

# Difference Between Procedural and Object-Oriented Programming

Although there are various similarities between Procedural and object-oriented programming, both are programming languages that carry data types like string, float, etc. Here is the list of differences between Procedural and Object-Oriented programming in the table provided below.

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<b>Procedural-Oriented Programming</b>	<b>Object-Oriented Programming</b>
It is a procedural model-oriented programming language.	It is an object model-based programming language.
It is known as POP	It is known as OOP.
Top-down approach.	Bottom-up approach.
Access modifiers are not supported.	Access modifiers are supported.
Functions are preferred over data.	Security and accessibility are preferred.
Runs faster than OOP.	Runs slower than POP.
If the size of the problem is small, POP is preferred.	If the size of the problem is big, OOP is preferred.

## What is Procedural-Oriented Programming?

Before learning about the difference between Procedural and Object-Oriented programming, we will first learn about Procedural-Oriented programming or POP in brief. It is a programming language that is based on structured programming. The code in POP is written to break down the tasks into data structures, subroutines, and a collection of variables.

POP is the oldest form of programming language. The codes in the POP generally carry sequences of procedural steps that will be performed during the program's running. Examples of Procedural-Oriented programming are C, BASIC, PASCAL, COBOL, FORTRAN, etc.

## What is Object-Oriented Programming?

Object-Oriented Programming or OOP is another type of high-level programming language. The OOP is based on the concept of object. It is one of the most widely used programming languages. The object in OOP are instances of classes known as the blueprint of objects.

Object-Oriented programming is the most popular programming language which carries data as attributes and code-like methods. The popular example of OOP in Java, C++, C#, Python, Objective-C, Scala, PHP, JavaScript, Dart, Swift, Ruby, Perl, etc.

## Key Differences Between Procedural and Object-Oriented Programming

The key differences between procedural and object-oriented programming are given below.

- Procedural programming is based on the unreal world, whereas the foundation of object-oriented programming is reality.
- Programming that follows a linear stream of instructions is known as procedural programming. On the other hand, object-oriented programming is a subset of programming that is built on the idea of objects.
- Overloading is not possible with procedural programming. However, overloading is possible in object-oriented programming in two ways- Method overloading and operator overloading.