

DAY-3 LAB EXPERIMENTS

NAME: S.G.DEVSACHIN

REG.NO: 192111088

SUBJECT CODE:CSA0836

SUBJECT: PYTHON PROGRAMMING

DATE: 13/09/2022

1) PROGRAM:

```
def maxProfit(price, n):
```

```
    profit = [0]*n
```

```
    max_price = price[n-1]
```

```
    for i in range(n-2, 0, -1):
```

```
        if price[i] > max_price:
```

```
            max_price = price[i]
```

```
    profit[i] = max(profit[i+1], max_price - price[i])
```

```
    min_price = price[0]
```

```
    for i in range(1, n):
```

```
        if price[i] < min_price:
```

```
            min_price = price[i]
```

```
    profit[i] = max(profit[i-1], profit[i]+(price[i]-min_price))
```

```
    result = profit[n-1]
```

```
    return result
```

```
a=[]
```

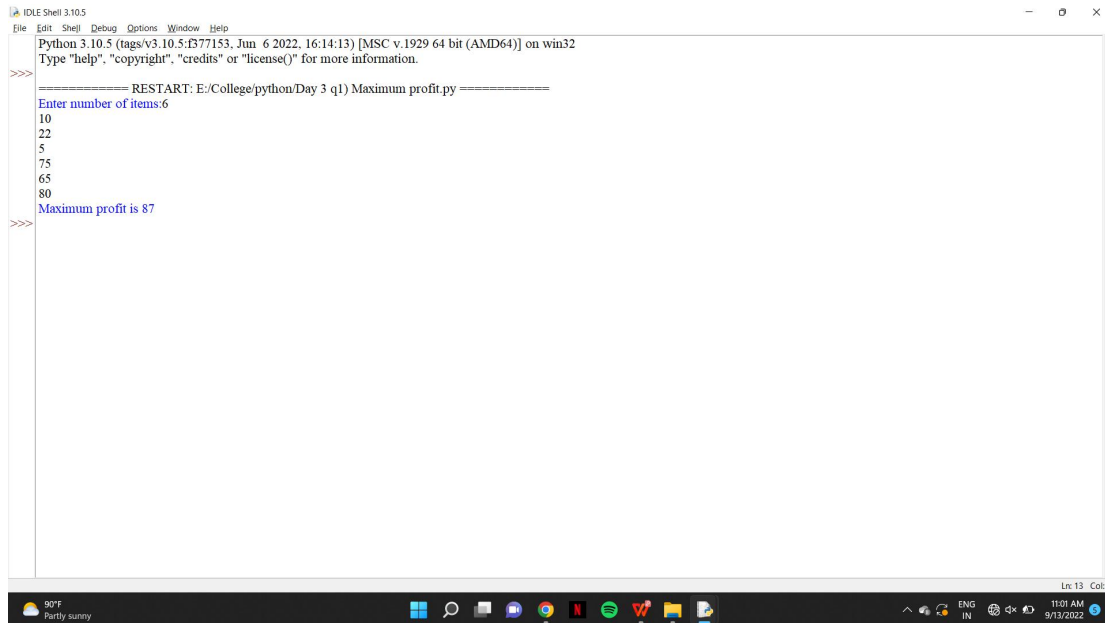
```
n=int(input("Enter number of items:"))
```

```

for i in range(n):
    a.append(int(input()))
print ("Maximum profit is", maxProfit(a, len(a)))

```

OUTPUT:



```

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/Day 3 q1) Maximum profit.py=====
Enter number of items:6
10
22
5
75
65
80
Maximum profit is 87
>>>

