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;
  }
```

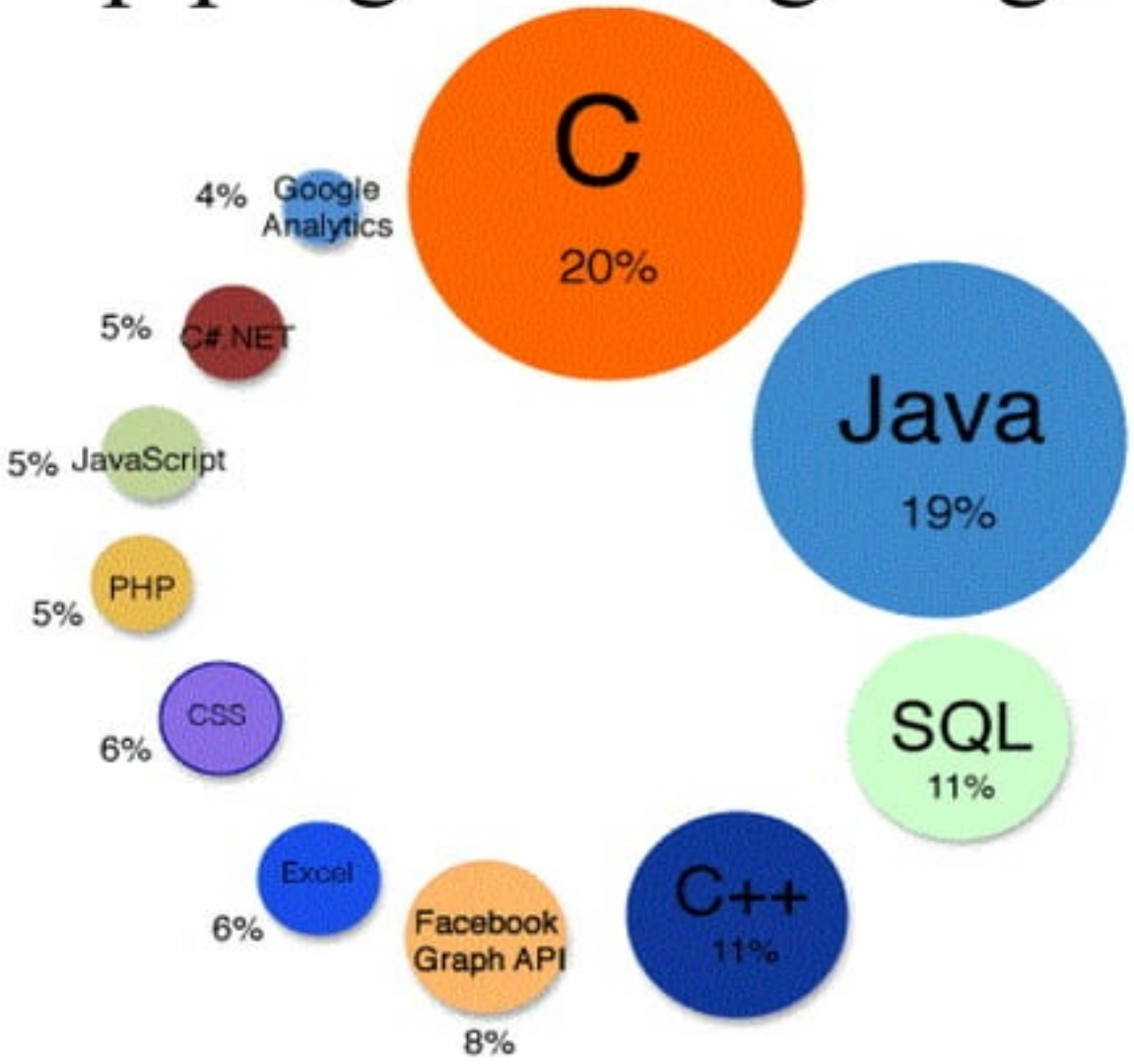
Low-level program

```
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.

