Practice problems

ISYS90088 Introduction to Application Development

Semester 2, 2016

--adapted from dept. resources --

Exercises

1. Assuming the assignments `i = 1`, `f = 2.0`, `s = "3"` and `t = "b4"` have been made, evaluate the following code snippets:

   (a) `i + f`

   (b) `str(i) + s`

   (c) `int(f) + int(s)`

   (d) `float(t[-1]) * i`

2. Assuming the assignments `a=1`, `b=2`, `c=3.0` and `d=0` have been made, evaluate:

   (a) `a + b / c`

   (b) `(a + b) / c`

   (c) `b // int(c)`

   (d) `bool(d and not b or a)`

   (e) `bool((d and not b) or a)`

   (f) `bool(d and not (b or a))`

3. Assuming the assignment `s="internationalization"` has been made, evaluate:

   (a) `s[1]`

   (b) `s[:-1]`

   (c) `s[:6] + s[11:13]`

   (d) `s[25]`

   (e) `s[::-1]`

   (f) `s[:25]`

4. What is the printed output of the following code snippets:

   (a) `print("{} was a racehorse, {} was one too".format(11, 22))`

   (b) `print("One day {0} won a race, and {1} won one too".format(11, 22))`

   (c) `print("One day {h1} won a race, and {h2} won one too".format(h1=11, h2=22))`

   (d) `print("pi = {0:10.5f} != {1:.5f}".format(3.141592653, 22/7))`

Problems

5. What is wrong with this code? How can you fix it?

```
letter = input("Enter a letter: ")
if letter == 'a' or 'e' or 'i' or 'o' or 'u':
    print("vowel")
else:
    print("consonant")
```

6. Given a variable `num` containing a `float`, write a program to calculate the number of digits in it (including any exponents). Hint: make sure your code can handle negative numbers, and also numbers with an exponent.