DAY-4 LAB EXPERIMENTS

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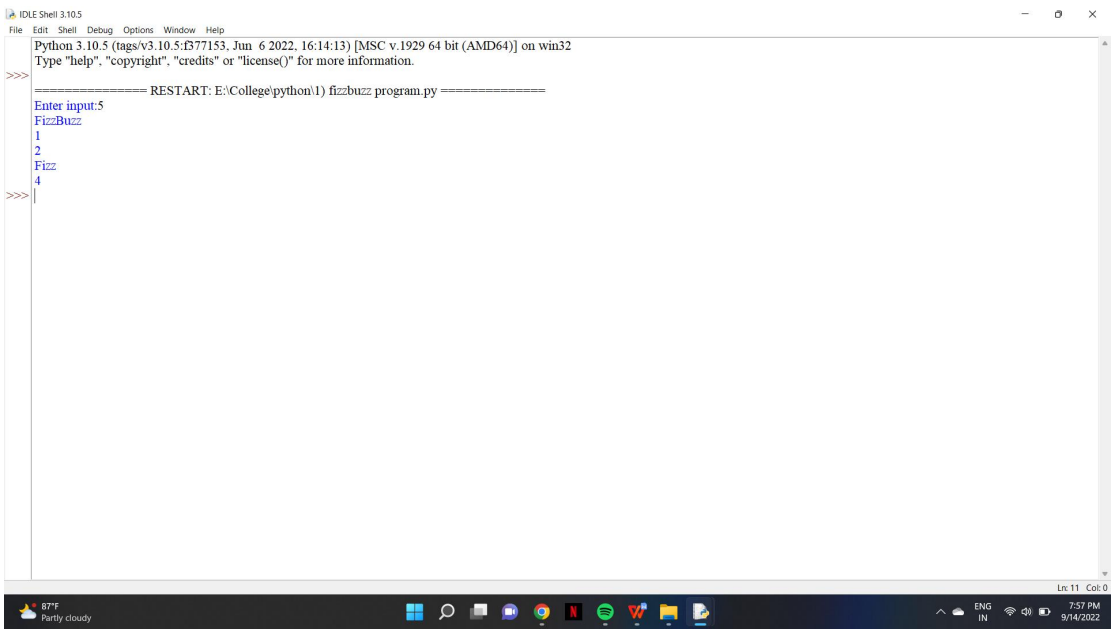
SUBJECT CODE:CSA0836
SUBJECT: PYTHON
DATE: 14/09/2022

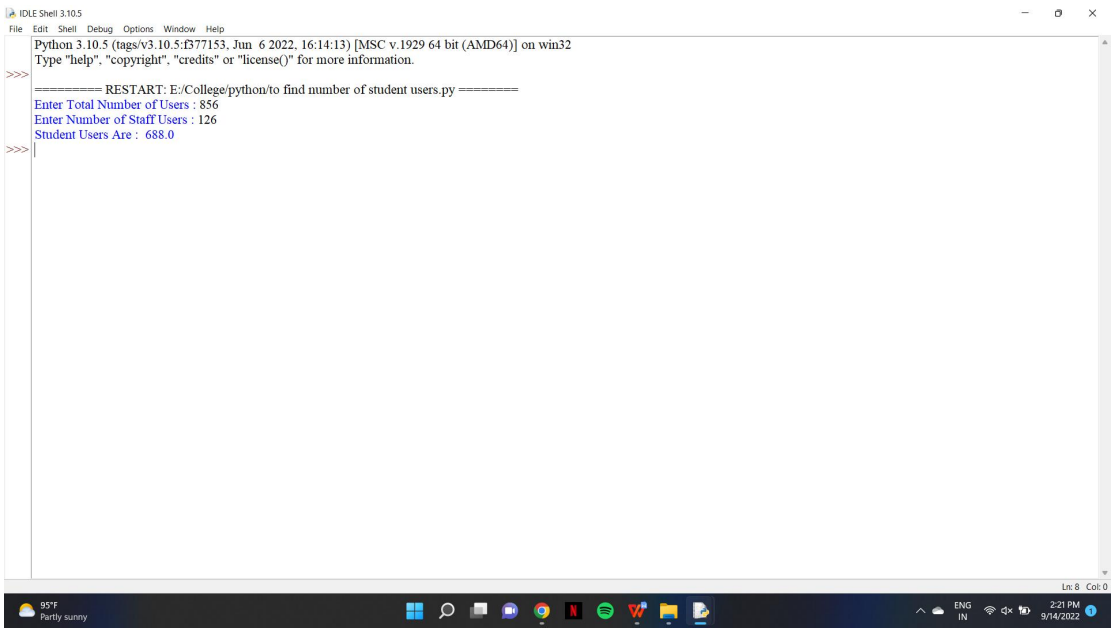
1)
```
n=int(input("Enter input:"))
for fizzbuzz in range(n):
 if fizzbuzz % 15 == 0:
  print("FizzBuzz")
  continue
 elif fizzbuzz % 3 == 0:
  print("Fizz")
  continue
 elif fizzbuzz % 5 == 0:
  print("Buzz")
  continue
print(fizzbuzz)
```

