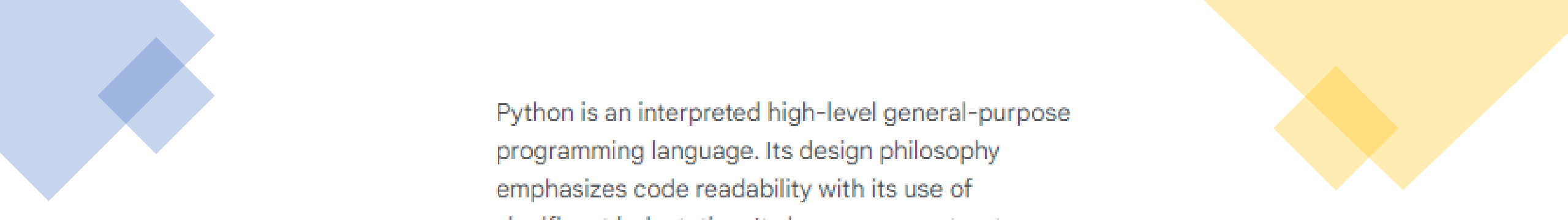


Python Programming





Python is an interpreted high-level general-purpose programming language. Its design philosophy emphasizes code readability with its use of significant indentation. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects. [Wikipedia](#)

Developer: Python Software Foundation


First appeared: 20 February 1991; 30 years ago

Designed by: [Guido van Rossum](#)

OS: [Windows](#), [Linux/UNIX](#), [macOS](#) and more

Paradigm: Multi-paradigm: object-oriented, procedural (imperative), functional, structured, reflective

Stable release: 3.10.1 / 6 December 2021; 34 days ago



Why to Learn Python?

- Python is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages.
- Python is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain.

Key Advantages

Python is Interpreted – Python is processed at runtime by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP.

Python is Interactive – You can actually sit at a Python prompt and interact with the interpreter directly to write your programs.

Python is Object-Oriented – Python supports Object-Oriented style or technique of programming that encapsulates code within objects.

Python is a Beginner's Language – Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

Characteristics of Python



It supports functional and structured programming methods as well as OOP.



It can be used as a scripting language or can be compiled to byte-code for building large applications.



It provides very high-level dynamic data types and supports dynamic type checking.



It supports automatic garbage collection.



It can be easily integrated with C, C++, COM, ActiveX, CORBA, and Java.

Python Identifiers

A Python identifier is a name used to identify a variable, function, class, module or other object. An identifier starts with a letter A to Z or a to z or an underscore (_) followed by zero or more letters, underscores and digits (0 to 9).

Python does not allow punctuation characters such as @, \$, and % within identifiers. Python is a case sensitive programming language.

Thus, **Manpower** and **manpower** are two different identifiers in Python.

Here are naming conventions for Python identifiers

Class names start with an uppercase letter. All other identifiers start with a lowercase letter.

Starting an identifier with a single leading underscore indicates that the identifier is private.

Starting an identifier with two leading underscores indicates a strongly private identifier.

If the identifier also ends with two trailing underscores, the identifier is a language-defined special name.

Reserved Words

- These are reserved words and you cannot use them as constant or variable or any other identifier names.
- All the Python keywords contain lowercase letters only.

and	exec	not
assert	finally	or
break	for	pass
class	from	print
continue	global	raise
def	if	return
del	import	try
elif	in	while
else	is	with
except	lambda	yield