```

2) def comb(L):

```

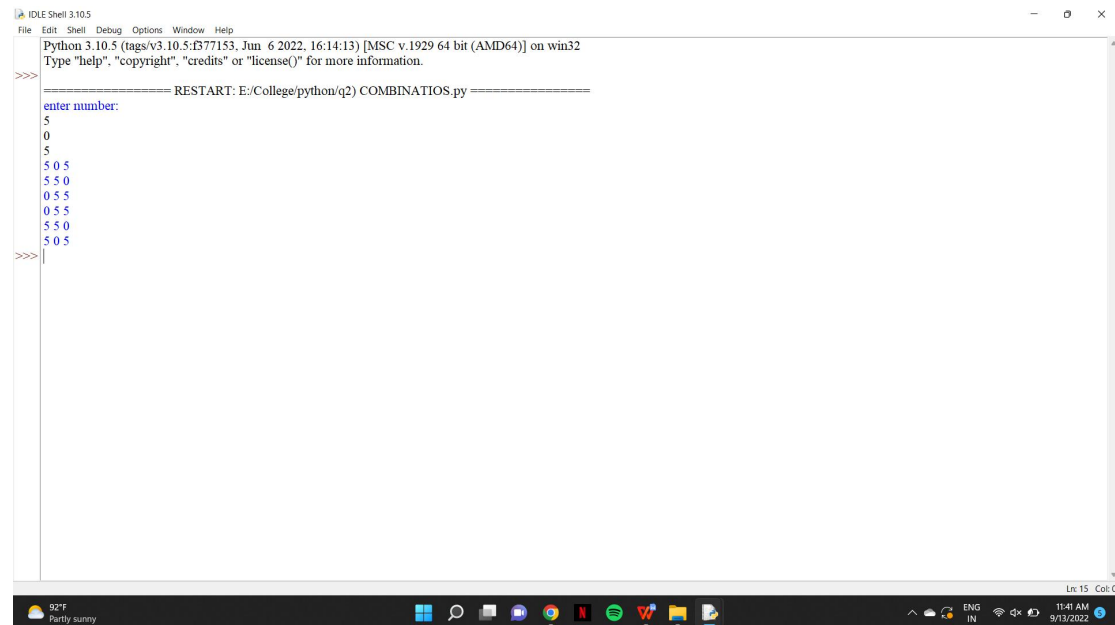
for i in range(3):
    for j in range(3):
        for k in range(3):

            # check if the indexes are not
            # same
            if (i!=j and j!=k and i!=k):
                print(L[i], L[j], L[k])

a=[]
print("enter number:")
for i in range(3):
    b=int(input())
    a.append(b)
comb(a)

```

OUTPUT:

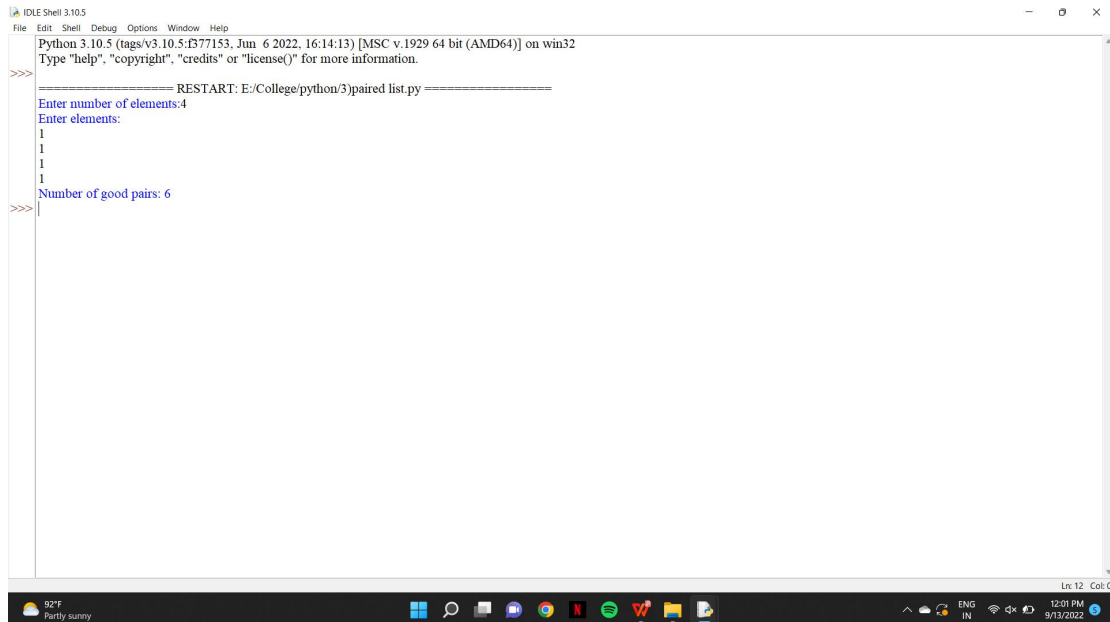


```
Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> ===== RESTART: E:\College\python\q2) COMBINATIOS.py =====
>>> enter number:
5
0
5
5 0 5
5 5 0
0 5 5
0 5 5
5 5 0
5 0 5
>>>
```

```
3) def solve(nums):
    count=0
    n=len(nums)
    for i in range(n):
        for j in range(i+1,n):
            if nums[i] == nums[j]:
                count+=1
    return count

a=[]
n=int(input("Enter number of elements:"))
print("Enter elements:")
for i in range(n):
    b=int(input())
    a.append(b)
print("Number of good pairs:",solve(a))
```

OUTPUT:

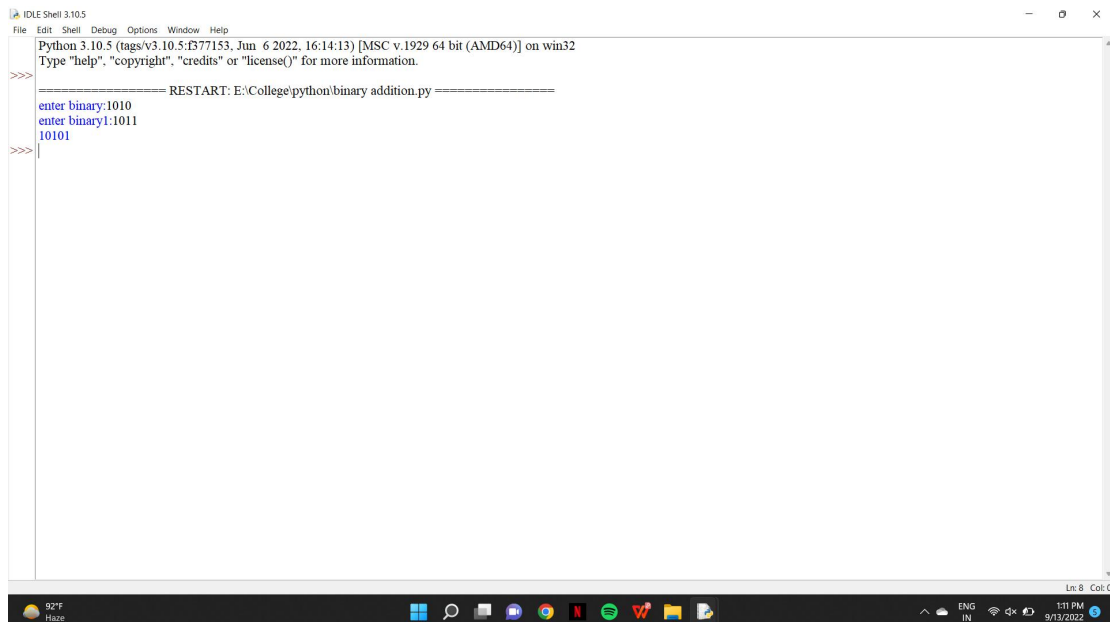


```
Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\College\python\3\paired list.py =====
Enter number of elements:4
Enter elements:
1
1
1
1
Number of good pairs: 6
>>>
```

```
4) a = input("enter binary:")
b = input("enter binary1:")
sum = bin(int(a, 2) + int(b, 2))
```

```
# Printing result
print(sum[2:])
```

OUTPUT:



```
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\binary addition.py =====
enter binary:1010
enter binary1:1011
10101
>>>
```

```
5) def minJumps(arr, l, h):
```

```
    if (h == l):
```

```

return 0

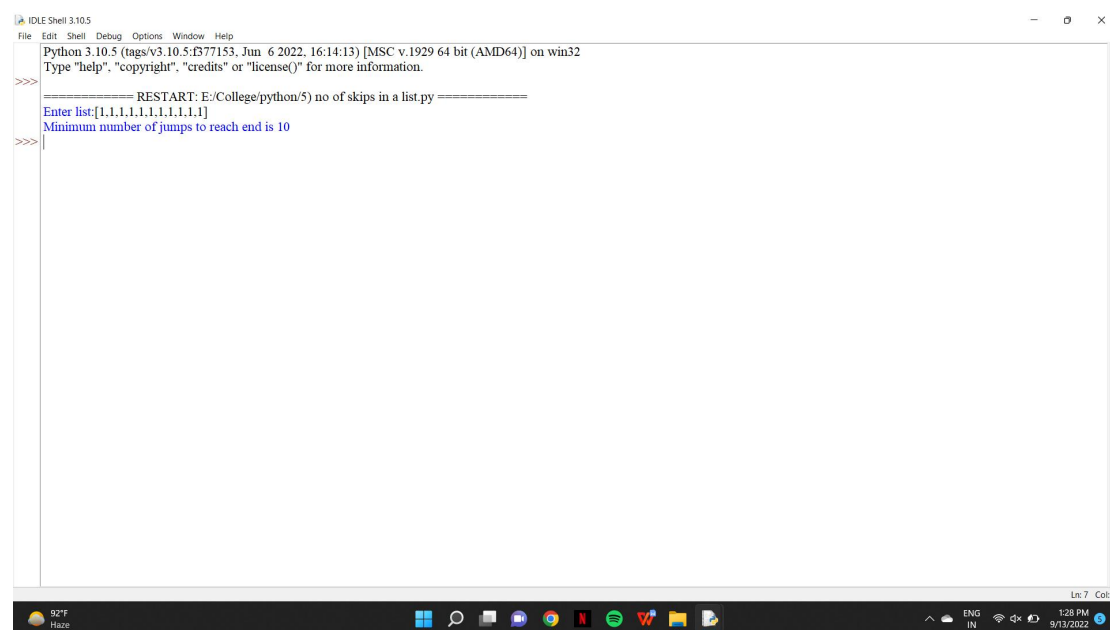
if (arr[l] == 0):
    return float('inf')

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))

