Intro to Python

Exercise: Calculator

Assignment

User Input and Text Output

This exercise is designed to give you a first chance to ask the user for information, and display information for the user, all in text mode.

Displaying Text Output

This displays a literal message: `print “Hello”`

This displays the value of a variable: `print x`

This displays a literal message, a space, and the value of a variable: `print “Hello”, x`

The space comes because of the comma (,).

Receiving User Input

This reads a string of characters from the keyboard, up to a newline (enter key): `s = raw_input()`

This reads a string of characters from the keyboard, after displaying a prompt for the user: `s = raw_input(“Tell me something? “)`

Try a simple program: `s = raw_input(“Text please: “) print s`

This will get rid of spaces at both ends of the input string: `s = s.strip()`

Checking User Input

This tells how much the user typed: `len(s)`

This looks at the first character in a string to see if it is a 3: `if s[0] == ‘3’: print “It is a three”`

Simple Arithmetic Calculator (calculator.py)

This program is most of a calculator program that does addition, subtraction, multiplication and division. You just need to add code for 4 functions. The functions have comments explaining what needs to happen. Don’t remove existing code, just add new code.

Your tasks: - Complete display_status() to show the user the status of the calculator. - Complete get_input() to ask the user for input. - Complete process_input() to find out what the user typed, and how it needs to be handled. - Complete do_arithmetic() to update the value of the calculator when two numbers need to be operated on.

Advanced tasks: - Add a clear function when the user types a ‘c’. - Add a memory function to store the current value when the user types a ‘m’. Recall the memory value when the user types a ‘M’. - Add trigonometric functions. - What other features can you add?

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