the value while the Java program is executed. A variable is assigned with a data type.

There are three types of variables in java 1.Local Variables

2.Global Variables 3.Static Variables

# Difference between Local Variable and Global Variable?

|  |  |
| --- | --- |
| **Local Variable** | **Global Variable** |
| If you are declaring the variables inside  a method, That is called as Local Variable | If you are declaring the variables inside  a class, and outside of the method That is called as Global variable. |
| Must be Initialized | May or may not be Initialized |
| If you are declaring the local variable, it will be accessing only with in a method, but it can not accessed outside the  method. | If you are declaring the Global variable, it will be accessing any where of this class. |
| For local variable access modifier can't be used. | For Global variable access modifier can be used. |

1. **Can we overload main method in Java**

Yes, we can have multiple methods with name “main” in a single class.

However if we run the class, java runtime environment will look for main method with syntax as public static void main(String args[]){---}.

# Why is Java a platform independent language?

# Java is platform-independent because it is compiled to a bytecode that can be run on any device that has a Java Virtual Machine (JVM). This means that you can write a Java program on one platform (such as Windows) and then run it on a different platform (such as macOS or Linux) without making any changes to the code

# What is compiler?

# A compiler is a translator that converts the user-level language into the machine language and machine language into user-level.