```

OUTPUT:



```

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\5) no of skips in a list.py =====
Enter list:[1,1,1,1,1,1,1,1,1,1]
Minimum number of jumps to reach end is 10
>>>

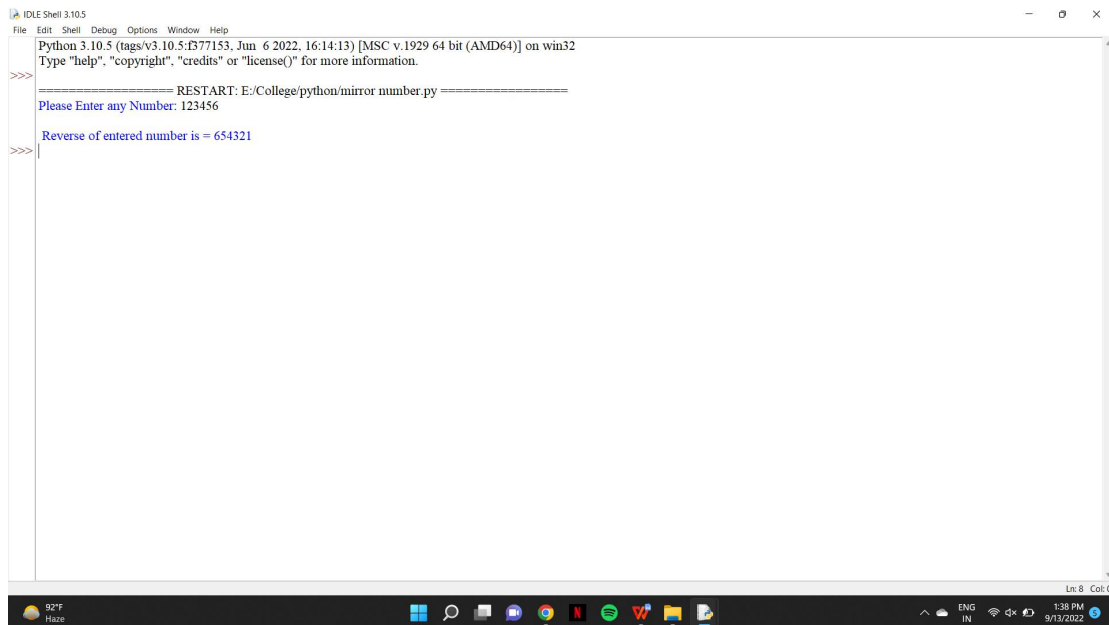
```

```

6) Number = int(input("Please Enter any Number: "))
Reverse = 0
while(Number > 0):
    Reminder = Number %10
    Reverse = (Reverse *10) + Reminder
    Number = Number //10
print("\n Reverse of entered number is = Reverse)

