

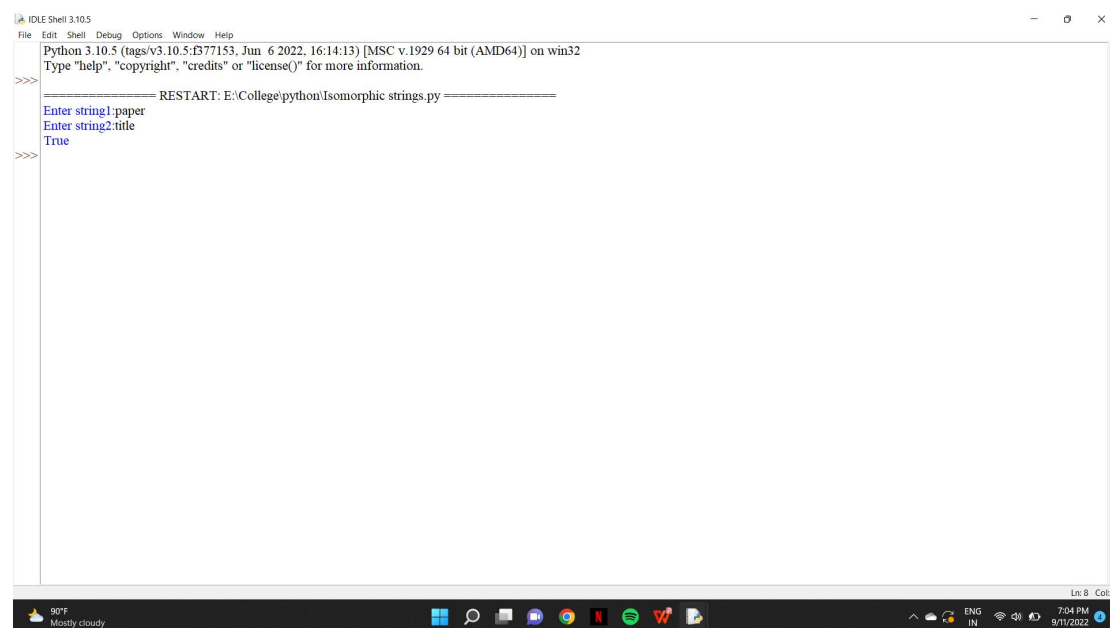
# DAY-1 LAB EXPERIMENT

NAME: S.G.DEVSACHIN

SUBJECT CODE: CSA0836

```
1) def isomorphic(str1,str2):
    if len(str1) != len(str2):
        return False
    else:
        map1,map2={},{}
        for i in range(len(str1)):
            ch1,ch2=str1[i],str2[i]
            if ch1 not in map1:
                map1[ch1]=ch2
            if ch2 not in map2:
                map2[ch2]=ch1
            if ((map1[ch1] != ch2) or (map2[ch2]!=ch1)):
                return False
        return True
str1=input("Enter string1:")
str2=input("Enter string2:")
print(isomorphic(str1,str2))
```

OUTPUT:



The screenshot shows a Python IDE Shell window titled 'IDLE Shell 3.10.5'. The window contains the following text:

```
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\Isomorphic strings.py =====
Enter string1:paper
Enter string2:title
True
>>>
```

The window also shows a Windows taskbar at the bottom with various icons and a system tray displaying the date and time as 7:04 PM on 9/11/2022.

```

2) l=int(input("Enter number of elements:"))
lst=[]
sum1=0
sum2=0
for i in range(0,l):
    ele=int(input())
    lst.append(ele)
for i in range(0,l):
    if(lst[i]%2==0):
        sum2=sum2+lst[i]**2
    else:
        sum1=sum1+lst[i]**2
l1=[sum1,sum2]
print(l1)

```

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\sum of odd and even numbers list!.py =====
Enter number of elements:8
2
4
5
6
7
11
12
13
[364, 200]
>>>

```

```

3) def numSquareSum(n):
    squareSum = 0
    while(n):
        squareSum += (n%10)*(n%10)
        n=int(n/10)
    return squareSum
def isHappynumber(n):
    slow=n
    fast=n
    while(True):

