

Introduction to Software Development



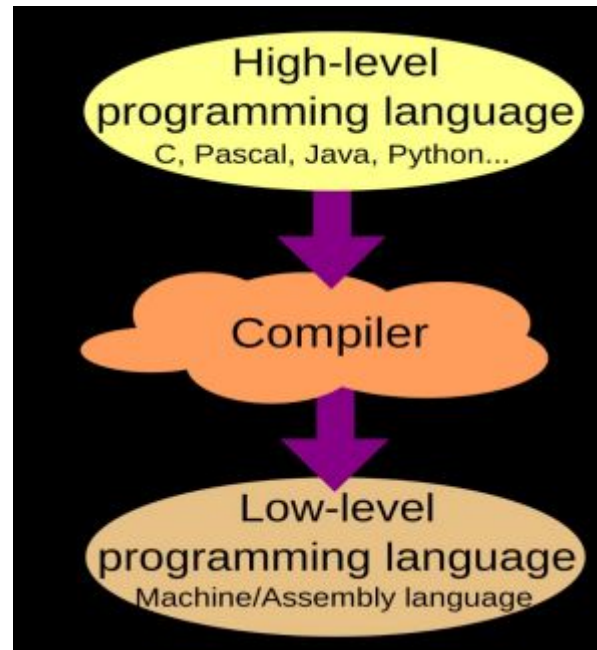
IT TALENTS
Training Camp

Programming language vs any language

- ▶ Languages help people communicate between each other
- ▶ Programming languages do the same but between humans and machines
- ▶ Each programming language is “best” at something specific
- ▶ Programming languages include instructions that machines have to perform
- ▶ Both the machine and the human have to know the language
- ▶ Software developers - people that know programming languages and can “communicate” with machines (give them instructions)
- ▶ Code - the instructions written in a programming language

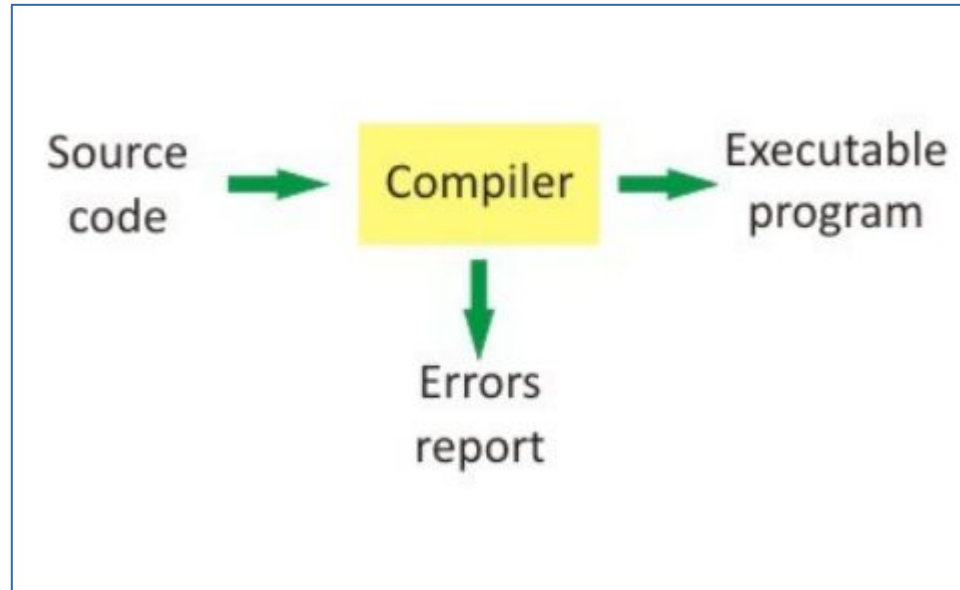
High-Level vs. Low-Level Languages

- ▶ High-level languages enable you to accomplish great functionality with little piece of code.
- ▶ Low-level languages are not easy to understand by humans, but are really fast to execute from computers.



Compiler vs Interpreter

- ▶ **Compiler** is a program that transforms source code written in a programming language into executable code



- ▶ **Interpreter** is a program that directly executes a code written in a scripting language, without previously compiling it into a machine language.
- ▶ Languages such as PHP, JavaScript, Ruby, etc. are not compiled but interpreted

JavaScript

- ▶ Developed in 10 days in May 1995 by Brendan Eich for Netscape
- ▶ Also known as ECMA Script, LiveScript, JScript
- ▶ Very widely used programming language
- ▶ Suitable for desktop, mobile, web, office applications, machine automation
- ▶ Multi-paradigm language - supports object-oriented and functional programming styles
- ▶ JavaScript is executed by JavaScript engines
- ▶ Interpreted language



JavaScript engine

- ▶ JavaScript source code is human readable code in .js (or other) files
- ▶ Interpretation
 - ▶ - Chrome - V8
 - ▶ - Mozilla Firefox - SpiderMonkey
 - ▶ - Internet Explorer - Chakra
 - ▶ - Safari - JavaScriptCore
- ▶ Execution

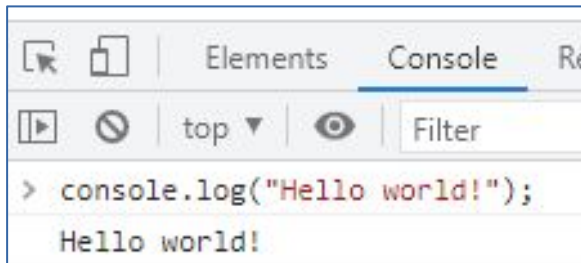


First steps in JavaScript

- ▶ Install IDE/Code editor - VS Code
- ▶ Install Code Runner plugin
- ▶ Open settings and Enable: Code Runner: Run in Terminal

```
test.js
1 console.log("Hello World!");
2
3
```

- ▶ You can manage to do the same in any browser - for example Chrome
- ▶ Open Chrome, pres F12 (Developer tools)
- ▶ Open “Console” tab



The screenshot shows the Chrome DevTools interface with the 'Console' tab selected. The console displays a log message: `> console.log("Hello world!");` followed by the output `Hello world!`. The interface includes standard DevTools controls like zoom, search, and a filter input.