

Operations

1. Assume the following variable declarations have been made, what are the values of each of the following lines of code?

i = 2

j = 9

k = "3"

x = 3.0

y = 2.5

i. j % i → modulus

ii. k * i → string multiplication

iii. j / i

iv. j // i

v. x * y

2. Circle any of the following expressions which evaluates to true:

a = 11

b = 30

c = "p"

d = "z"

e = ""

f = "mommy"

g = "mommmmmmmmy"

i. c > d or a > b

ii. d

iii. not (a == b)

iv. d != c and a <= b

3. What prints out after the following lines are executed?

vowels = ["a", "e", "i", "o", "u"]

i. print(vowels[2:])

ii. print(vowels[1:4])

Code Problem 1:

Read in a file called `numbers.txt`. This file contains a list of numbers (unsorted), each number on a new line. Find the smallest number in the file WITHOUT sorting the list.

Problem 2

Write a method `coin(headWeight)` that “flips” a coin and call that method 5 times in main, storing each result in a list. Take in as input the “weight” of the coin as a float between 0 and 1 such that the weight designates the percentage of heads the coin will flip. For example, if you pass in 0.2, then the function will flip a heads 20% of the time. If the user doesn’t input anything, set the default value of `headWeight` to 0.5.

Problem 3

What is the difference between a while loop and a for loop? Why would you want to use a for loop as opposed to a while loop? Why would you want to use a while loop as opposed to a for loop?

Problem 4

There are errors in the code below. Try to find them all

1).

```
while True:
```

```
    print("Hello")
```

2).

```
for index in list
```

```
    print(index)
```

3).

```
if myString = "this":
```

```
    myString = "that"
```

Single Line Comment symbol:

Multi Comments: