



What is Programming ?

Definition

Programming is the process of creating a series of instructions that tell a computer how to perform a task.

Instructions that tell a computer how to perform a task are written in a programming language.

Definition

A programming language is a computer language, through which a human being can give instructions to a computer.

Instructions that tell a computer how to perform a task and written in a programming language are called source code.

Files in which the source code is stored are called source files.

It should be noted that the computer at the lower level only understands the binary language, meaning zeros and one.

Definition

The process of transforming the source code into a binary file (which can be assimilated by the processor) is called compilation.

After a source code (located in a source file) is successfully compiled, a file containing its executable version is generated. Failed compilation occurs when the source code does not adhere to the rules of the programming language.

The computer will only run the instructions recorded in the source file after it executes the file obtained from compiling the source code file.



There are several programming languages. These languages can be grouped into several programming paradigms.

Paradigms in programming refer to the fundamental principles of software development. At best, it is the classification, style or way of programming. It is an approach to solve problems by using programming languages.

Below are some programming paradigms.

1. Imperative programming

They include:

- Structured programming
- Procedural programming

2. Object-oriented programming

They include:

- Prototype oriented programming
- Class-oriented programming
- Component-oriented programming

3. Declarative programming

They include:

- Descriptive programming
- Functional programming
- Logic programming
- Constraint programming

Some programming languages:

Language	Paradigm
Java	Object-oriented programming
C++	Object-oriented / procedural
C	procedural
PHP	Object-oriented/ procedural
Perl	Object-oriented / procedural
Haskell	Functional oriented



F#	Functional oriented
Clojure	Functional oriented
JavaScript	Functional oriented & Procedural