Terminologies Related to Programming

Before we start learning C++, we will first explain what a programming language is and what some basic terminologies used in programming are. These terminologies are not language-specific and are common across all programming languages.

We'll cover the following

Computer program

A **computer program** is a set of instructions given to the computer to perform a particular task.

Coding	Programming
Process of creating instruction	Taking instruction and making the target obey them

Machine language

Computers can only understand **binary code**. This effectively means that any input given to the computer must be in the form of **0 and 1's** (binary).

A computer then performs some operations and returns an output, which is also in the form of 0 and 1's. So how can a human understand and communicate with the computer? We have programming languages for this purpose.

Programming language

We have created some languages that we can use to communicate instructions to the computer. These languages are **close to human languages**, and like any language, e.g., English, programming languages have some rules known as **syntax**. Programming languages are categorized into:

- Low-level languages
- High-level languages

Low-level languages

Low-level languages are close to **machine language** and require extensive knowledge of machine hardware and working. Binary and assembly are low-level languages.

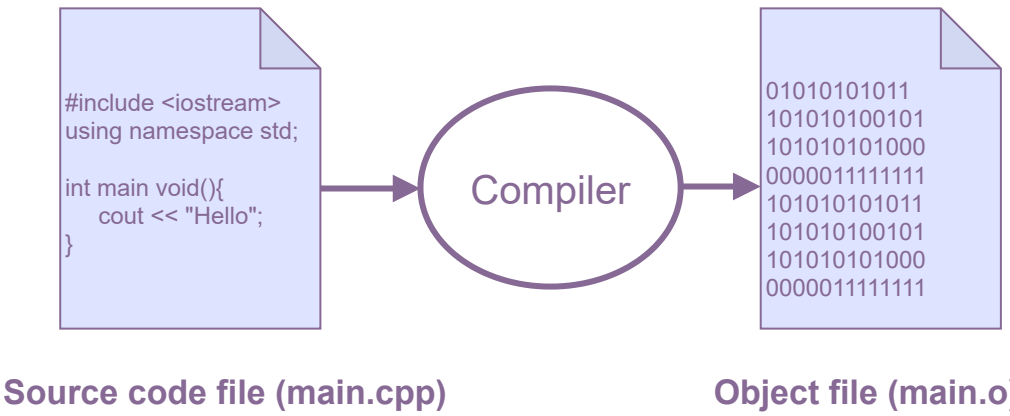
High-level language

High-level languages are close to **human language**. C++, python, and all such languages are high level and require knowledge of syntax to work with them.

So how can a computer understand rules, or rather a syntax, of each language? We have compilers for this purpose.

Compiler

A compiler translates a high-level language to machine language. We write our instructions in a high-level language, called **source code or program**, and then the compiler translates the instructions for a machine to understand. This process is called **compilation**.



Compilation process

In the next lesson, we will introduce you to the C++ language.