**Fibonacci series using recursion**

def fibonacci\_recursion(my\_val):

if my\_val <= 1:

return my\_val

else:

return(fibonacci\_recursion(my\_val-1) + fibonacci\_recursion(my\_val-2))

num\_terms = 12

print("The number of terms is ")

print(num\_terms)

if num\_terms <= 0:

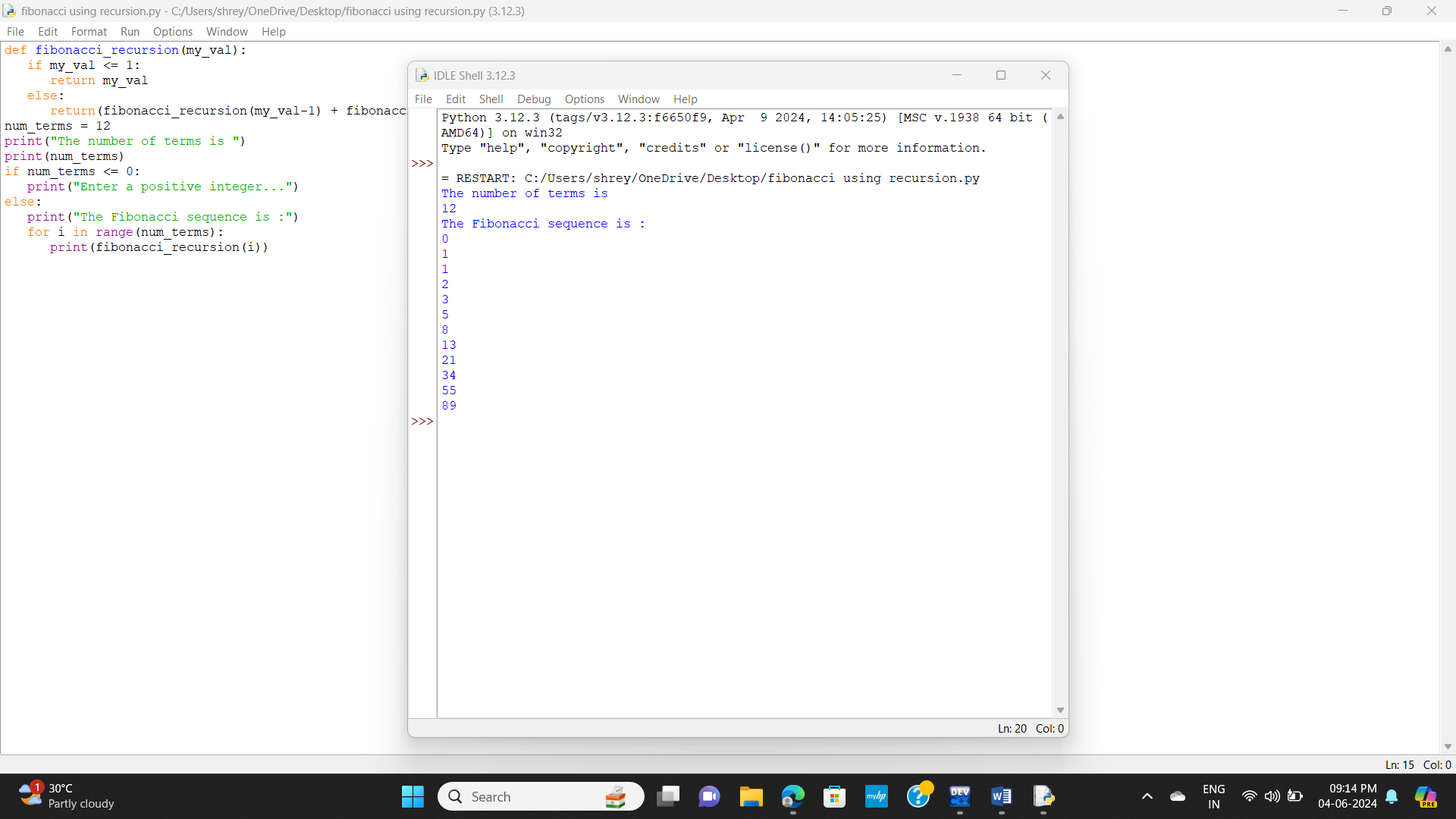
print("Enter a positive integer...")

else:

print("The Fibonacci sequence is :")

for i in range(num\_terms):

print(fibonacci\_recursion(i))



**Armstrong**

def is\_armstrong(num):

num\_str = str(num)

n = len(num\_str)

sum = 0

for digit in num\_str:

sum += int(digit)\*\*n

if sum == num:

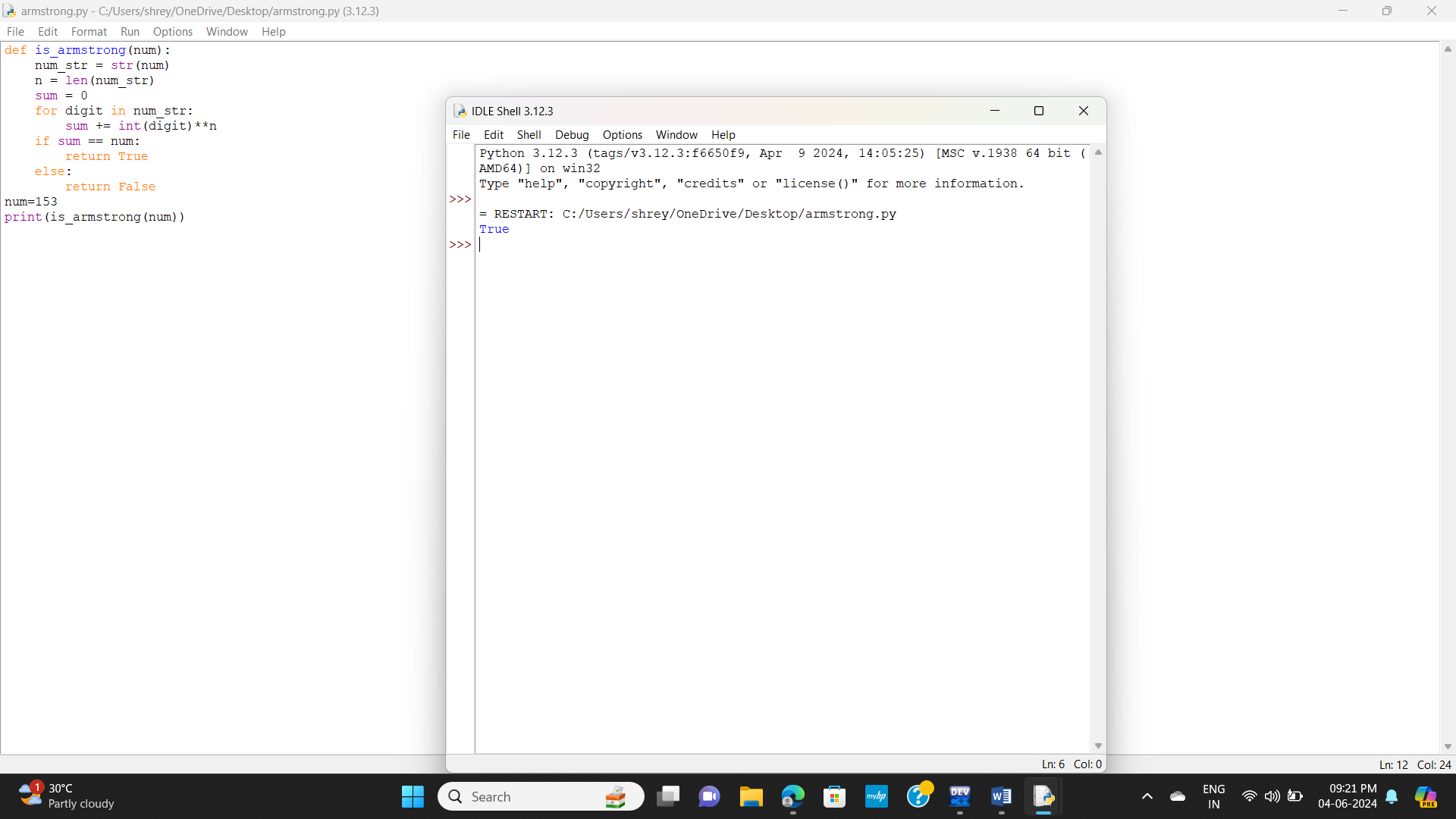
return True

else:

return False

num=153

print(is\_armstrong(num))



**Gcd**

def gcd(a, b):

if b == 0:

return a

else:

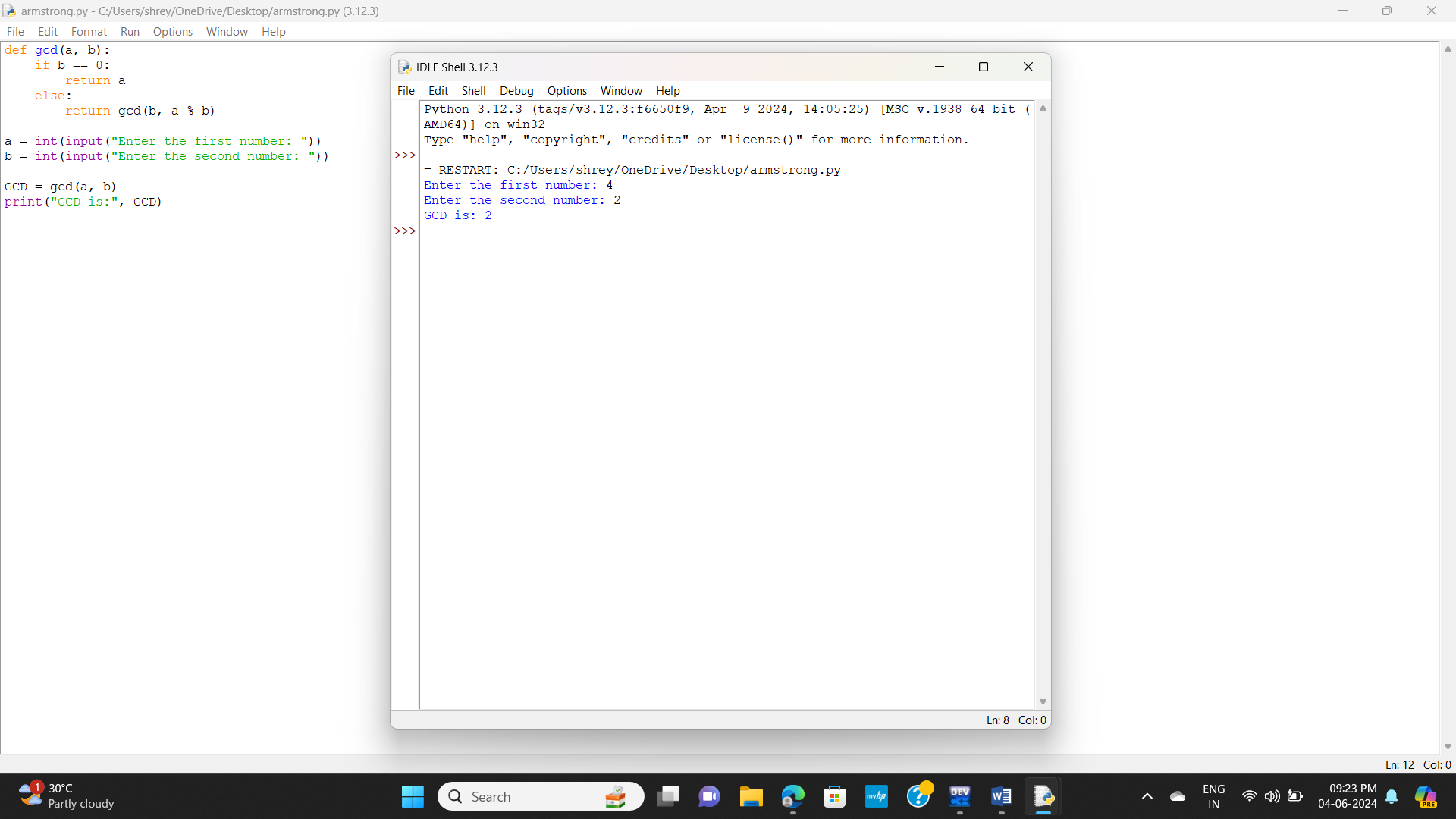
return gcd(b, a % b)

a = int(input("Enter the first number: "))

b = int(input("Enter the second number: "))

GCD = gcd(a, b)

print("GCD is:", GCD)



**Largest number in an array**

def largest(arr, n):

max\_val = arr[0]

for i in range(1, n):

if arr[i] > max\_val:

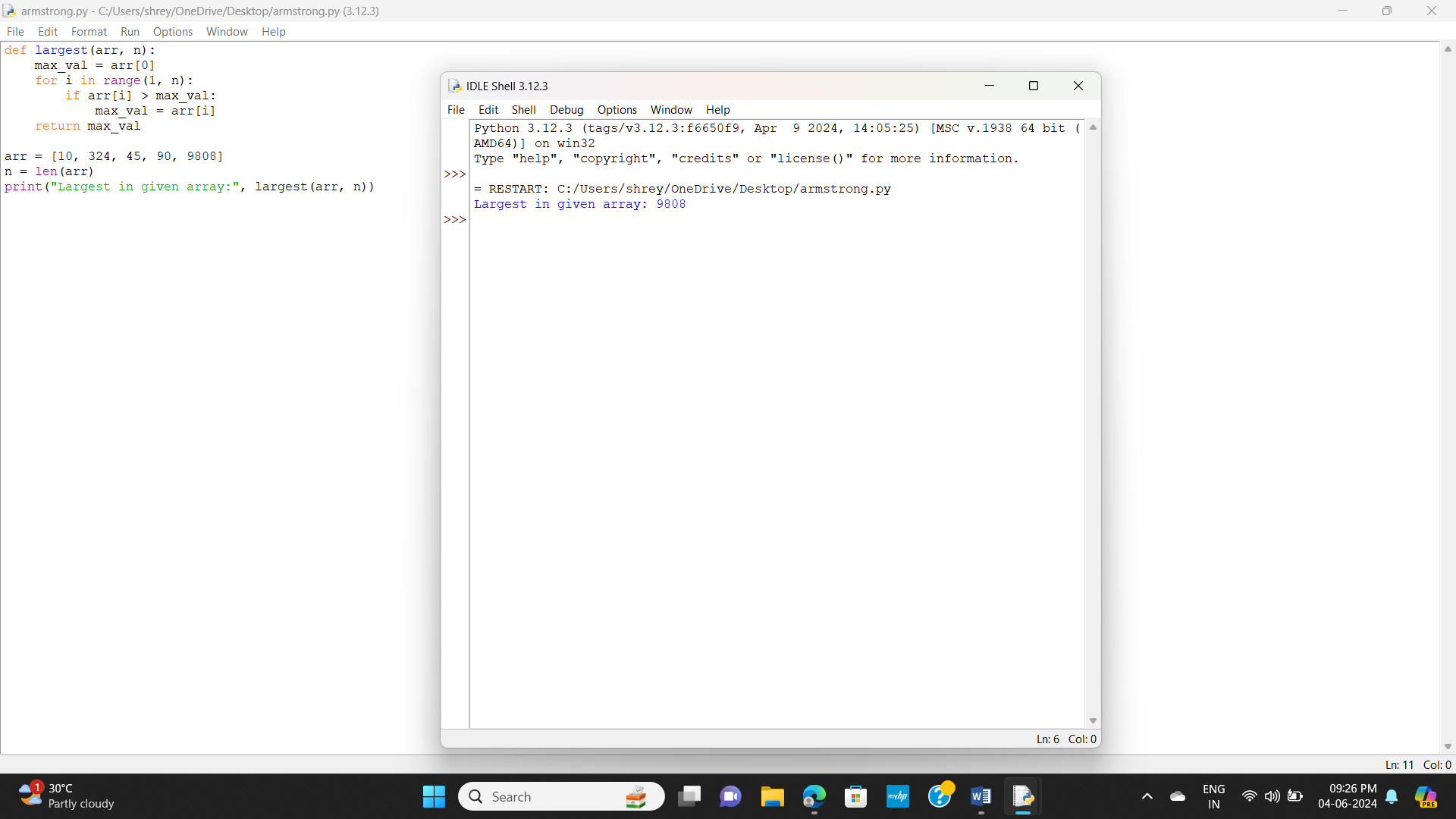
max\_val = arr[i]

return max\_val

arr = [10, 324, 45, 90, 9808]

n = len(arr)

print("Largest in given array:", largest(arr, n))



**Factorial using recursion**

def recur\_factorial(n):

if n == 1:

return n

else:

return n \* recur\_factorial(n - 1)

num = 5

if num < 0:

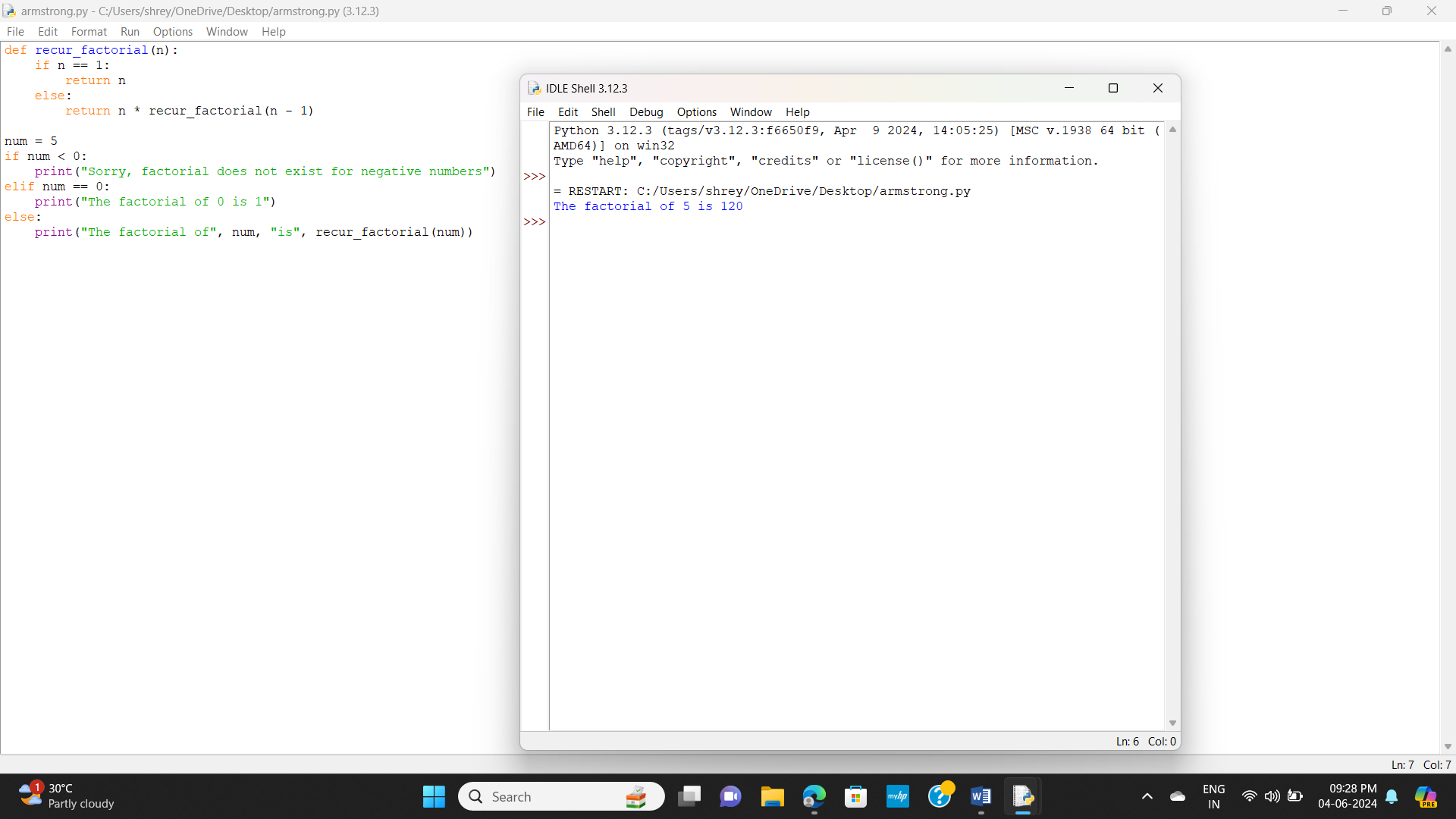
print("Sorry, factorial does not exist for negative numbers")

elif num == 0:

print("The factorial of 0 is 1")

else:

print("The factorial of", num, "is", recur\_factorial(num))



**Reverse of a string**

def reverse(s):

result = ""

for char in s:

result = char + result

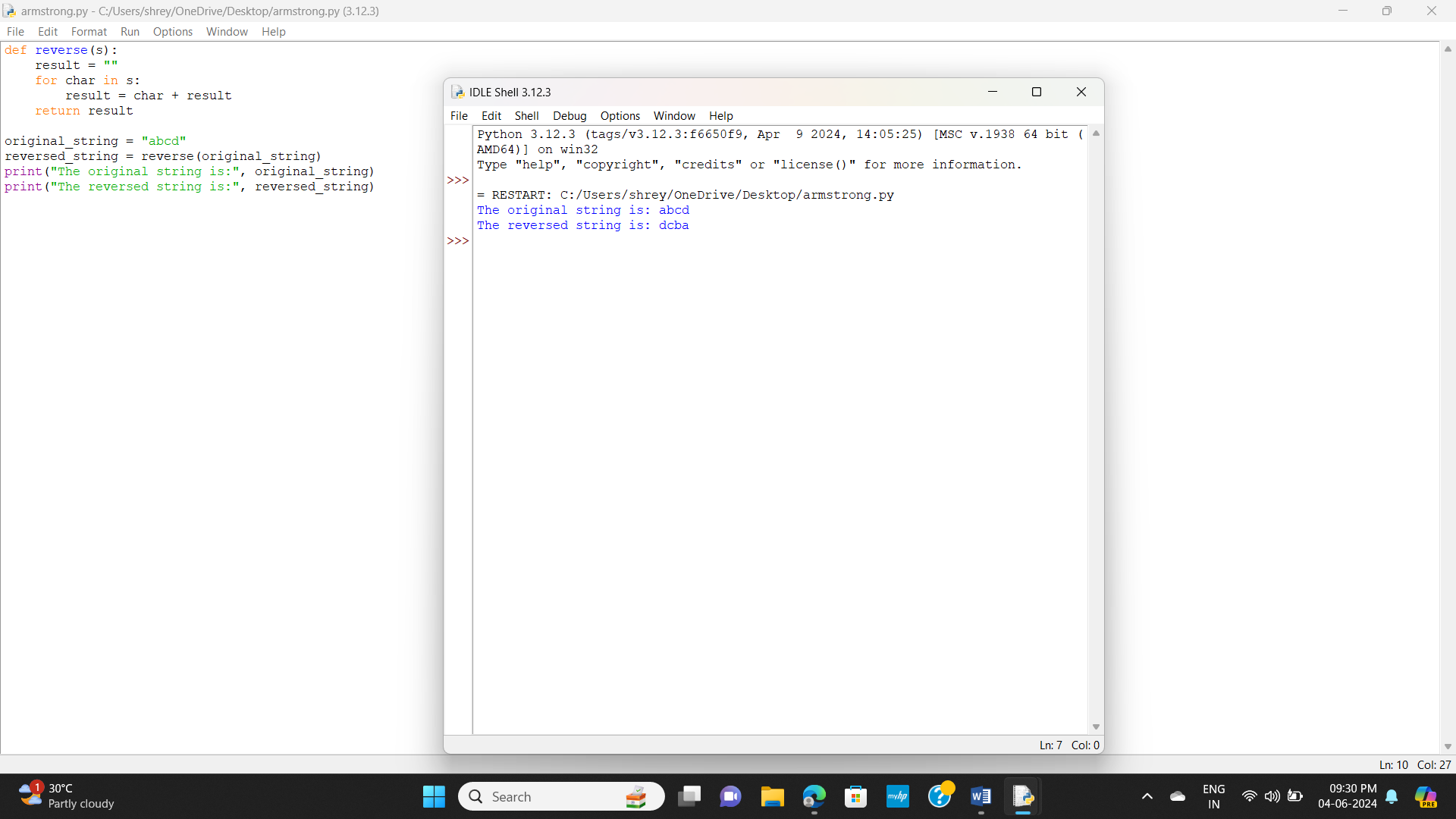
return result

original\_string = "abcd"

reversed\_string = reverse(original\_string)

print("The original string is:", original\_string)

print("The reversed string is:", reversed\_string)



**Prime number**

def prime(x, y):

prime\_list = []

for i in range(x, y):

if i == 0 or i == 1:

continue

else:

for j in range(2, int(i/2)+1):

if i % j == 0:

break

else:

prime\_list.append(i)

return prime\_list

starting\_range = 2

ending\_range = 7

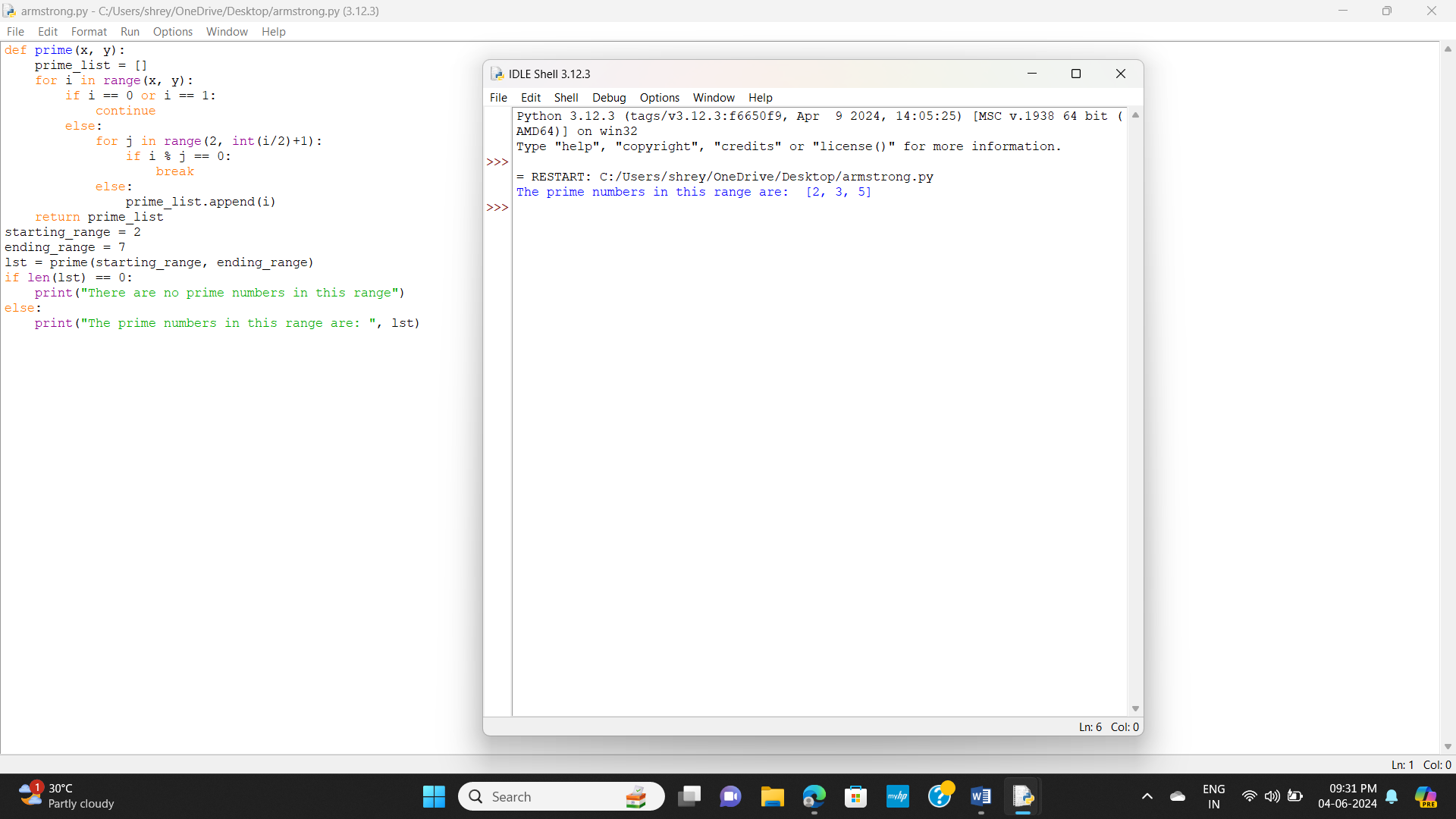
lst = prime(starting\_range, ending\_range)