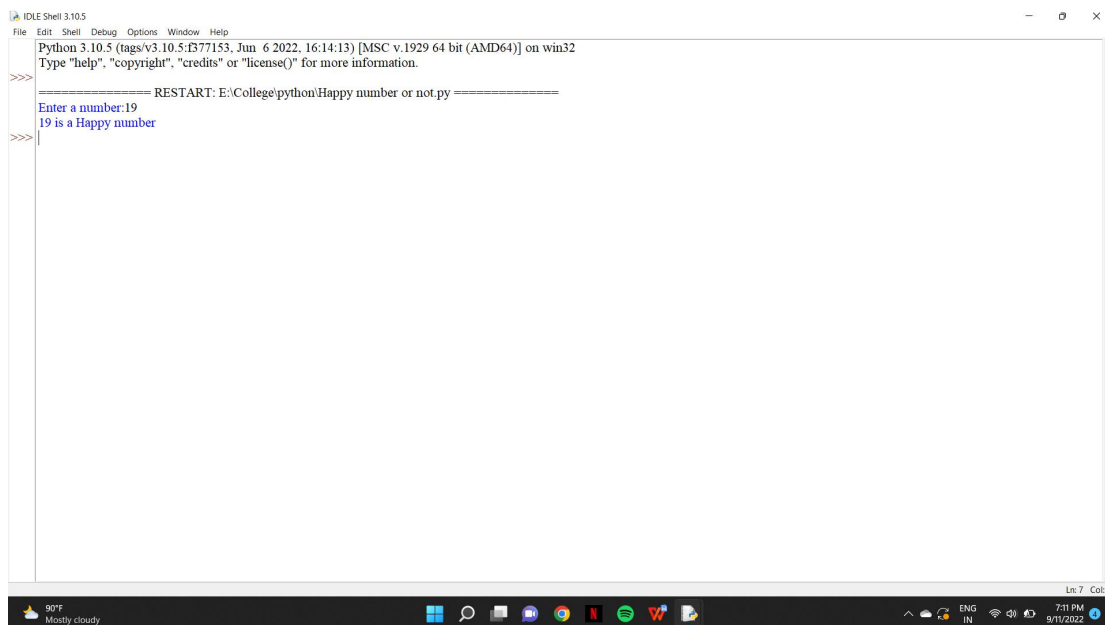
```

```

        slow=numSquareSum(slow)
        fast=numSquareSum(numSquareSum(fast))
        if(slow!=fast):
            continue
        else:
            break
    return (slow==1)
n =int(input("Enter a number:"))
if (isHappynumber(n)):
    print(n , "is a Happy number")
else:
    print(n , "is not a Happy number")

```

OUTPUT:



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

```

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\Happy number or not.py =====
Enter a number:19
19 is a Happy number
>>>

```

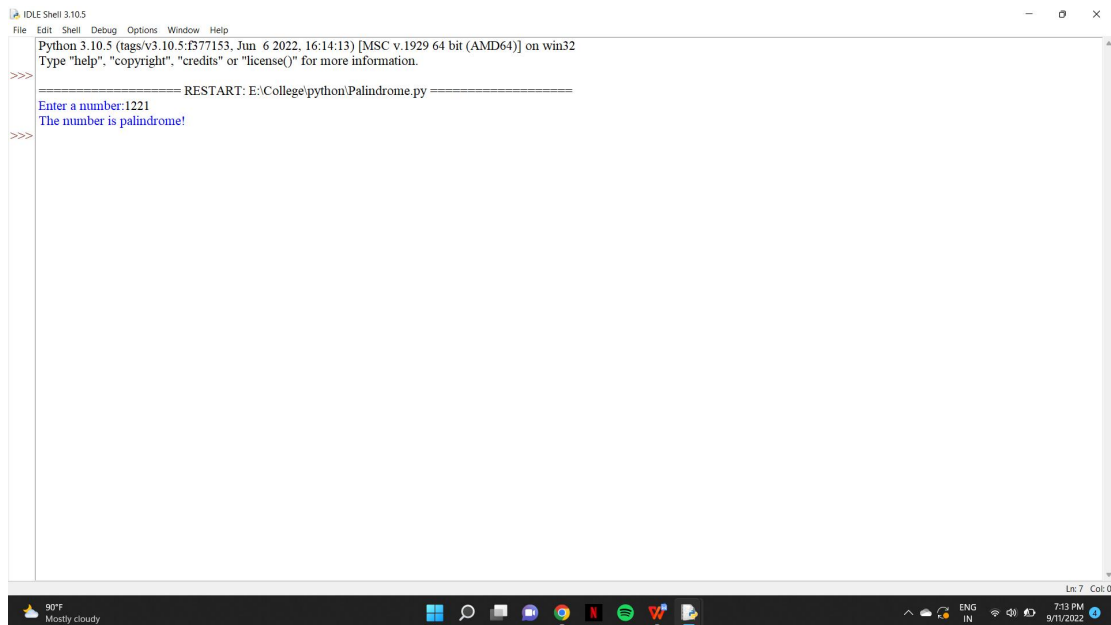
The window also shows a Windows taskbar at the bottom with various icons and a system tray displaying the date and time as 7:11 PM on 9/11/2022.

