**Conditional Loops – Day 1 \*\* Save all your programs\*\***

|  |  |
| --- | --- |
|  | x = 10  while (x > 0):     print("\*" \* x)     x -= 2  print("Done.")  \*\*\*\*\*\*\*\*\*\*  \*\*\*\*\*\*\*\*  \*\*\*\*\*\*  \*\*\*\*  \*\*  Done.  This program prints the star symbol x amount of times, and each time the while loop runs the value of x is decreased by 2 until reaching 0. Once the value of x reaches 0 it will print out the word done |

|  |  |
| --- | --- |
|  | x = 5  y = 3  while (x > 0) and (y > 0):     print(x + y)     x -= 1     y -= 1  print("Done.")  8  6  4  Done. |

1. Determine the output of each program. Explain.

A

B

The program prints x + y if the values of x and y are both greater than 0. Each time the loop runs the values of x and y are decreased by 1. Once the values of x and y reach 0 the program prints out done.

|  |  |
| --- | --- |
|  | x = 10  while (x > 10):     x += 1     print("\*")  print("Done.")  Done.  The program prints the star symbol if the value of x is 11 or greater. Each time the loop runs the value of x is increased by 1. Once the x value is greater than 10 the program will print out the word done |

C

|  |  |
| --- | --- |
|  | x = 1  while (x > 0):     x += 1     print(x)  print("Done.")  1  2  3  4  5  Etc.  This program prints the x value if the value of x is greater than 0. Every time the loop runs the value of x increases by 1. This loop will run infinitely, because it never exits the while loop. |

D

1. Write a program that multiplies a given integer by three until it exceeds 10000.
2. a) Write a program that keeps asking the user for their name until they enter "Tim".  Otherwise, keep saying "You are not Tim!" and ask for their name.

b) Allow your name as a valid input as well.

c) Keep track of how many times the user fails to enter the correct name, and report it when they finally get it right.