# Programming Languages

# What is a Programming Languages

- A programming language allows people to create programs that tell machines (computers) what to do.

*A programming language is a tool for developing executable models for a class of problem domains.*

# Levels of Programming Languages

High-level program

```
class Triangle {
  ...
  float surface()
    return b*h/2;
  }
```

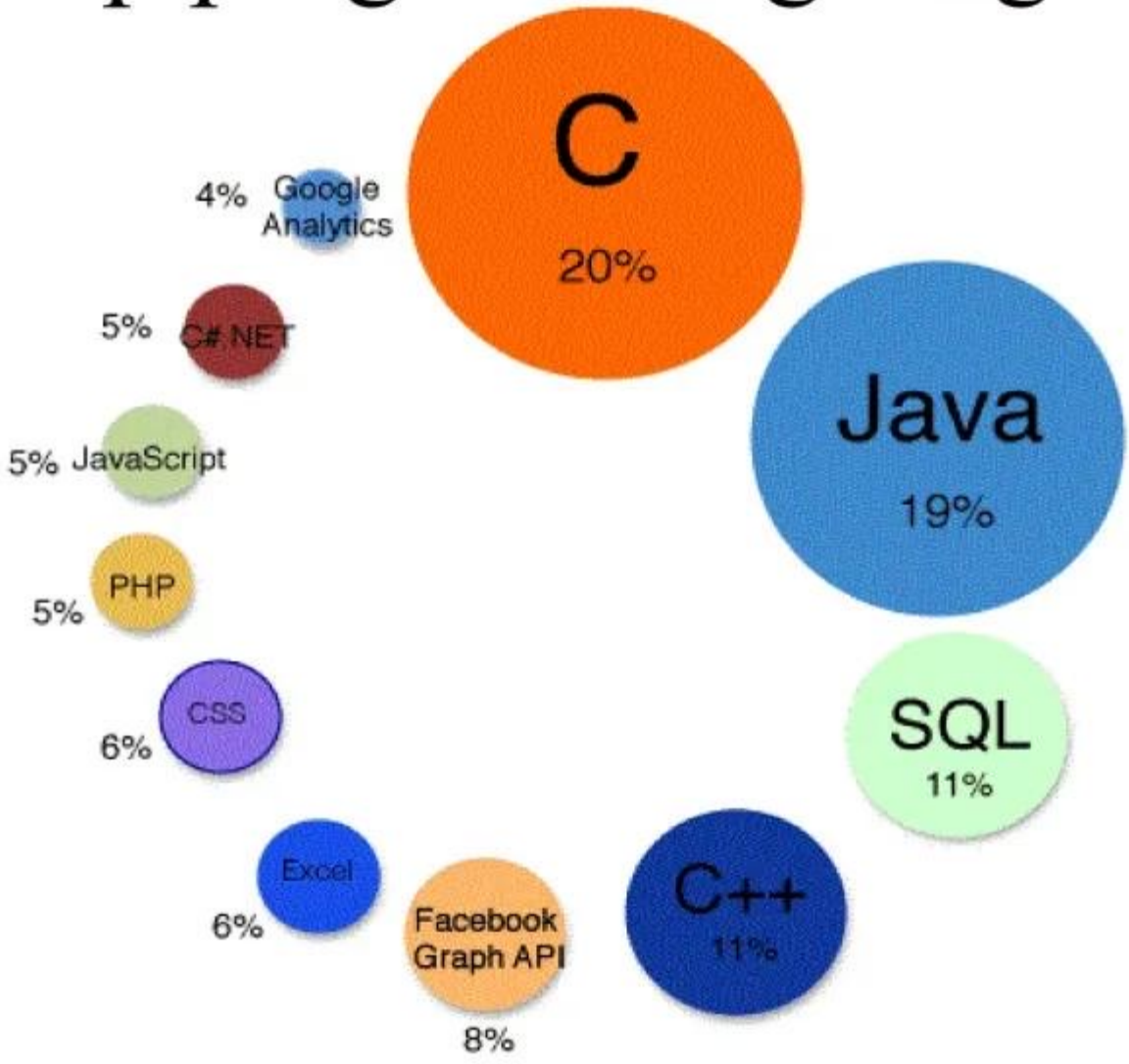
Low-level program

```
LOAD r1,b
LOAD r2,h
MUL r1,r2
DIV r1,#2
RET
```

# Types of programme

- Imperative Programming (C)
- Object-Oriented Programming (C++)
- Logic/Declarative Programming (Prolog)
- Functional/Applicative Programming (Lisp)

# Top programming languages



# High-level Languages

- C
- C++
- Java
- HTML
- XML

# High-level Languages

## •C

- Developed by Bell Laboratories in the early 1970s.
- Provides control and efficiency of assembly language while having third generation language features.
- Often used for system programs.
- UNIX is written in C.

