

FIT9136 – Lab Activity 2

Task 1: Finding Information

Where can you get information on Python syntax? At what point does 'research' turn into plagiarism?

Task 2: Python Types

What are the different types available in Python?

- What are their differences?
- Why is there an Integer, and a Float?

Task 3: Naming Variables

What would be good names for variables for the following (also try to identify the type):

- Dimensions for a rectangle
- Money in Australian Dollars
- Someone's Age
- Someone's Name
- Your tutor's favourite food
- Your favourite food

Task 4: Calculator

Code a script that stores two integer numbers as 'x' and 'y', then performs the following operations: +,-,*,/,%,sin(y)

Note: for the sake of this question you will be asked to change your file. Each time make a new copy of your script to make the changes.

- Ensure that your statements print in a way that isn't ambiguous.
- At the end print the types of both x and y.
- Rather than hardcoding 'x' and 'y', try taking input from the user. Did you have any problems just using 'input()'?

- Printing is one way of providing output. The other is writing to a file. Change your calculator script to do this.

Task 5a: Documenting your Code

Code documentation is the marker of a great developer. Technically speaking you should write your documentation before you start to code. Why do you think that is?

Task 5b: Documenting your Code

For your calculator script, try adding the following as part of a comment header:

- Your name
- Date the script was created
- Date the last edit was made
- Description of the purpose of the code

This list isn't exhaustive, but most comment headers include the above. Whatever style you choose, include them.

Task 6: Converting Temperature

Make a script that converts temperature from Fahrenheit to Celsius and prints it. The formula for this is:

$$C = (F - 32) \times \frac{5}{9}$$

Task 7: Greetings

Take as input a first name, a last name, and an age. Then print out a message formally displaying the inputs. E.g. "Hey there Gavin Kroeger! You are 28 years old!" Try doing this using variables and without using variables.

Task 8: Shapes (Week 2 submission)

Take as input a height and a width then print the areas of a rectangle and a triangle for these measurements (you may assume width is base for a triangle). Try and shortcut your calculations as much as possible.

Task 9: Files (Week 2 Submission)

For a script that does not have it, try and convert your code to work entirely on files. Take your input as separate lines from a file, and output your results to another file.

Important

You have to submit Task 3, 5 in Lab activity 1 AND Task 8, 9 in Lab activity 2 to moodle week 2 submission.

There is no late submission allowed.