if len(lst) == 0:

print("There are no prime numbers in this range")

else:

print("The prime numbers in this range are: ", lst)



**Check prime or not**

n=int(input("Enter a number:"))

if n>1:

for i in range(2,n//2):

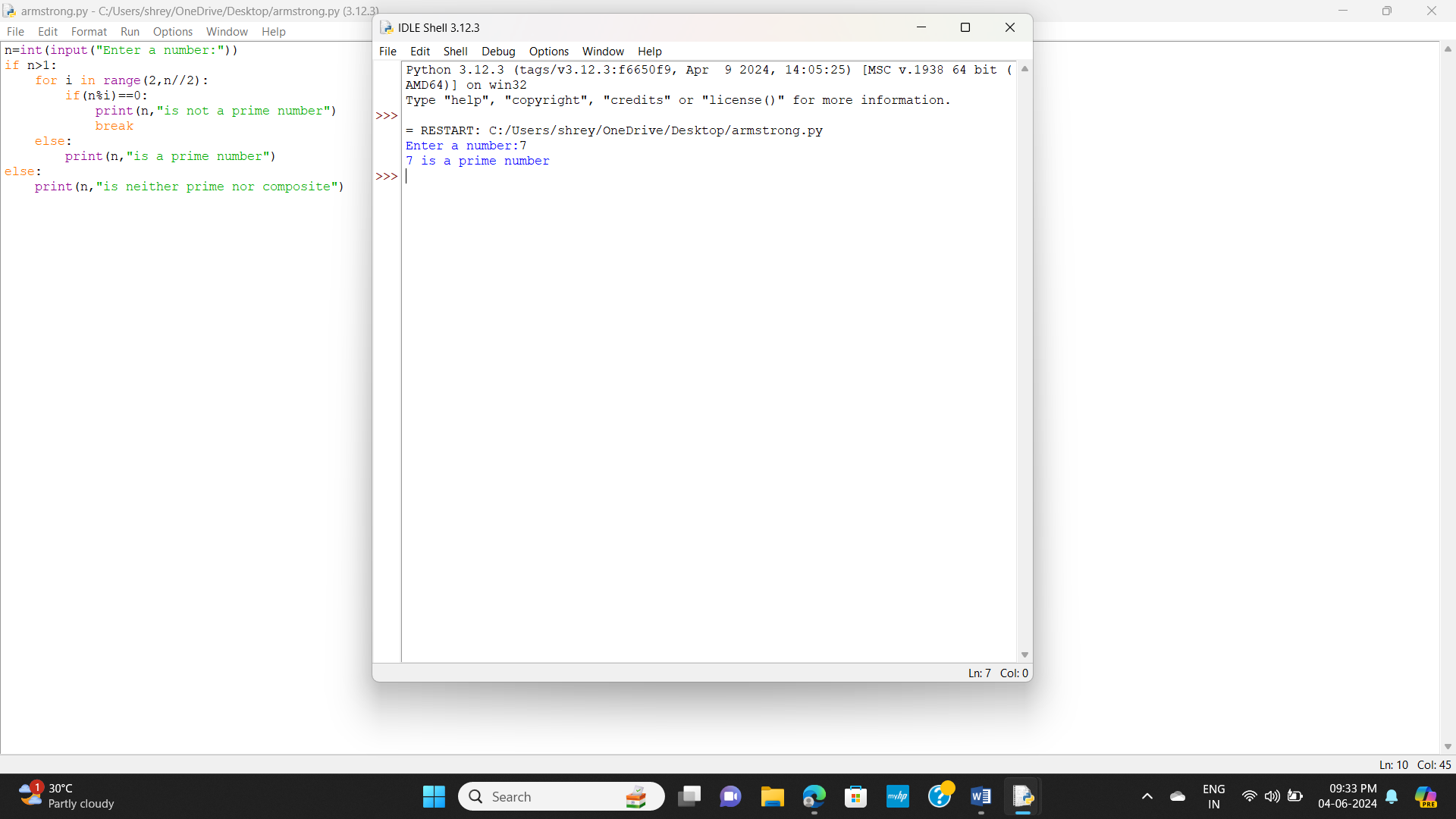
if(n%i)==0:

print(n,"is not a prime number")

break

else:

print(n,"is a prime number")



