







Interpreted

- Python is an interpreted language
- interpreted means that Python looks at each instruction, one at a time, and turns that instruction into something that can be run
- that means that you can simply open the Python interpreter and enter instructions one-at-a-time
- you can also *import* a program which causes the instructions in the program to be executed, as if you had typed them in
- to rerun an imported program, you reload it

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The Core of a Language • control the flow of the program • construct and access data elements • operate on data elements • construct functions • construct classes • libraries and built-in classes

Save as a "Module"

- when you save a file, such as our first program, and place a .py suffix on it, it becomes a Python module
- you can run the module to see the results of the operation
- a module is just a file of Python commands



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Continuation

" of continuation")

this is a test of continuation

Python is sensitive to end of line stuff; to

make a line continue, use the \
 print("this is a test", \

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prints





Python Tokens					
Keywords: You cannot use (are prevented from using) them in a variable name	and as	del elif	from global	not or	while with
	assert	else	if	pass	yield
	break class	except	import in	print raise	
	continue	finally	is	return	
	def	for	lambda	try	
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minds.



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Variable

- a variable is a name we designate to represent an object (number, data structure, function, etc.) in our program
- we use names to make our program more readable, so that the object is easily understood in the program

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Mixed Types What is the difference between 42 and 42.0? • their types: the first is an integer, the second is a float What happens when you mix types? • done so no information is lost 42 * 3 → 126 42.0 * 3 → 126.0

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Modules modules are files that can be imported into your Python program • use other, well-proven code with yours example is the math module • we import a module to use its contents • we use the name of the module as part of the content we imported

math Module import math print(math.pi) # constant in math module print(math.sin(1.0))# a function in math help(math.pow) # help info on pow





Developing an Algorithm How do we solve the following? • if one inch of rain falls on an acre of land, how many gallons of water have accumulated on that acre?











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The Rules Think before you program A program is a human-readable essay on problem solving that also executes on a computer. The best way to improve your programming and problem solving skills is to practice. A foolish consistency is the hobgoblin of little minds

5. Test your code, often and thoroughly!

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