OUTPUT:



2) a=float(input("Enter Total Number of Users : "))
b=float(input("Enter Number of Staff Users : "))
c=a-b-(b//3)
print("Student Users Are : " , c)

OUTPUT:

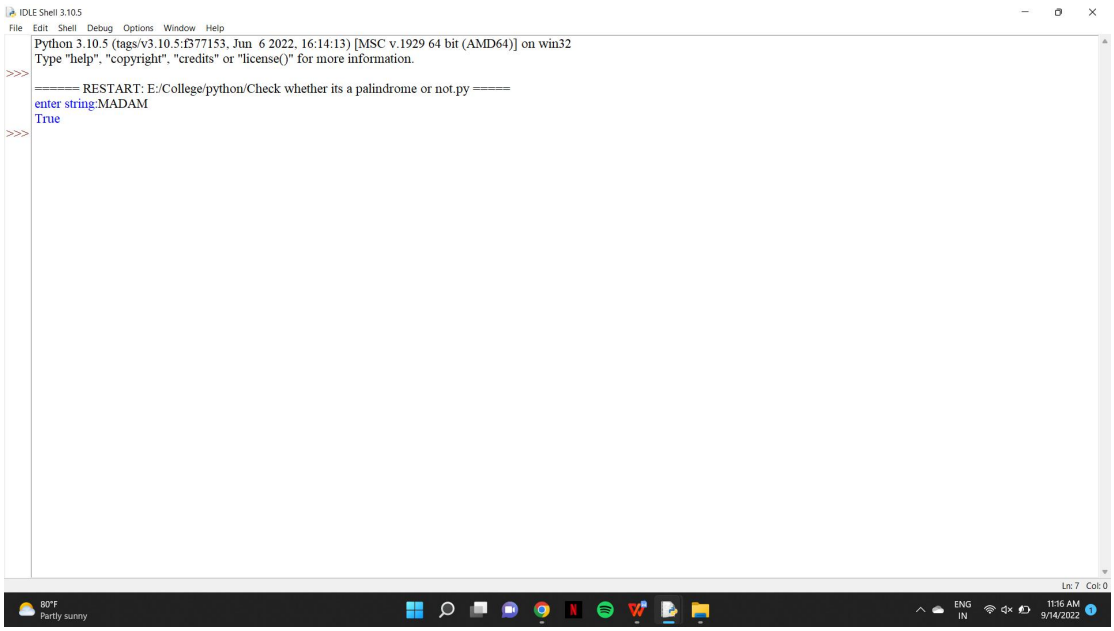


3)

4)def first_letter_index(str, left, right):
  index = -1
  for i in range(left, right + 1):
    if str[i] >= 'a' and str[i] <= 'z' :
      index = i
      break
  return index
def last_letter_index(str, left, right):
  index = -1
  for i in range(left, right - 1, -1) :
    if str[i] >= 'a' and str[i] <= 'z':
      index = i
      break
  return index
def solve(str):
  left = 0

