CLASS TEST-5

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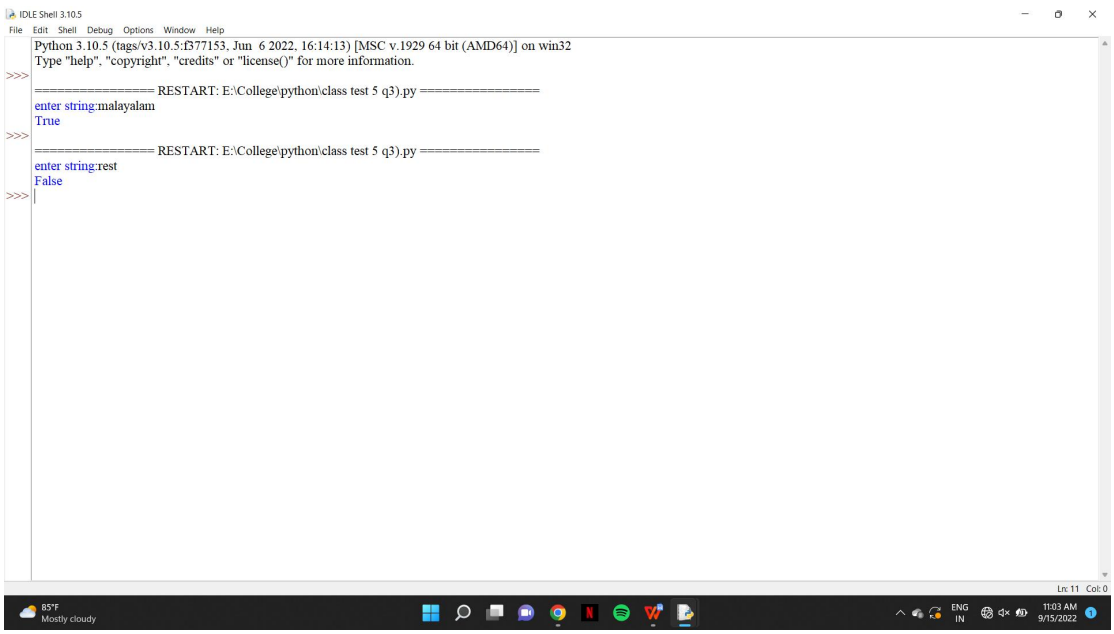
SUBJECT CODE:CSA0836
SUBJECT: PYTHON PROGRAMMING
DATE: 15/09/2022

1) Valid palindrome

```
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:

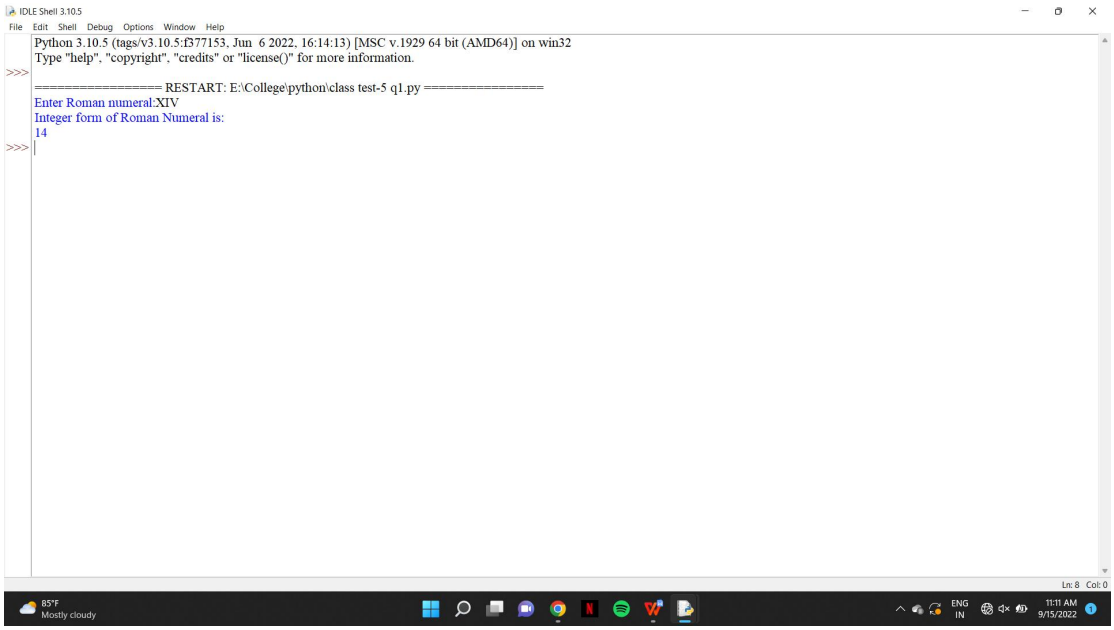


2) Roman numerals to integers

