**Nested Ifs – Day 1 \*\*\*Save these programs in the appropriate folder\*\*\***  
  
1. Compare these two programs. What do the programs output AND which program do you think is more efficient?

|  |  |
| --- | --- |
| x = int(input("Enter a value for x: "))  y = int(input("Enter a value for y: "))  z = int(input("Enter a value for z: "))  if x >= y: # y isn't biggest  if x >= z: # y, z not biggest  print("x is the biggest")  else: # y, x not biggest  print("z is the biggest")  elif y >= z: # x, z not biggest  print("y is the biggest")  else: # x, y not biggest  print("z is the biggest")  Program outputs which of the 3 values inputted is the largest | x = int(input("Enter a value for x: "))  y = int(input("Enter a value for y: "))  z = int(input("Enter a value for z: "))  if x >= y and x >= z: # x is biggest  print("x is the biggest")  elif y >= z: # x isn't biggest  print("y is the biggest")  else: # x, y not biggest  print("z is the biggest")  Program outputs which of the 3 values inputted is the largest. This one is more efficient because it outputs the same thing but with less code and is less confusing |

1. Write two different programs to simplify the following sequence so that the effect is the same but fewer comparisons are required. Use nested ifs in one of the programs and elif in the other.

if temperature > MAX\_TEMP:

print("Porridge too hot")

if temperature < MIN\_TEMP:

print("Porridge too cold")

if temperature <= MAX\_TEMP and temperature >= MIN\_TEMP:

print("Porridge just right - eat it all up.")

**elif Version**

**if temperature > MAX\_TEMP:**

**print("Porridge too hot")**

**elif temperature < MIN\_TEMP:**

**print("Porridge too cold")**

**else:**

**print("just right - eat it all up")**

**Nested if Version**

**if temperature < MAX\_TEMP:**

**if temperature > MIN\_TEMP:**

**print("just right - eat it all up")**

**else:**

**print("Porridge too cold")**

**else:**

**print("Porridge too hot")**

1. Consider the following statement.

if age > min\_age:

if income > min\_income:

print("Accept")

else:

print("Reject")

* 1. What will the statement print if age > min\_age and income < min\_income?

Output = reject

* 1. What will the statement print if age < min\_age and income < min\_income?

Output = N/A

4. What does this code do? Rewrite the code using the logical operator OR.

**letter = input("Please enter an uppercase letter: ")**

**if letter != "A":**

**if letter != "E":**

**if letter != "I":**

**if letter != "O":**

**if letter != "U":**

**print(letter, "is a consonant.")**

**This code prints if the user inputted letter is a consonant, if the user inputted letter is a Vowel it does not print anything**

letter = input("Please enter an uppercase letter: ")

if letter == "A" or letter == "E" or letter == "I" or letter == "O" \

or letter == "U":

pass

else:

print(letter, "is a consonant.")