**Day 8**

**Methods in Java**

* A **method** is a block of code or collection of statements or a set of code grouped together to perform a certain task or operation.
* It is used to achieve the **reusability** of code. We write a method once and use it many times. We do not require to write code again and again.
* It also provides the **easy modification** and **readability** of code, just by adding or removing a chunk of code. The method is executed only when we call or invoke it.
* The most important method in Java is the **main()** method.

**Method Declaration:**

The method declaration provides information about method attributes, such as visibility, return-type, name, and arguments. It has six components that are known as **method header**.

*Return Type*

*Access specifier* *Method name* *Parameter list*

public int add (int a, int b) **Method Header**

{

**Method signature**

// method body

}

* **Method Signature:** Every method has a method signature. It is a part of the method declaration. It includes the method name and parameter list.
* **Access Specifier:** Access specifier or modifier is the access type of the method. It specifies the visibility of the method. Java provides four types of access specifier:
* ***Public:*** The method is accessible by all classes when we use public specifier in our application.
* ***Private:*** When we use a private access specifier, the method is accessible only in the classes in which it is defined.
* ***Protected:*** When we use protected access specifier, the method is accessible within the same package or subclasses in a different package.
* ***Default:*** When we do not use any access specifier in the method declaration, Java uses default access specifier by default. It is visible only from the same package only.
* **Return Type:** Return type is a data type that the method returns. It may have a primitive data type, object, collection, void, etc. If the method does not return anything, we use void keyword.
* **Method Name:** It is a unique name that is used to define the name of a method. It must be corresponding to the functionality of the method. Parameter List: It is the list of parameters separated by a comma and enclosed in the pair of parentheses. It contains the data type and variable name. If the method has no parameter, left the parentheses blank.
* **Method Body:** It is a part of the method declaration. It contains all the actions to be performed. It is enclosed within the pair of curly braces.

**Non access modifier:**

Static

Final

Strict fp