

# JAVA Programming

## # Introduction :-

Java is an Object Oriented programming language developed by Sun Microsystems of USA in 1991.

It was originally called Oak by James Goslin who was one of the inventors of JAVA.

✶ JAVA is purely object oriented.

## # How JAVA works?

Java is compiled into byte code and then it is interpreted to machine code.



# # JDK - Java Development Kit -

Collection of tools used for developing  
and running JAVA program

Java Code -

```
package com.company; // ①
```

```
public class Main { // ② entry point of the application
```

```
    public static void main (String[] args) { // ③
```

```
        System.out.println ("Hello world");
```

```
    }  
}
```

① `package com.company;`

- packages are used to group the related classes
- `package` keyword used to create package in JAVA.
- `com.company` is the name of the package.

③ Every JAVA program must contain main method.

# # Variables and data types

Variables - Container that stores a value  
Values can be changed during the execution.

Data types - ① Primitive ② Non-primitive

Primitive → byte → Float (F) → Char  
→ short → Long (L, l) → boolean  
→ int → double (d, D)

## # Literals

A constant value which can be assigned to a variable.

eg - 15.3F → Float literal  
18.3D → double "  
true → boolean "

# Keywords - Words which are reserved and used by JAVA compiler.

## # Input from the user :-

Java uses Scanner class to take input

```
Scanner S = new Scanner(System.in)
```

→ `String str = SC.next();`

→ `String line = SC.nextLine();`

→ `int a = SC.nextInt();`

→ `Float f = SC.nextFloat();`

## # Print in Java -

① `System.out.print()` → Print in same line

② `System.out.println()` → Print in new line.

③ `System.out.printf()` → ex -

`system.out.printf("%c", 'a')`

