main() method :

* main is a **unredefined method** because a user is responsible to write the logic inside the main method, only the name is predefined because it is the **entry point** of our java program.

Can we write multiple methods with the same name ?

Yes, We can write multiple methods with same name but parameter MUST be different otherwise code will not compile.

Note :- We can also write multiple main methods with different parameter but JVM will always execute the main method which takes String [] args (String array) as a parameter as shown in the program below.

```
//Program
public class Welcome
{
    public static void main(String[] args)
    {
        System.out.println("Hello Batch 51, Welcome to Java!!");
        main();
    }

    public static void main()
    {
        System.out.println("Hello Everyone!!");
    }
}

Output : Hello Batch 51, Welcome to Java!!
         Hello Everyone!!
```

String [] args :

* String is a predefined class available in java.lang package (package is just like header file). args is an array variable as it can hold multiple values of type String.

FQ :

Why the main method of java accepts String array as a parameter ?

String is a collection of alpha-numeric character so it can accept all different kind of values.

Java software people has provided String array as a parameter so it can ACCEPT MULTIPLE VALUES OF DIFFERENT TYPE, that means providing more wider scope to accept heterogeneous types of values.

System.out.println() :

* It is an output statement in java. By using this statement we can **print different types** of values on the console window.

* Actually, System.out.println() represents HAS-A Relation as shown below :

```
public final class System
{
    public static final PrintStream out = null;  //HAS-A Relation
}
```

```
//WAP to add two numbers
public class Addition
{
    public static void main(String[] args)
    {
        int x = 100;
        int y = 200;
        int sum = x + y;
        System.out.println("Sum is " +sum);
    }
}
```

Note : Here we will get compilation error because in java library, there is not println() method which accept String, int as a parameter.

How to provide user-friendly message with String as a parameter :

* If we want to provide user friendly message with String as a parameter then we should use a special operator called String concatenation operator ("+").

Behavior of + operator :

```
1 + 1 = 2     [Here '+' is working as a Arithmetic Operator]

"1" + 1 =11   [Here '+' is working as a String concatenation Operator]

"2" + "2" = 22   [Here '+' is working as a String concatenation Operator]
```

So, the final conclusion is, If any of the operand is String type then '+' will behave as a String concatenation operator.

```
//WAP to add two numbers
public class Addition
{
    public static void main(String[] args)
    {
        int x = 100;
        int y = 200;
        int sum = x + y;
        System.out.print("Sum is ");
        System.out.print("Sum is ");
        System.out.println();
    }
}

//String Concatenation Operator :
public class AddtionWithoutLinkVariable
{
    public static void main(String[] args)
    {
        int x = 100;
        int y = 200;
        System.out.print("Sum is ");//++++1, //100200
        System.out.print(x+y);//300
        System.out.print("+++++1 //130230");
    System.out.print("Sum is " +x+y+" +++++1 //130230");
        System.out.print("ACC+B1+"B27"+B5+B51, //B9427B6B6
    }
}
```