**Review Questions – Part 1**

NOTE: Use python shell to confirm your answers for syntax questions

1. ​*Write the code to assign the numerical value 54 to x.* x = 54

1. ​*Write the code to assign the string 54 to y.*x = “54”

1. What is the difference between questions 1 and 2?

The first question gives you a variable that you can do operations too. The second number you can’t.

1. What is the code to prompt the user for name and assign it to variable ​*name*​?

name = input (‘Please enter a name:’)

1. Write a code snippet to compare two integer variables x and y. It should display the larger of the two.

if x > y:

print (x)

elif y > x:

print (y)

6.​ *What is the flowchart shape for input/output?* Parallelogram

1. ​*How many arrows point to any one flowchart shape?* As many as you need it to.

1. ​*How many arrows leave an input/output flowchart shape?* As many as you need it to.

1. Up to how many arrows leave a decision flowchart shape? Explain your answer.

As many as needed. There can be a true/false, where there are only 2, but there can also be a choose the number out of 10 number to see if it is the right number.

1. What is the instruction to display a numerical variable age and a string ” years old”?

print (age, ‘years old.’)

1. What is the code to prompt the user for a real number amount (decimal) and assign it to variable ​*amount*​?

amount = float (input (‘Please enter a decimal number:’))

1. Write the python instruction to find the average of the integer variables x1, x2, and x3.

average = (x1 + x2 + x3) / 3

1. What is the result of executing the following python instruction? Explain how python solves the expression. x = 5 – 2 \* 10 + 5

­10 is the result of execution the instruction. Python uses PEMDAS to solve these problems, so for this problem, it first multiples then adds and subtracts in order.

1. How should you rewrite the expression in question 13 to get the answer ​**35**​? (5 ­ 2) \* 10 + 5

1. Given that number is a 4­digit integer, what is it displayed after execution of the following code?
   1. **= number % 10**
   2. **= number // 10 % 10 z = number // 100 % 10**

**print (x, " ", y , " ", z)**

x is the last number, y is the second to last number, and z is the second number.

1. Can you guess the next one? a = number // 1000 #this will print the first number
2. What is an accumulator variable and when is it typically used?

An accumulator variable is a variable that is added or multiplied by a specific number each time the while loop runs. It is typically used in while loops to terminate the loop at a specific point.

1. Write a flow chart and Python code for the following assignment: Prompt the user for an integer number. If the number is less than 10, print (“The number is less than 10”). Ask the user if she/he would like to enter another number. When the user is finished, print “Goodbye” and exit the program.

Please enter an

integer number

Begin

Is the

number

less than

?

10

print the

number is less

than 10.

print the number

is greater than

10.

yes

no

Would you

like to play

again(y/n)?

Assign ‘y’

to yesNo

Is yesNo

==

‘y’ ?

yes

no

goodbye

end

num = int (input (‘Please enter an integer number:’)) yesNo = ‘y’

while yesNo == ‘y’: if num < 10: print (‘The number is less than 10.’) elif num > 10: print (‘The number is greater than 10.’)

yesNo = input (‘Do you want to play again? (y/n):’)

print (‘Goodbye’)