```

4) num=int(input("Enter a number:"))
temp=num
rev=0
while(num>0):
    dig=num%10
    rev=rev*10+dig
    num=num//10
if(temp==rev):
    print("The number is palindrome!")
else:
    print("Not a palindrome!")

```

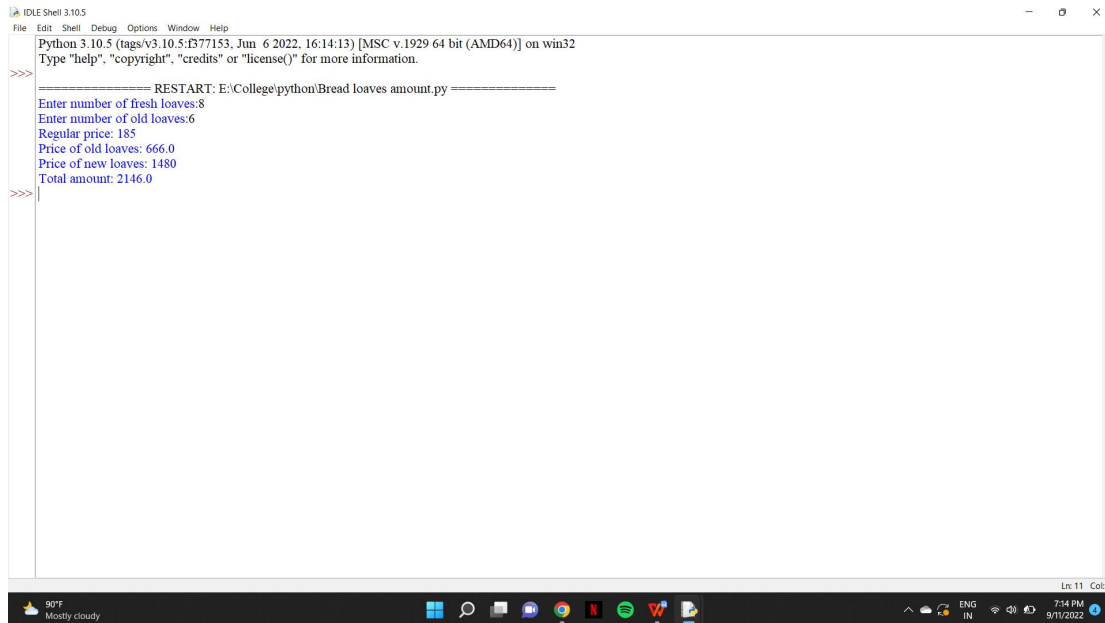
## OUTPUT:



```
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\Palindrome.py =====
>>> Enter a number:1221
The number is palindrome!
>>>
```

