1. What is the output of the following print statements?

If syntax is invalid, show how to fix it.

* 1. print('The value of pi = %4.2f' %math.pi)
     1. The value of pi = 3.14
     2. 3.14
     3. The value of pi = 3.1416
     4. The value of 3.1416 = %4.2f
     5. Invalid syntax
  2. print('pi = 22/7 = %4.3f' %math.pi)
     1. 3.14 = 3.1416 = 3.14
     2. 3.14
     3. pi = 22/7 = 3.142
     4. pi= 3.1416 = 3.14
     5. Invalid syntax
  3. x= 20/5; print('20/5 = %d = %4.2f' %x)
  + 4 = 4
  + 20/5 = 4
  + 20/5 = 4 = 4.00
  + 4 = 4 = 4.00
  + Invalid syntax

1. Complete the “for” loop in order to print formatted integers as follows:

**998** for i in range(998 , 1002):

**999** print(i)

**1000**

**1001**

1. What is the output of the following program

|  |
| --- |
| a = 3.863  print(“%.3f\t%.2f\t%.1f\n%.0f\t%d” %(a,a,a,a,a))  3.863 3.86 3.9  4 3 |

**What is the difference between %.0f and %d ?**

.”0f%”, it will format the float with no decimal places, essentially rounding the number to the nearest integer.

“%d”, it will format the integer without any decimal places.

1. Write one python statement to print the following

**My name is Ahmed**

**Friends call me "Mido :)"**

**I don't like apples\bananas\peaches**

print("My name is Ahmed \n Friends call me \"Mido :)\ **"**\n\I don't like apples\\bananas\peaches")

1. What is the output of the following program?

|  |
| --- |
| s = "Hello. My name is ahmed. I am from Cairo"  a = s.split()  b = s.split(",")  c = s.split(".")  d = s.split(". ")  print(s)  print(a)  print(b)  print(c)  print(d) |

['Hello.', 'My', 'name', 'is', 'ahmed.', 'I', 'am', 'from', 'Cairo']

['Hello. My name is ahmed. I am from Cairo']

['Hello', ' My name is ahmed', ' I am from Cairo']

['Hello', 'My name is ahmed', 'I am from Cairo']

1. Write a program that reads two arrays from the user; one containing the length and the other containing the width of several rectangles. The program computes the area of these rectangles and shows the results in a tabular format aligned left.

Num Length Width Area (approx.)

1 5.50 4.1 23

2 7.31 5.3 39

3 10.45 4.9 51

1. Write a program that opens a file “covid19.txt” that contains data related to COVID19 infected cases in many countries.

Each line in the input file as formatted as follows:

***Country\_Name Total\_cases Active\_cases Total\_Death Population***

Sample input file (comma separator is used every third digit in numbers)

|  |
| --- |
| **Egypt 107,376 1,765 6,258 102,965,454**  **France 1,331,984 1,178,886 36,565 65,321,753**  **Brazil 5,519,528 393,702 159,562 213,061,062**  **Jordan 69,306 60,934 772 10,236,643**  **Thailand 3,775 131 59 69,858,456**  **India 8,136,166 583,574 121,681 1,384,493,422** |

\*Table contains real data obtained from worldometers.info (30/10/2020)

The program should create an output file called “covidStats.txt” that contains the following information

* 1. A table in which each line contains country name and death ratio (percentage)

Death ratio = Total\_Death/(Total\_Cases – Active\_Cases) %

* 1. The world total and average of infected cases
  2. Countries with highest and lowest death ratios

Hint: to get rid of comma in numbers, you can use string replace function (https://www.w3schools.com/python/ref\_string\_replace.asp)

Output file for the given input file

|  |
| --- |
| **Egypt 5.93% France 23.88% Brazil 3.11% Jordan 9.22% Thailand 1.62% India 1.61% Total = 15168135 and avg = 2528022.500 Death Ratio: Max==>France(23.88%) and Min==>India(1.61%)** |