**Palindrome**

def is\_palindrome(s, left, right):

if left >= right:

return True

if s[left] != s[right]:

return False

return is\_palindrome(s, left + 1, right - 1)

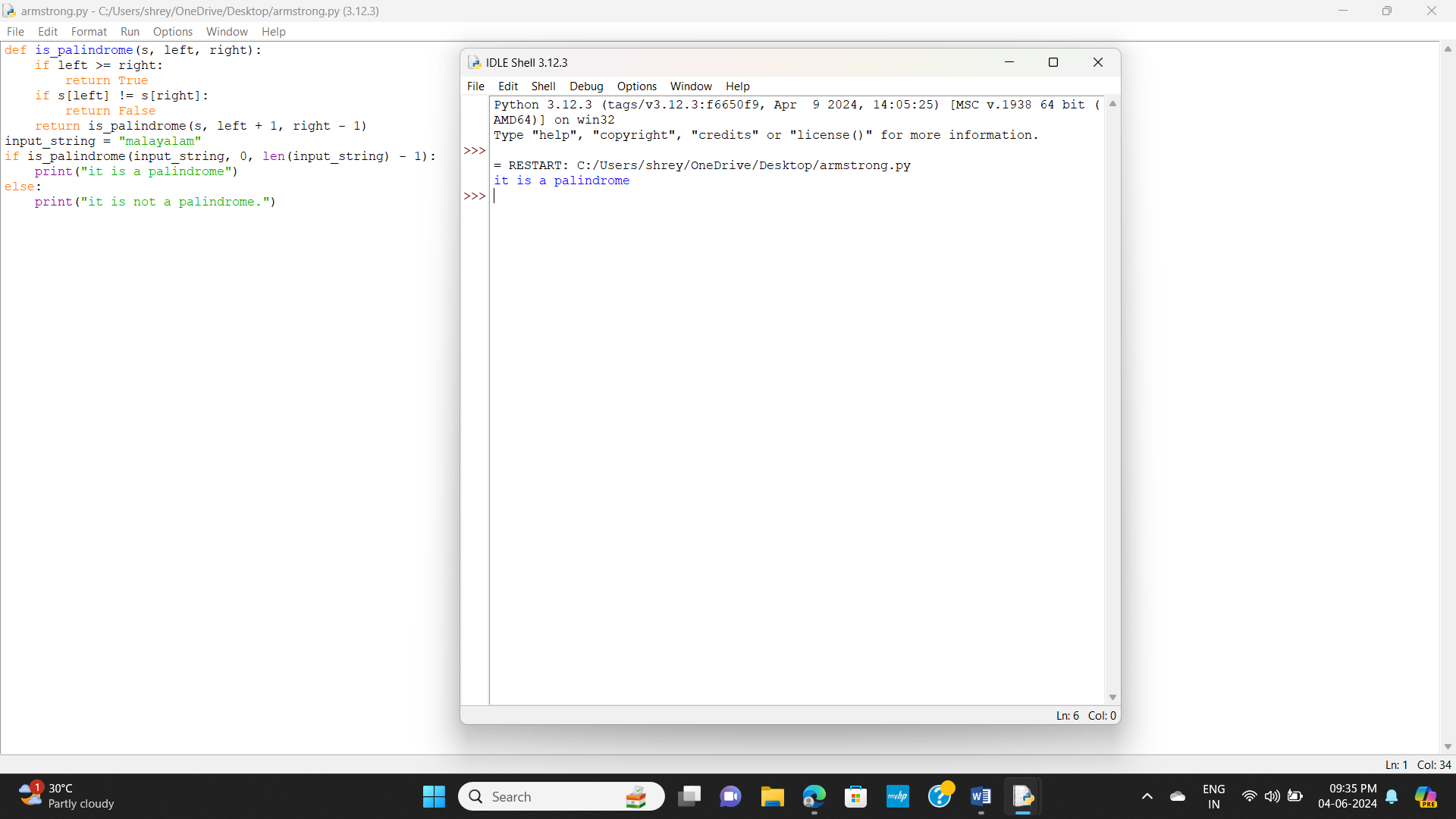
input\_string = "malayalam"

if is\_palindrome(input\_string, 0, len(input\_string) - 1):

print("it is a palindrome")

else:

print("it is not a palindrome.")



**Copy one string to another**

str1 = "Hello"

str2 = str1

print(str2)