```
5) a=int(input("Enter number of fresh loaves:"))
b=int(input("Enter number of old loaves:"))
c=185*a
d=185*b*0.6
e=185
total=c+d
print("Regular price:",e)
print("Price of old loaves:",d)
print("Price of new loaves:",c)
print("Total amount:",total)
```

## 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\Bread loaves amount.py =====
Enter number of fresh loaves:8
Enter number of old loaves:6
Regular price: 185
Price of old loaves: 666.0
Price of new loaves: 1480
Total amount: 2146.0
>>>
```

```
6) def maxArea(A, Len) :
    area = 0
    for i in range(Len) :
        for j in range(i + 1, Len) :

            # Calculating the max area
            area = max(area, min(A[j], A[i]) * (j - i))
    return area
```

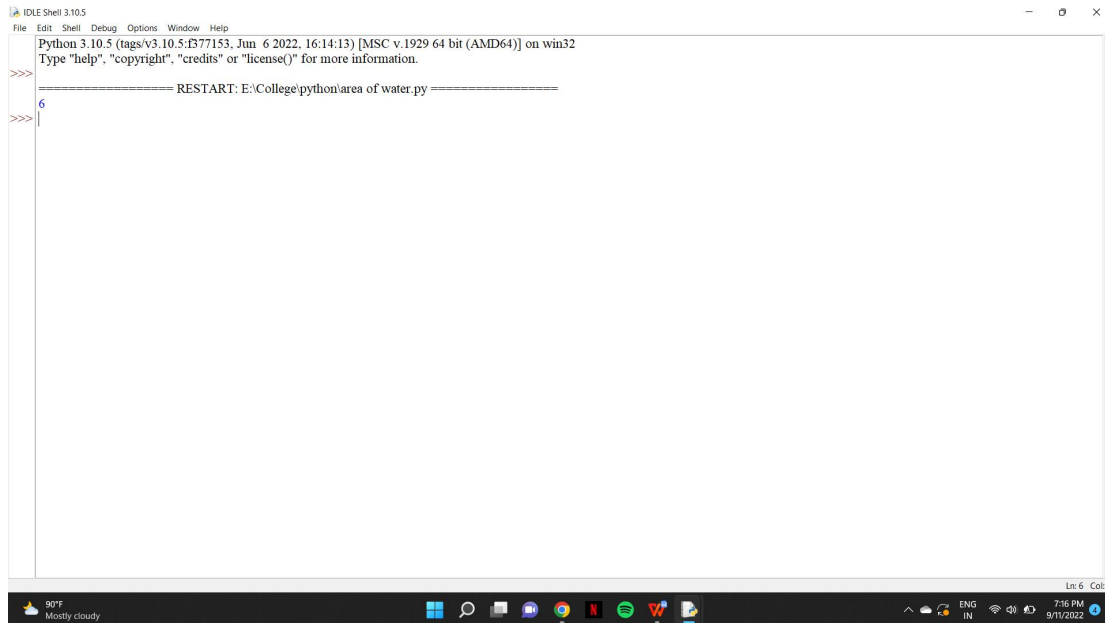
# Driver code

```
a = [1,5,4,3]
```

```
len1 = len(a)
```

```
print(maxArea(a, len1))
```

OUTPUT:

