Modules & for Loops

COSC 101: Intro to Computing I
September 18, 2017
Exercise #1

import math

print((6+3).sqrt())
Exercise #2

import math

for num in range(10):
    print( math.floor(num * 0.5) )
Exercise #3

import random

num = input("Give me a number: ")

for i in range(num):
    j = round( random.random() * i, 2 )
    print( "(" + str(i) + ") " + str(j) )
Accumulator Pattern

A strategy for completing a task using a for loop

1. Answer these questions:
   A. What do you want to compute?
   B. What is its type?
   C. How can we build it one piece at a time?

2. Initialize accumulator variable (use the right type).

3. Update the accumulator variable time through the loop.

4. After the loop, the accumulator variable is result.
Exercise #4

name = input("what is your name?" )

count = 0
for letter in len(name):
    if letter == "e":
        count += 1

print("Your name has", count, "'e's in it.")
Exercise #5 & 6

word = input("A word, please: ")

word2 = ' '
for letter in word:
    word2 = letter + letter + word2

print("Your word reversed and duplicated", word2)
Exercise #7

Write a program that asks the user for a word and
prints the palindrome of the word (e.g., if the user
enters “dog” the output would be “doggod”)
import random

how_many = int(input("How many times do you want to play? ") )

for turn in range(how_many):
    magic_number = random.randrange(1, 11)
    guess = int(input("Guess a number (1–10): ") )

    if guess == magic_number:
        print("You were right! ")
    elif guess > magic_number:
        print("Your guess was too low...")
    else:
        print("Your guess was too high...")
Exercise #9

```
if x < y:
    print(x, 'is smaller than', y)
elif x > y:
    print(y, 'is smaller than', x)
else:
    print(x, 'is the same as', y)
```
Exercise #10

```
x == a
  True
  print(x,'is', a)
  False
  print(x,'is not the same...')

x == b
  True
  print(x,'is', b)
  False

x == c
  True
  print(x,'is', c)
  False
```
Exercise #11

x = "apple"
y = "banana"

x != y

False

print(x+' is the best '+
'fruit ever!')

True

print('I love to eat, eat, '+
'eat, x+s and'+y+s!')

z = input('What is your '+
'favorite fruit? ")

x == z

False

print('I like '+x+s and'+
you like '+z+s.')

True

print('We both like'
+x+s!')
Exercise #13

for x in range(y)

print(x)

print('all done')

complete
Exercise #14

```
for y in range(x)
print(y)
```

```
for x in range(y)
print(x)
```

```
print('all done')
```