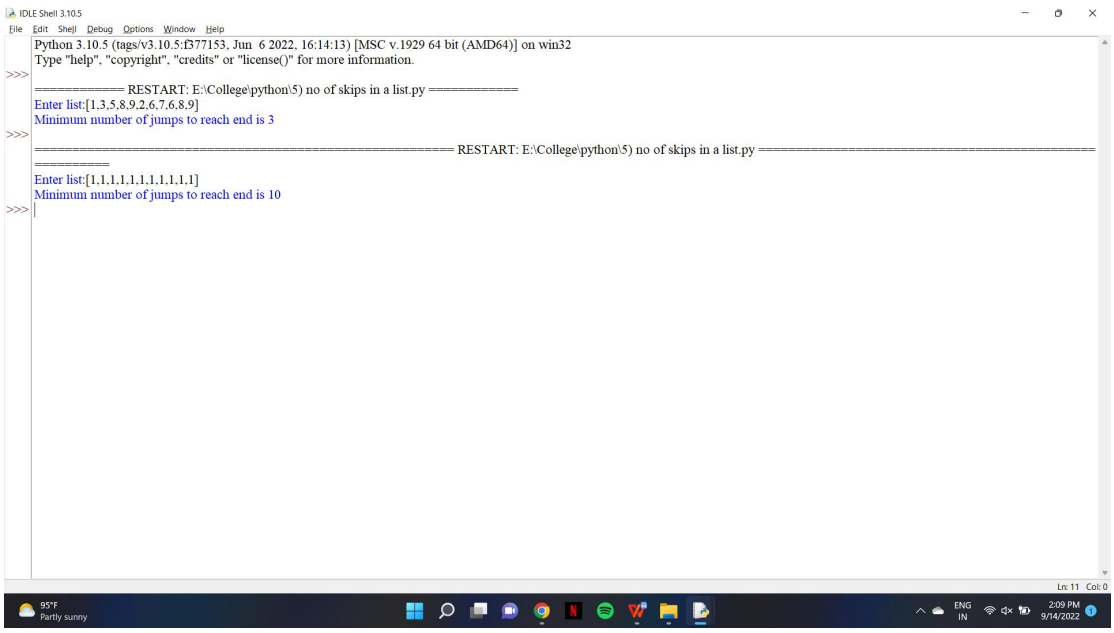
```
    right = len(str) - 1
    flag = True
    for i in range(len(str)) :
        left = first_letter_index(str, left, right)
        right = last_letter_index(str, right, left)
        if right < 0 or left < 0:
            break
        if str[left] == str[right]:
            left += 1
            right -= 1
            continue
        flag = False
        break
    return flag
s = input("enter string:")
print(solve(s))
```

OUTPUT:



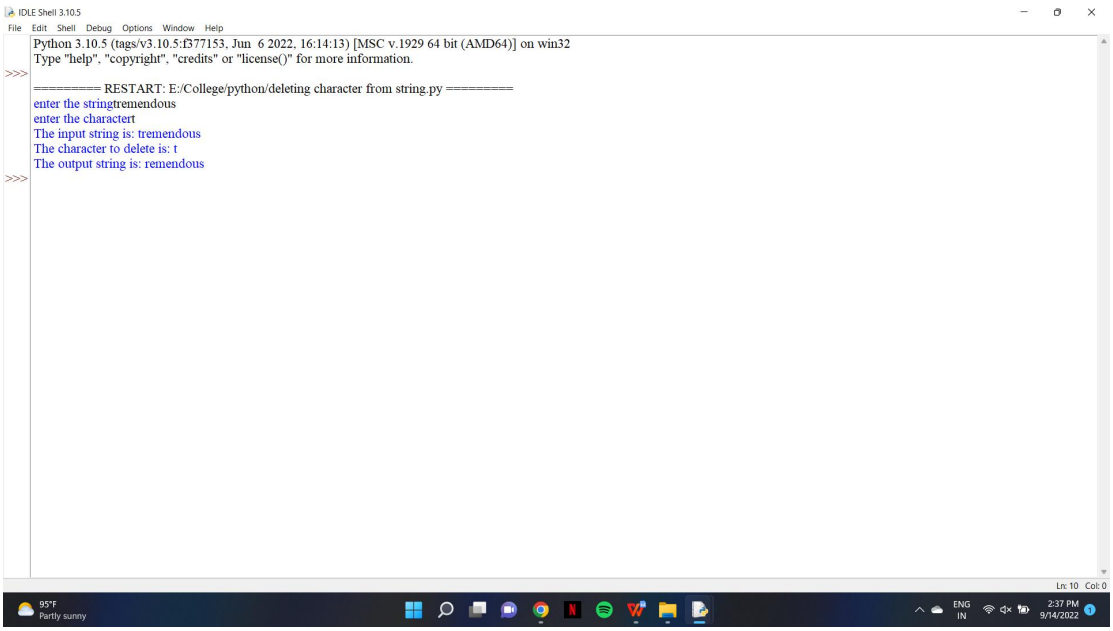

```
5) def minJumps(arr, l, h):
 if (h == l):
  return 0

 if (arr[l] == 0):
  return float('inf')
```

```
 min = float('inf')
 for i in range(l + 1, h + 1):
  if (i < l + arr[l] + 1):
   jumps = minJumps(arr, i, h)
   if (jumps != float('inf') and
     jumps + 1 < min):
    min = jumps + 1

 return min
arr=eval(input("Enter list:"))
n=len(arr)
print('Minimum number of jumps to reach',
'end is', minJumps(arr, 0, n-1))
```

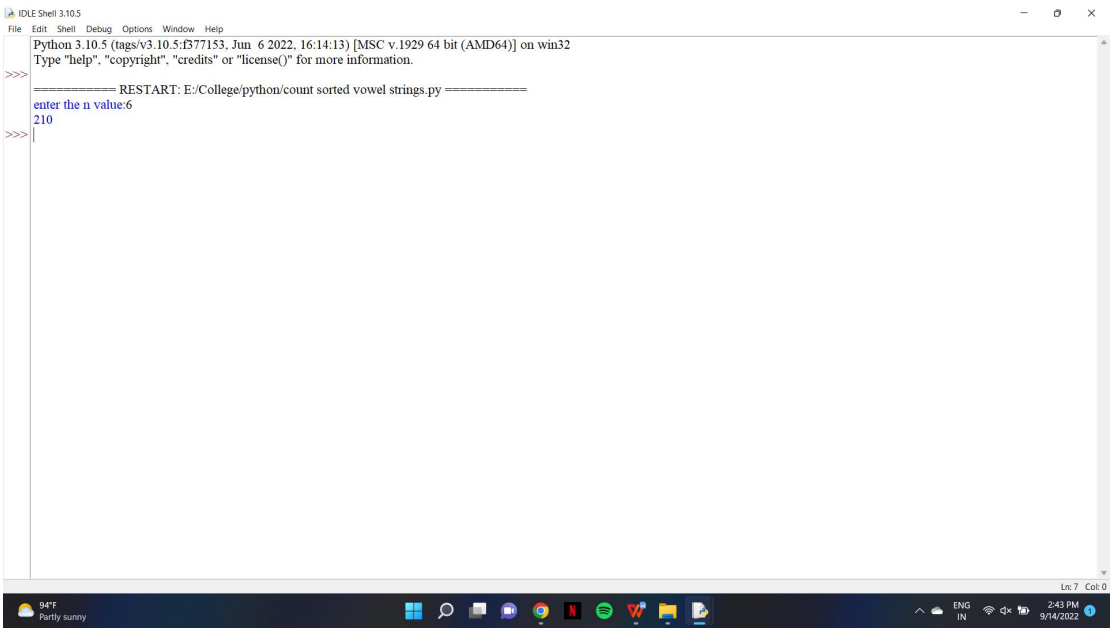



```
6) input_string = input("enter the string")
char_to_remove = input("enter the character")
newStr = ""
for character in input_string:
    if character != char_to_remove:
        newStr += character

print("The input string is:", input_string)
print("The character to delete is:", char_to_remove)
print("The output string is:", newStr)
```