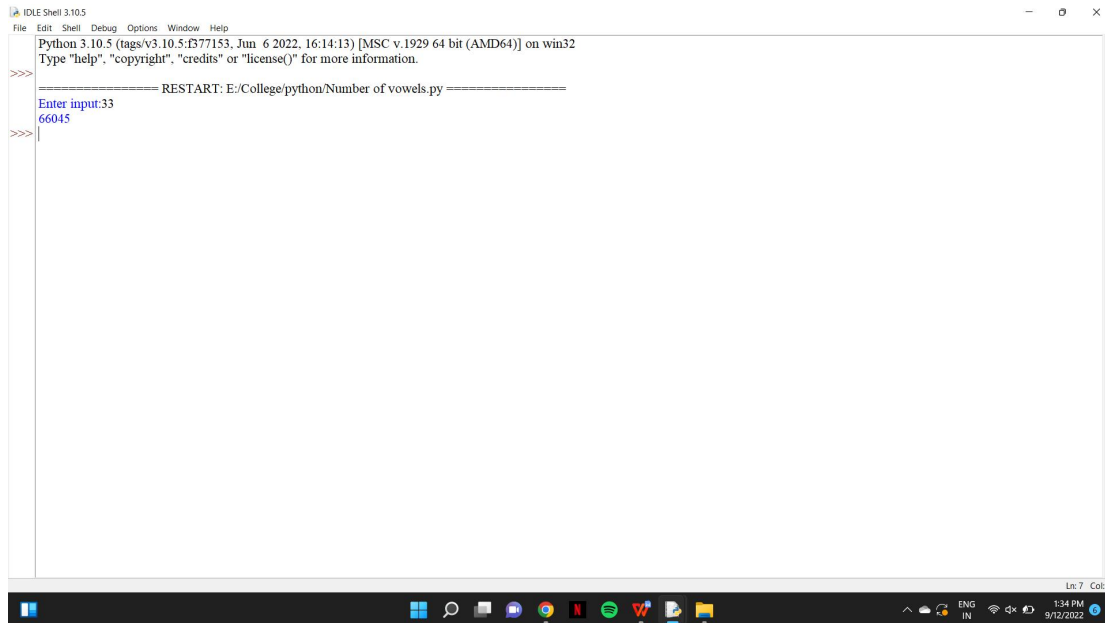


```
7) def countstrings(n, start):  
    if n == 0:  
        return 1  
    cnt = 0  
    for i in range(start, 5):  
        cnt += countstrings(n - 1, i)  
    return cnt
```

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

```
n = int(input("Enter input:"))  
print(countVowelStrings(n))
```

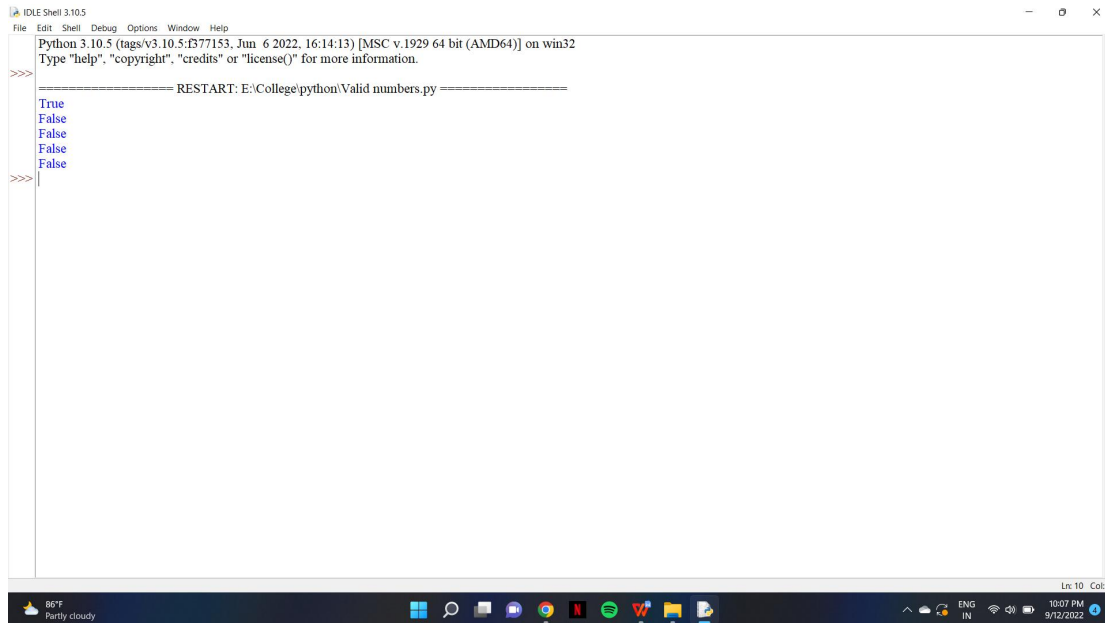
OUTPUT:



```
8) class Solution(object):
    def isNumber(self, s):
        s = s.strip()
        try:
            s = float(s)
            return True
        except:
            return False
```

```
ob = Solution()
print(ob.isNumber("0"))
print(ob.isNumber("e"))
print(ob.isNumber(" "))
print(ob.isNumber("."))
print(ob.isNumber("%"))
```

OUTPUT:

A screenshot of an IDE Shell window titled 'IDLE Shell 3.10.5'. The window shows the Python 3.10.5 prompt and the output of a script. The output consists of a separator line '=====RESTART: E:\College\python\Valid numbers.py =====', followed by the boolean values 'True', 'False', 'False', and 'False' on separate lines. The window's taskbar at the bottom shows the system clock as 10:07 PM on 9/12/2022.

