

Small Python Programs

Create separate `.py` files for each item below. The filename should be the name of the python program (e.g. greeter.py, adder.py, greeterplus.py)

To test your programs, run each file using the `python` command in the terminal (or anaconda prompt). For example:

```
python greeter.py
```

Easy (requires expressions and datatypes)

1 Greeter

- Create a program that asks the user for a name, and the program prints "Hello, "

2 Adder

- Create a program that asks the user for two integers (you will have to call `input()` twice). The program prints the sum of the values

3 Converter

- Create a program that asks the user for a float. The program prints the conversion of the number to Fahrenheit

4 Mean Calculator

- Create a program that asks the user for three floats. The program prints the arithmetic mean of the numbers

5 Repeater

- Create a program that asks a user for a string and an integer. The program prints the string repeated n -times (where n is the number inputted by the user).
- Example:
 - **inputs:** ``ha`, `5``
 - **output:** ``hahahahaha``

Medium (requires conditionals)

1 Greeter+

- Create a program that asks the user for a name.
 - If the number of characters in the name of the person is less than 7, the program prints "Hello, {name}".
 - Otherwise it prints "Hi, {name}"

2 Adder+

- Create a program that asks the user for two integers (you will have to call ``input()`` twice).
 - If the value of their sum is zero, the program prints the string "Zero".
 - Otherwise it prints the sum in integer form.

3 Converter+

- Create a program that asks the user for a float. The program prints the conversion of the number to Fahrenheit.
 - If the value is below the freezing point of water, the program prints "{fahrenheit} degrees Fahrenheit cold".
 - If the value is above the boiling point of water, the program prints "{fahrenheit} degrees Fahrenheit hot"
 - Otherwise the program prints "{fahrenheit} degrees Fahrenheit"

4 Mean Calculator+

- Create a program that asks the user for three floats.
 - If the mean is positive, print "Negative mean"
 - If the mean is negative, print "Positive mean"
 - If the mean is zero, print "Zero mean"

5 Repeater+

- Create a program that asks a user for a string and an integer. The program prints the string repeated n -times (where n is the number inputted by the user).
 - If the number of characters in the repeated string is greater than 20, the prints "Too long, cannot print" instead
- Example 1:
 - **inputs:** `ha`, `5`
 - **output:** `hahahahaha`
- Example 2:

- inputs: `ha`, `12`
- output: `Too long, cannot print`

Advanced (requires Sequence types, Loops)

1 Greeter++

- Create a program that asks the user for n names. After collecting n names, print the following for every inputted name:
 - If the number of characters in the name of the person is less than 7, the program prints "Hello {name}".
 - Otherwise it prints "Hi {name}"

2 Adder++

- Create a program that asks the user n integers.
 - If the value of their sum is zero, the program prints the string "Zero".
 - Otherwise it prints the sum in integer form.

3 Mean Calculator++

- Create a program that asks the user for n floats.
 - If the mean is positive, print "Negative mean"
 - If the mean is negative, print "Positive mean"
 - If the mean is zero, print "Zero mean"