OUTPUT:

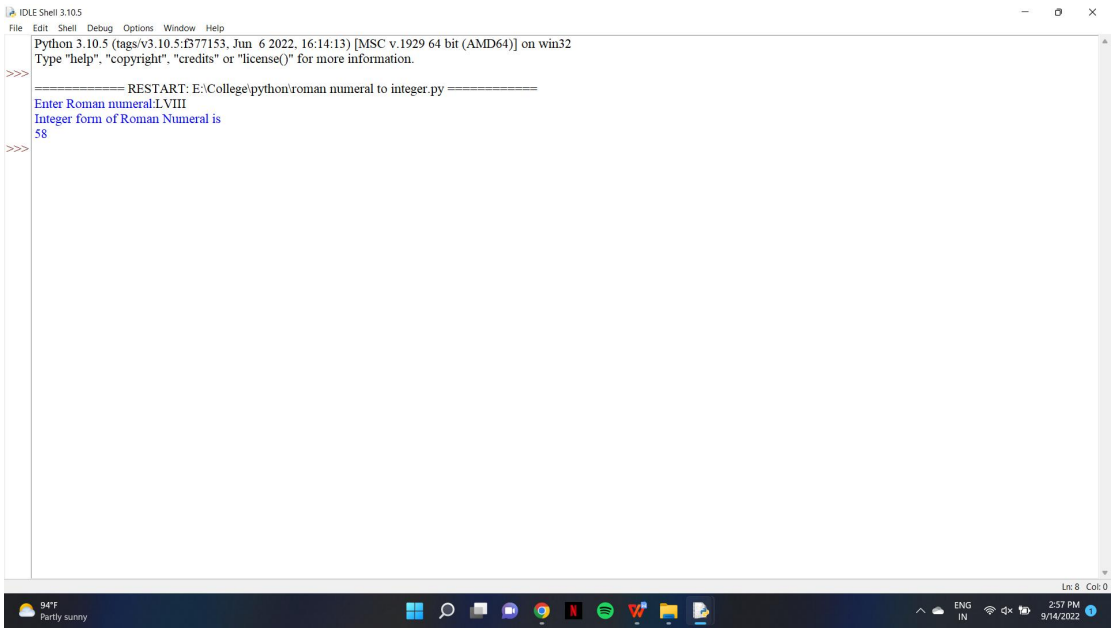



```
7) def countstrings(n, start):
    if n == 0:
        return 1
    cnt = 0
    for i in range(start, 5):
        cnt += countstrings(n - 1, i)
    return cnt

def countVowelStrings(n):
    return countstrings(n, 0)

n=int(input("enter the n value"))
print(countVowelStrings(n))
```



