**Question 1**

What data type is each of the following?

|  |
| --- |
| 5 = integer  5.0 = float  5 > 1 = boolean (True)  '5' = string  5 \* 2 = integer (10)  '5' \* 2 = string(10)  '5' + '2' = string (7)  5 / 2 =  5 // 2 =  {5, 2, 1} = dictionary  5 == 3 = integer  Pi (the number) = float |

Question 2

**Write (and evaluate) Python expressions that answer these questions: a. How many letters are there in 'Supercalifragilisticexpialidocious'?**

**ANS:** 34 letters

**b. Does 'Supercalifragilisticexpialidocious' contain 'ice' as a substring?**

**ANS:** Yes

**c. Which of the following words is the longest: Supercalifragilisticexpialidocious, Honorificabilitudinitatibus, or Bababadalgharaghtakamminarronnkonn?**

**ANS:**using System;

namespace ConsoleApp1

{

class Program {

static void Main(string[] args)

{

Console.WriteLine("Enter Any Sentence ");

string str = Console.ReadLine(); str = str + " ";

int len = str.Length; String k = " ", max = " ", min = " "; char ch;

int p, max1 = 0; int min1 = len; for(int i =0;i<len;i++) { ch = str[i]; if(ch != ' ') { k = k + ch; } else { p = k.Length-1; if(p<min1) { min1 = p; min = k; } if(p > max1) { max1 = p; max = k; } k = " "; } } Console.Write("Shortest Word = " + min + " Length of the Word = " + min1+"\n"); Console.Write("Longest Word = " + max + " Length of the Word = " + max1); } } }

**d. Which composer comes first in the dictionary: 'Berlioz', 'Borodin', 'Brian', 'Bartok', 'Bellini', 'Buxtehude', 'Bernstein'. Which one comes last?**

**ANS:** composers = ['Berlioz', 'Borodin', 'Brian', 'Bartok', 'Bellini','Buxtehude', 'Bernstein']

composers.sort()

print(composers)

***ANS 3:***

a=float(input("side one of triangle"))

b=float(input("side two of triangle"))

c=float(input("side three of triangle"))

def triangle():

s=(a+b+c)/2

area=(s\*(s-a)\*(s-b))\*\*0.5

print(area)

print(triangle())

side one of triangle 2

side two of triangle 2

side three of triangle 2

1.732050807568872

none

***ANS 4:*** num=[25,47,42,56,32]

for i in num:

# num = int(input("Enter a number: "))

if(i % 2) == 0:

print(str(i) + " is even")

else:

print(str(i) + " is odd")

25 is odd

47 is odd

42 is even

56 is even

**ANS 5: using** System;

**class** GFG

{

// function to find if given

// point lies inside a given

// rectangle or not.

**static** **bool** FindPoint(**int** x1, **int** y1, **int** x2,

**int** y2, **int** x, **int** y)

{

**if** (x > x1 && x < x2 &&

    y > y1 && y < y2)

**return** **true**;

**return** **false**;

}

// Driver code

**public** **static** **void** Main()

{

    // bottom-left and top-right

    // corners of rectangle

**int** x1 = 1, y1 = 1,

        x2 = 0, y2 = 0;

    // given point

**int** x = 2, y = 3;

    // function call

**if** (FindPoint(x1, y1, x2, y2, x, y))

        Console.Write("Yes");

**else**

        Console.Write("No");

}

}

b. Use function inside() from part a. to write an expression that tests whether the point (1,1) lies in both of the following rectangles: one with lower left corner (0.3, 0.5) and upper right corner (1.1, 0.7) and the other with lower left corner (0.5, 0.2) and upper right corner (1.1, 2).

**ANS 6:**

pigLatin = input("Convert message to pig latin: ")

wordList = pigLatin.lower().split(" ")

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

pigLatin = []

eachWord = []for word in wordList:

if word[0] in 'aeiou': #case where vowel is first

pigLatin.append(word + 'yay')

if word[0] not in 'aeiou':

for letter in word:

if letter in 'aeiou':

pigLatin.append(word[word.index(letter):] + word[:word.index(letter)] +'ay')

print(" ".join(pigLatin))

ANS7:

**ANS 8:**

**ANS 9:**

|  |
| --- |
| Trying to add incompatible variables, as in  adding 6 + ‘a’ **Type Error**    Referring to the 12th item of a list that has only 10  Items **Index Error**    Using a value that is out of range for a function’s   input, such as calling math.sqrt(-1.0) **Overflow Error**    Using an undeclared variable, such as print(x) when x   has not been defined **Syntax Error** |

Trying to open a file that does not exist, such as

mistyping the file name or looking in the

wrong directory. **FileNotFoundError**

**ANS 10:**