```
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 decimal(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(decimal(a))
```

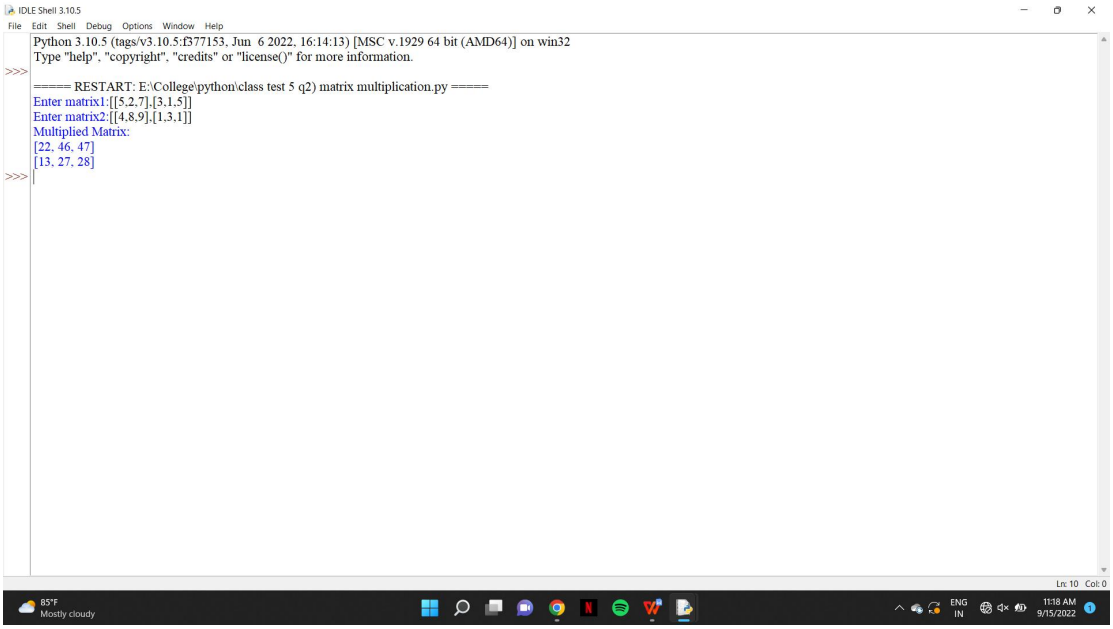
OUTPUT:




```
3) A=eval(input("Enter matrix1:"))
B=eval(input("Enter matrix2:"))
result = [[0,0,0,],
          [0,0,0,]]
for i in range(len(A)):
    for j in range(len(B[0])):
        for k in range(len(B)):
            result[i][j] += A[i][k] * B[k][j]

print('Multiplied Matrix:')
for r in result:
    print®
```

OUTPUT:


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\class test 5 q2) matrix multiplication.py =====
Enter matrix1:[[5,2,7],[3,1,5]]
Enter matrix2:[[4,8,9],[1,3,1]]
Multiplied Matrix:
[22, 46, 47]
[13, 27, 28]
>>>
Ln: 10 Col: 0
85°F
Mostly cloudy
ENG
IN
11:18 AM
9/15/2022