```

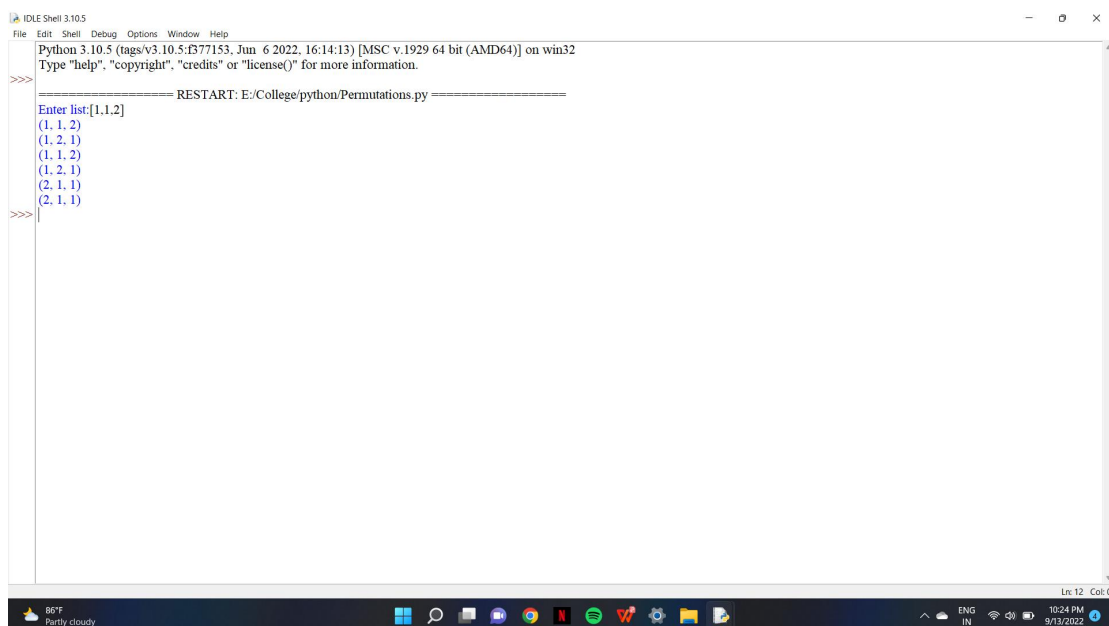
OUTPUT:



```
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/mirror number.py =====
Please Enter any Number: 123456
Reverse of entered number is = 654321
>>>
```

```
7) from itertools import permutations
a=eval(input("Enter list:"))
per = permutations(a)
for i in list(per):
    print(i)
```

OUTPUT:



```
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/Permutations.py =====
Enter list:[1,1,2]
(1, 1, 2)
(1, 2, 1)
(1, 1, 2)
(1, 2, 1)
(2, 1, 1)
(2, 1, 1)
>>>
```

```
8) str1=input("Enter string1:")
str2=input("Enter string2:")
```

```

if len(str1)!=len(str2):
    print("Not Anagrams")
else:
    if sorted(str1)==sorted(str2):
        print("Strings are Anagrams")
    else:
        print("Not Anagrams")