9)

10) def addFrequencyToCharacter(s):

    frequency = [0] \* 26

    n = len(s)

    for i in range(n):

        frequency[ord(s[i]) - ord('a')] += 1

    for i in range(n):

        add = frequency[ord(s[i]) - ord('a')] % 26

        if (ord(s[i]) + add <= ord('z')):  
            s[i] = chr(ord(s[i]) + add)

        else:

            add = (ord(s[i]) + add) - (ord('z'))  
            s[i] = chr(ord('a') + add - 1)

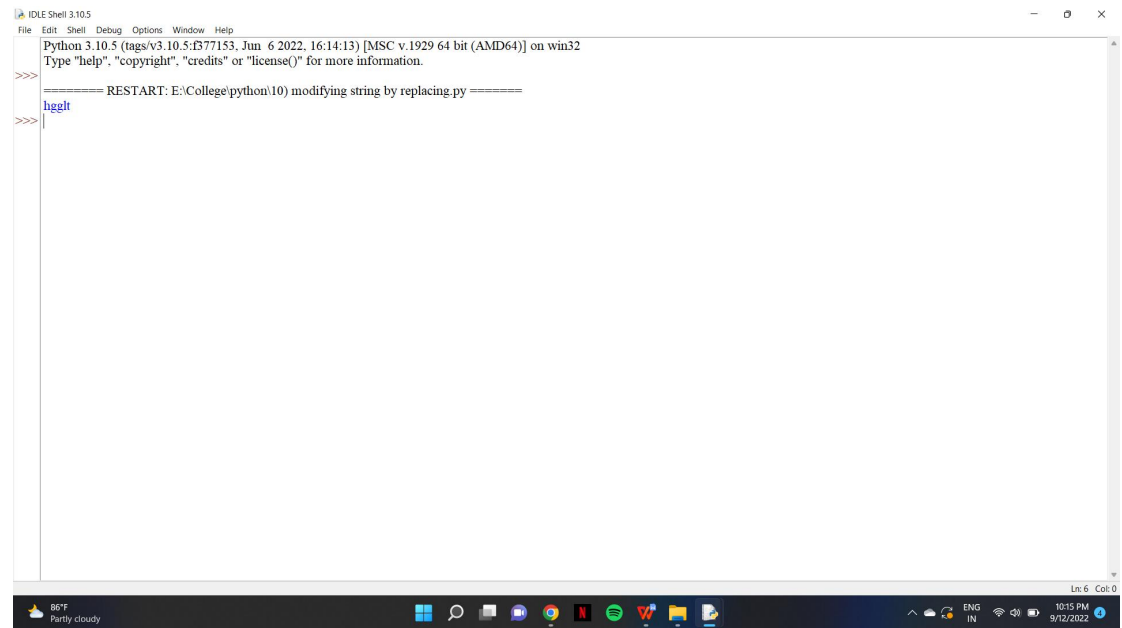
    print("".join(s))

str = "geeks"

addFrequencyToCharacter([i for i in str])



## OUTPUT:



The screenshot shows a Windows desktop environment. The primary window is the IDLE Shell 3.10.5, which has a menu bar (File, Edit, Shell, Debug, Options, Window, Help) and a command prompt interface. The shell displays the following text:

```
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\10) modifying string by replacing.py =====
>>> hgglt
>>>
```

The taskbar at the bottom of the screen shows the weather as 86°F and Partly cloudy. It also contains icons for the Start menu, Search, Task View, and several application icons including Chrome, Word, and a folder. The system tray on the right shows the language set to ENG IN, network and volume icons, and the date and time as 10:15 PM on 9/12/2022.