TMTplus Introduction to Scientific Programming

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Chapter 2

Variables, Statements & Expressions

Ex 2.2

In the first line of code the greetings.py takes the input from the prompt and assign that input into the name variable. The second line of code prints the string "Your name is" concatenated with the contents of name variable. The last line also concatenates the name variable but this time with + operator.

Ex 2.3

- Input() uses to read a string of data from the prompt and then converts it to a string.
- Input() converts the user input into a string.
- It's an assignment statement.
- It's a variable and yes, it's a valid variable name.

Ex 2.4

- Then python evaluates an empty string.
- The number evaluated as a string.
- The two words go inside one string.

Input() always converts the user input into string datatype.

Ex 2.5

- It prints one empty line.
- It prints the contents of that object.

Ex 2.7 Help allows us to get more information about an object.

Ex 2.8 It prints a string the specified number of times.

Ex 2.9 End prints the specified string in the end of the print statement.

Ex 2.10

variable	type	value
a	int	10
b	int	30
c	float	0.0
d	float	39.0

Ex 2.11

statement	description	type
`a = 1 + 2`	Add 1 and 2 and assign to a	`int`
`b = a`	Assign the value of a to b	`int`
`a = 7.0 // 8.0`	Floor divide 7.0 and 8.0 and assign the result to variable a	`float`
`a = 7 // 8`	Floor divide 7 and 8 and assign the result to variable a	`int`
`a = 9.0 ** 10`	Calculate 9.0 to the power of 10 and assign the result to variable a	`float`
`a = 5 % 2`	Calculate the reminder of 5 and 2 and assign the result to variable a	`int`
`a = int(2.6)`	Convert the float number 2.6 to an integer number	`int`
`a = round(2.6)`	Round the number 2.6	`int`

Ex 2.12

statement	result
`1 > 2`	F
`1 == 1`	T
`10 == 11`	F
`10 != 10`	F
`2 < 4`	T
`1==1 and 2 > 4`	F
`1==1 or 2 > 4`	T