Why we pass parameter to a function ?

We should pass parameter to a function for getting more information regarding the function.

If We don't pass parameter then the informations are not complete, it is partial information.

Example :

```
public void doSum(int x, int y)
{
}

public void deposit(double amount)
{
}

public void sleep(int hours)
{
}
```

Why functions are called methods in java ?
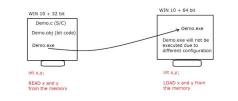
```
        public void m1() -> :: (Scope Resolution Operator)
        {                        --------> function
        }

        class Test
        {
            public void m1()
            {                    --------> Method
            }
        }
```

> In Java, it is not possible to write a function outside of the class, each and every function, we should write inside the class only.

* In C++ language, there is a facility to write a function inside the class as well outside of the class by using scope resolution operator (::) but in java we can write a function inside the class only, we can't define a function outside of the class, that is reason functions are called Method in java.

*** What is platform independency in Java ?

WIN 10 + 32 bit
Demo.c (S/C)
Demo.obj (bit code)
Demo.exe

WIN 10 + 64 bit
Demo.exe
Demo.exe will not be executed due to different configuration

int a,c;
READ a and y from the memory

int a,c;
LOAD x and y from the memory
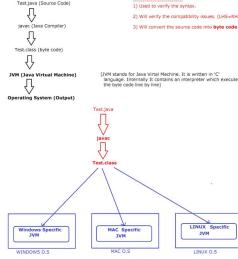
* C and C++ programs are **platform dependent programs** that means the .exe file created on one machine will not be executed on another machine, if there is a change in **system configuration.**

Server:
Test.c
Test.exe
WIN 11 + 64 bit

c1 c2 c3 c4 c5

* C and C++ programs are not suitable for website development because they are platform dependent.

How java is platform independent ?

Test.java (Source Code)
⇩
(Java) (Java Compiler)
⇩
Test.class (byte code)
⇩
JVM (Java Virtual Machine)
⇩
Operating System (Output)

Role of Java Compiler :
----
1) Used to verify the syntax.
2) Will verify the compatibility issues. (U+8=H+8)
3) Will convert the source code into **byte code**

[JVM stands for Java Virtual Machine. It is written in 'C' language. Internally it contains an interpreter which executes the byte code line by line]

Test.java
⇩
javac
⇩
Test.class

Windows Specific JVM — WINDOWS O.S
MAC Specific JVM — MAC O.S
LINUX Specific JVM — LINUX O.S

Java is a platform independent language. Whenever we write a java program, the extension of java program must be .java.

Now the .java file we submit to java compiler (javac) for compilation process. After successful compilation the compiler will generate a very special byte code file i.e .class file (also known as bytecode). Now this .class file we submit to JVM for execution purpose.

The role of JVM is to load and execute the .class file. Here JVM plays a major role because It converts the .class file into appropriate machine code instruction (Operating System format) so java becomes platform independent language and it is highly suitable for website development.

Note :- Each OS (Windows, Linux, Mac) has its own JVM implementation that means JVM is platform dependent technology where as Java is platform independent technology.

JVM internally contains an interpreter as it executes the code line by line. It is written in 'C' language hence platform dependent.

Note : All the browsers internally contain JVM are known as
JEB (Java Enabled Browsers) browser.