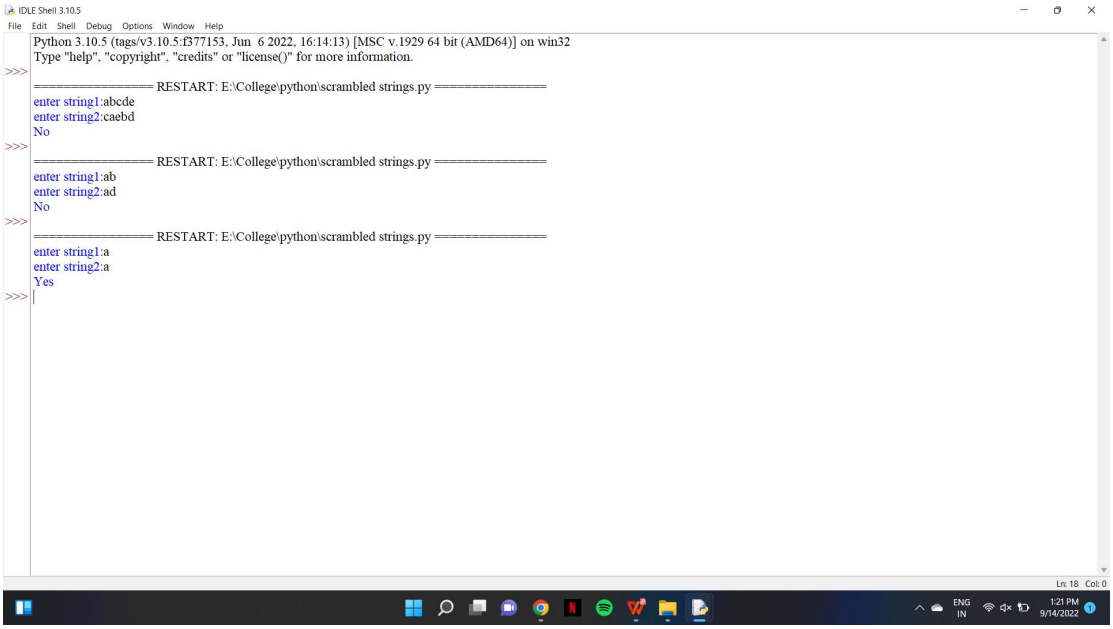
8)
```
def value(r):
    if (r == 'I'):
        return 1
    if (r == 'V'):
        return 5
    if (r == 'X'):
        return 10
    if (r == 'L'):
        return 50
    if (r == 'C'):
        return 100
    if (r == 'D'):
        return 500
    if (r == 'M'):
        return 1000
    return -1

def romanToDecimal(str):
    res = 0
    i = 0

    while (i < len(str)):

        s1 = value(str[i])

        if (i + 1 < len(str)):

            s2 = value(str[i + 1])

            if (s1 >= s2):

                res = res + s1
                i = i + 1
            else:

                res = res + s2 - s1
                i = i + 2
        else:
            res = res + s1
            i = i + 1

    return res
```

```
a=(input("Enter Roman numeral:"))
print("Integer form of Roman Numeral is"),
print(romanToDecimal(a))
```




```
9)month = input("Input the month (e.g. January, February etc.): ")
day = int(input("Input the day: "))

if month in ('January', 'February', 'March'):
        season = 'winter'
elif month in ('April', 'May', 'June'):
        season = 'summer'
elif month in ('July', 'August', 'September'):
        season = 'spring'
else:
        season = 'autumn'

if (month == 'March') and (day > 19):
        season = 'summer'
elif (month == 'June') and (day > 20):
        season = 'summer'
elif (month == 'September') and (day > 21):
        season = 'autumn'
elif (month == 'December') and (day > 20):
        season = 'winter'

print("Season is",season)
```

```
10) def isScramble(S1: str, S2: str):
    if len(S1) != len(S2):
        return False

    n = len(S1)

    if not n:
        return True
    if S1 == S2:
        return True
    if sorted(S1) != sorted(S2):
        return False

    for i in range(1, n):
        if (isScramble(S1[:i], S2[:i]) and
            isScramble(S1[i:], S2[i:])):
            return True
        if (isScramble(S1[-i:], S2[:i]) and
            isScramble(S1[:-i], S2[i:])):
            return True
    return False

S1 = input("enter string1:")
S2 = input("enter string2:")

if (isScramble(S1, S2)):
    print("Yes")
else:
    print("No")
```


IDLE Shell 3.10.5
File Edit Shell Debug Options Window Help
Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:\College\python\scrambled strings.py ==========
enter string1:abcde
enter string2:caebd
No
>>>
========== RESTART: E:\College\python\scrambled strings.py ==========
enter string1:ab
enter string2:ad
No
>>>
========== RESTART: E:\College\python\scrambled strings.py ==========
enter string1:a
enter string2:a
Yes
>>>
Ln: 18 Col: 0
ENG
IN
1:21 PM
9/14/2022