```

OUTPUT:

```

Python 3.10.5 (tags/v3.10.5:1377153, 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\anagrams.py =====
>>> Enter string1:eat
Enter string2:tea
Strings are Anagrams
>>>

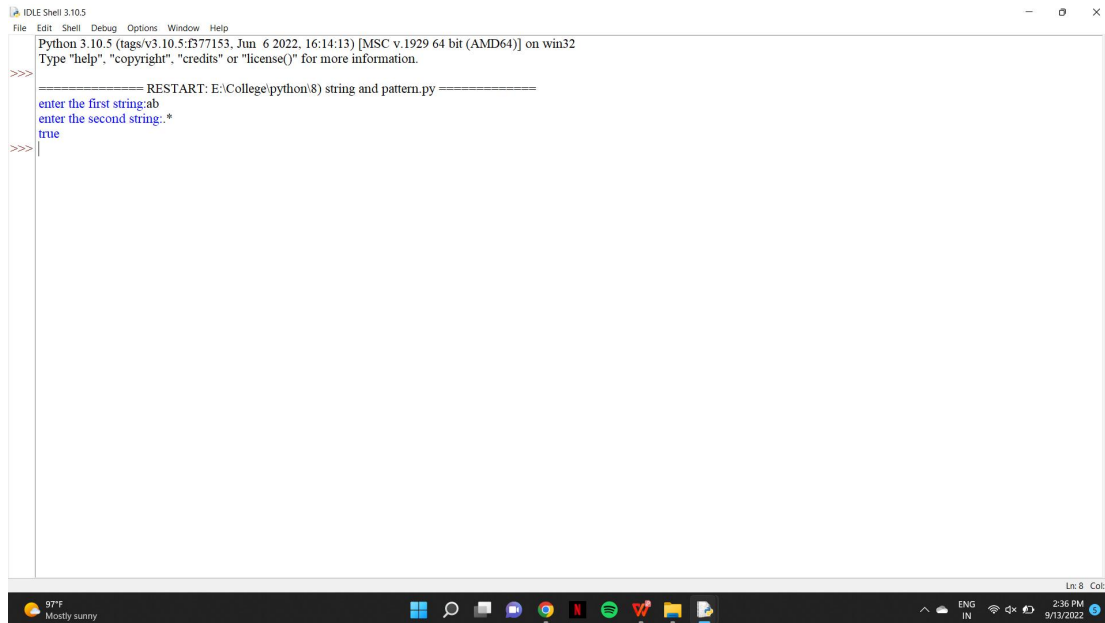
```

```

9) import re
s = input("enter the first string:")
p = input("enter the second string:")
p = r"{}".format(p)
p = re.compile(p)
if p.fullmatch(s):
    print("true")
else:
    print("false")

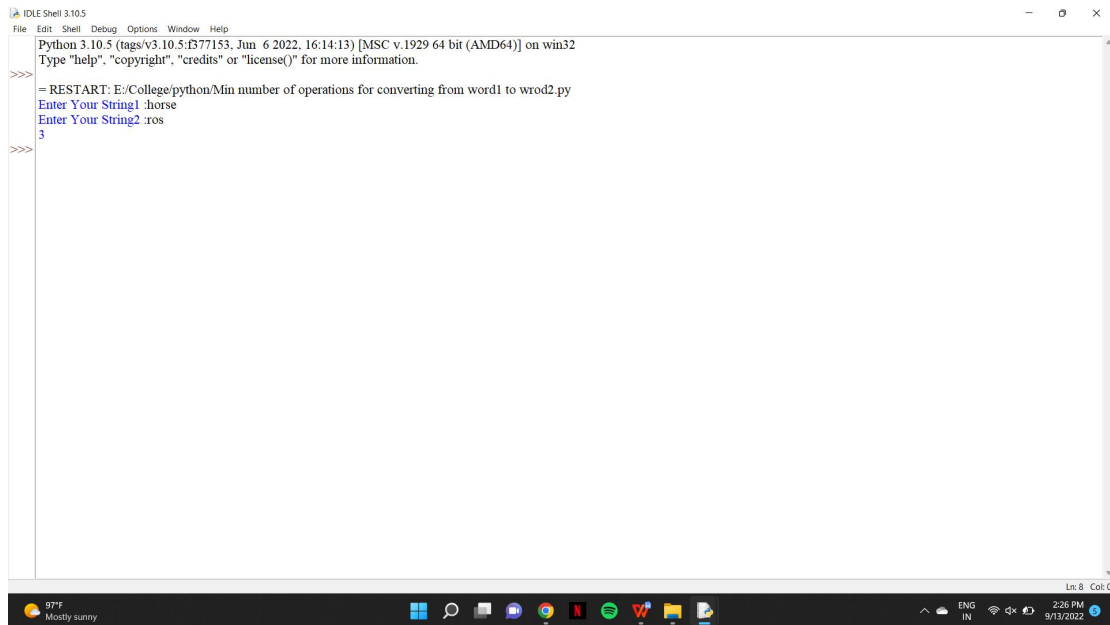
```

OUTPUT:



```
10) def editDistance(str1, str2, m, n):  
  
    if m == 0:  
        return n  
  
    if n == 0:  
        return m  
  
    if str1[m-1] == str2[n-1]:  
        return editDistance(str1, str2, m-1, n-1)  
  
    return 1 + min(editDistance(str1, str2, m, n-1),  
                    editDistance(str1, str2, m-1, n),  
                    editDistance(str1, str2, m-1, n-1)  
                    )  
  
str1 = input("Enter Your String1 :")  
str2 = input("Enter Your String2 :")  
print (editDistance(str1, str2, len(str1), len(str2)))
```


OUTPUT:



The screenshot shows an IDLE Shell window titled "IDLE Shell 3.10.5". The window contains the following text:

```
>>> Python 3.10.5 (tags/v3.10.5:1377153, 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/Min number of operations for converting from word1 to word2.py
Enter Your String1 :horse
Enter Your String2 :ros
3
>>>
```

The bottom of the window shows a Windows taskbar with a weather widget indicating 97°F and Mostly sunny, along with various application icons and system status icons on the right.