

COMP 10280

Programming I (Conversion)

Practical Sheet 4
Thursday, 29 September 2016

For each of the following programs, the `input` function should be used to prompt the user for appropriate input and read that input from the keyboard.

1. Write a program that takes as input an amount of currency (a `float`) and an exchange rate to another currency (a `float`) and prints out the value of the original amount in the other currency. For the exchange rate, pick two currencies and use today's exchange rate.

Save this program as `p4p1.py`.

2. Write a program that takes as input a single length (a `float`) and calculates the following:

- The area of a square with side of that length
- The volume of a cube with side of that length
- The area of a circle with radius of that length
- The volume of a sphere with radius of that length
- The volume of a cylinder with radius of that length and side of that length

Import the `math` module and use the constant `math.pi` for the value π .

Save this program as `p4p2.py`.

3. Write a program that takes as input an amount (a `float`), divides the amount in the ratio 60:40, calculates the tax due according to two different tax rates (13.5% on the larger amount and 23% on the smaller), and prints out the initial amount, the two different tax amounts, the total tax and the total amount (initial amount plus taxes).

Save this program as `p4p3.py`.

**Please upload your work to
the Moodle site before Sunday evening.**

**You should keep a copy of your programs
for your portfolio.**