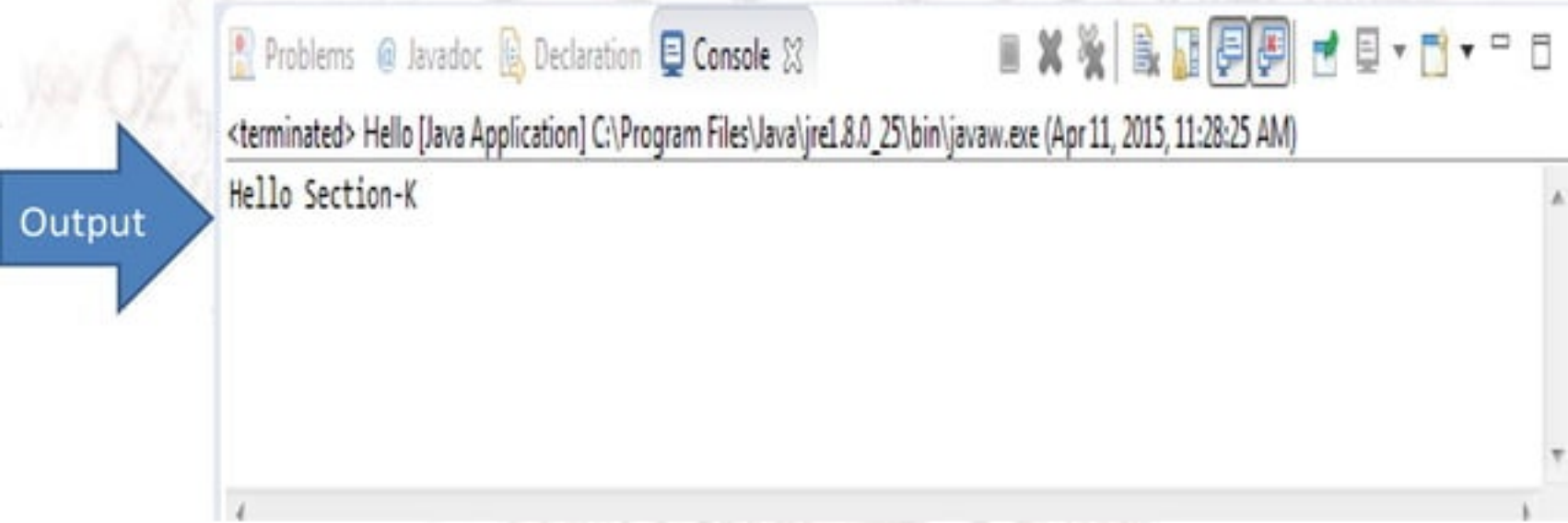
Example of Java

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



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!

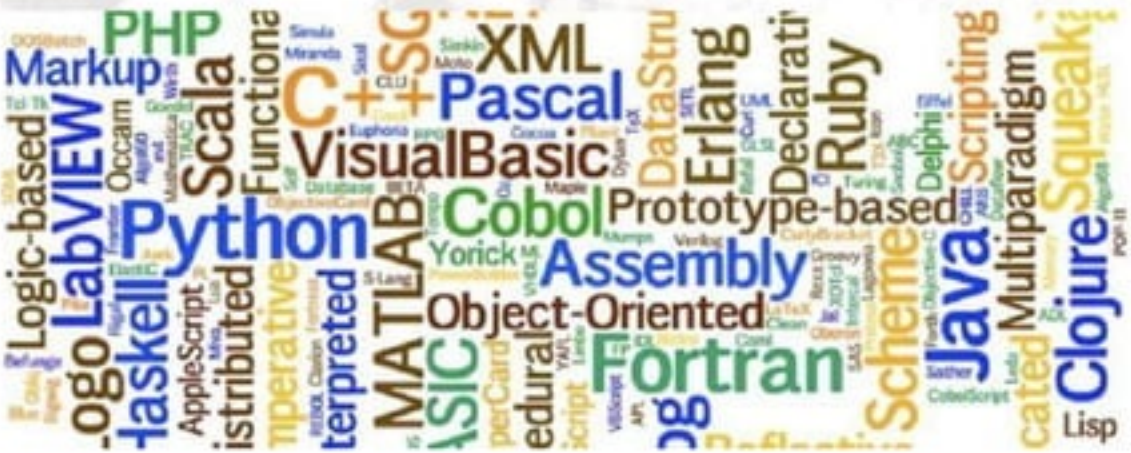
And me!

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 !!
Lisp Pascal Lua Perl Python
VisualBasic
Ruby
Lua Pascal
Java
MATLAB
Groovy
Python
Java
COBOL
C++
VisualBasic
Python
HTML
JavaScript
PHP
Lisp
SQL
C#
VisualBasic
Perl
JavaScript
COBOL Perl
Perl
JavaScript HTML
C++ MATLAB
MATLAB
COBOL C# SQL