# Example of C programe

Input

Start here | Untitled1.c

```
1   #include<stdio.h>
2
3   int main()
4
5   {
6       printf("Hello World");
7
8
9       return 0;
10  }
11
```

# Example of C programe

Reasult/ output

```
Hello World
Process returned 0 (0x0)   execution time : 0.188 s
Press any key to continue.
```

Input a programme +compile it +run it = Reasult/output

# High-level Languages

- C++
  - It is C language with additional features.
  - Widely used for developing system and application software.
  - Graphical user interfaces can be developed easily with visual programming tools.

# High-level Languages

- JAVA
  - An object-oriented language similar to C++ that eliminates lots of C++'s problematic features
  - Allows a web page developer to create programs for applications.
  - Objective of JAVA developers is that it be machine, platform and operating system independent.

# Example of Java

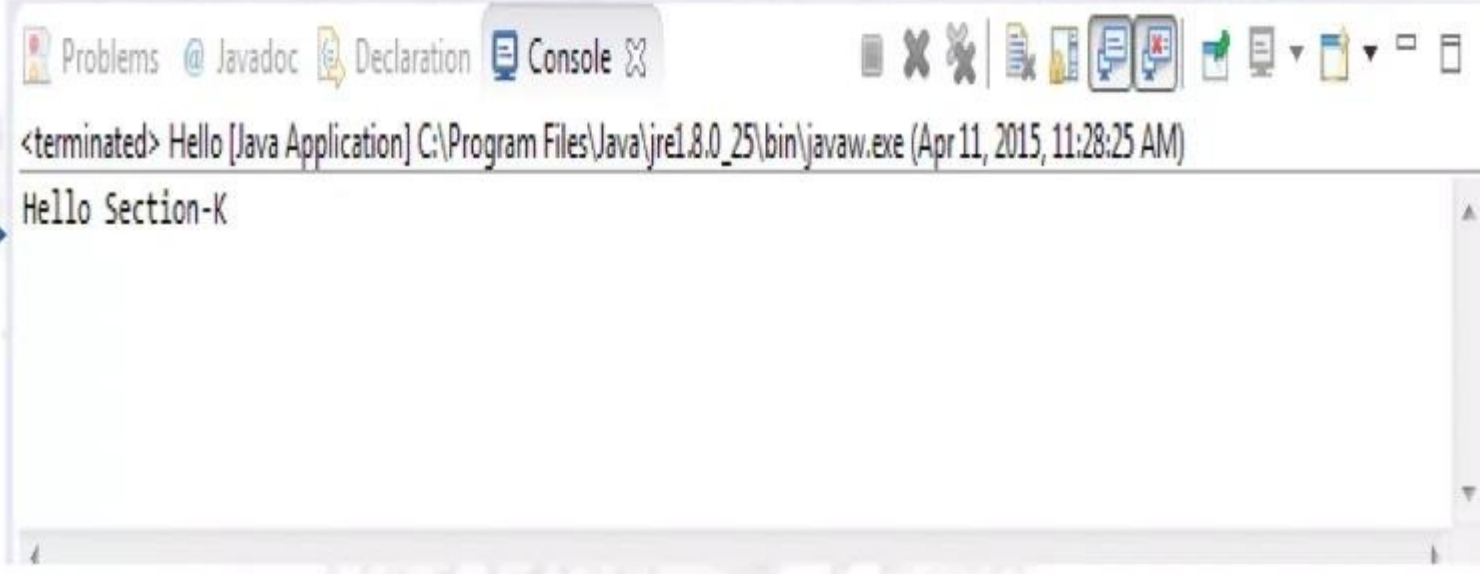
Input

Hello.java

```
1
2  public class Hello {
3
4      public static void main(String[] args) {
5          // TODO Auto-generated method stub
6          System.out.println("Hello Section-K");
7      }
8
9  }
10
```

# Example of Java

Output



# High-level Languages

- XML
  - Extensible Markup Language.
  - A language for defining other languages.

# Markup Languages

- HTML
  - HyperText Markup Language.
  - Used on the Internet and the World Wide Web (WWW).
  - Web page developer puts brief codes called tags in the page to indicate how the page should be formatted.

# Example of HTML

```
<html>
    <head>
        <body>
            <h1>Hello Friends</h1>
      </body>
   </head>
</html>
```

# Exaample of CSS

```
<!DOCTYPE html>
<html>
<head>
<style>
p {
    text-align: center;
    color: red;
}
</style>
</head>
<body>
```

# Example of CSS

Result:

Every paragraph will be affected by the style.

Me too!

And me!

# Difference between a high and low-level programming language

**LOW LEVEL LANGUAGES WORK MORE CLOSELY WITH HARDWARE AND DO NOT REQUIRE A COMPILER TO BE EXECUTED. HIGH LEVEL LANGUAGES ARE MORE UNDERSTANDABLE FOR THE PROGRAMMER IN TERMS OF THE WORDS IN THE CODE.**

# Conclusion

- Every one need a language to tell an information which is hidden, in such a way programming is a language which is used used for knowing the hidden information of computer related programming

Thank
You !!