

# Difference Between Source Code and Object Code

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## Key Difference - Source Code vs Object Code

A [software](#) is a collection of programs. A program is a set of instructions given to a computer to perform a specific task. Their instructions are written by a programmer using a [programming language](#). Therefore, developing a software meaning developing a set of programs. The activity of writing programs is known as programming. The process that is followed to develop a complete software is called Software Development Life Cycle (SDLC). The steps involved in SDLC gives an understanding of the source code and object code. This article discusses the difference between them. The **key difference** between the Source Code and Object Code is that **Source Code is a collection of computer instructions written using a human-readable programming language while Object Code is a sequence of statements in machine language, and is the output after the [compiler or an assembler](#) converts the Source Code.**

## What is Source Code?

Before developing the software, there should be an understanding of the requirement. The analysts get the user's required functionalities and document them. This document is System Requirement Specification (SRS). It provides descriptive documentation of the required functionalities. Based on that document, the system is designed. System designing can be done using flow charts, Data Flow Diagrams (DFD). The outputs of design phase can be database design, process design etc. After the design phase is completed, those designs can be implemented using a relevant programming language by a programmer.

```

#include <stdio.h>
#include <stdlib.h>
#include <sys/types.h>
#include <arpa/inet.h>

void serveur1(portServ ports)
{
    int sockServ1, sockServ2, sockClient;
    struct sockaddr_in monAddr, addrClient, addrServ2;
    socklen_t lenAddrClient;

    if ((sockServ1 = socket(AF_INET, SOCK_STREAM, 0)) == -1) {
        perror("Erreur socket");
        exit(1);
    }
    if ((sockServ2 = socket(AF_INET, SOCK_STREAM, 0)) == -1) {
        perror("Erreur socket");
        exit(1);
    }

    bzero(&monAddr, sizeof(monAddr));
    monAddr.sin_family = AF_INET;
    monAddr.sin_port = htons(ports.port1);
    monAddr.sin_addr.s_addr = INADDR_ANY;
    bzero(&addrServ2, sizeof(addrServ2));
}

```

**Figure 01: Source Code**

There are many programming languages. Some of them are [C](#), [C++](#), [C#](#), [Python](#), [Java](#). The programmer can select the programming language according to the software project and convert the designs to computer programs. The instructions are written to achieve the functionalities of the required software using the programming language. Those instructions have a syntax similar to English language and readable by a human. This collection of instructions written using a human-readable programming language is called the Source Code.

## What is Object Code?

Source Code is understandable by humans because it has a syntax similar to the English language. It is not understandable by a computer or a machine. Computers or machines understand the binary language that consists of zeros and ones. Therefore, it is necessary to convert the Source Code into machine-understandable form. The compiler or an assembler converts the Source Code into binary language or machine language. This converted code is known as the Object Code. It is understandable by the computer. Finally, the instructions given by the human are understandable by the computer.

## What is the Similarity Between Source Code and Object Code?

- Both are related to computer programming.

# What is the Difference Between Source Code and Object Code?

Source Code vs Object Code	
The Source Code is a collection of computer instructions written using a human-readable programming language.	The Object Code is a sequence of statements in machine language or binary and is the output after the compiler, or an assembler converts the Source Code.
Comprehensibility	
The Source Code is readable by the human or the programmer.	The Object Code is readable by the computer.
Generation	
The human generates the Source Code.	The compiler generates the Object Code.
Format	
The Source Code is in the form of plain text.	The object Code is in the form of binaries.

## Summary - Source Code vs Object Code

Computer Programs are useful to provide instructions to the computer to perform a specific task. These programs are written using programming languages. There are many programming languages, and the programmer can select a language to develop programs or software. Source Code and Object Code are two terms associated with programming. The difference between the Source Code and Object Code is that Source Code is a collection of computer instructions written using a human-readable programming language while Object Code is a sequence of statements in machine language, and is the output after the compiler or an assembler converts the Source Code.

### Reference:

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