Question 1- Write a Python program to replace all occurrences of a space, comma, or dot with a colon.

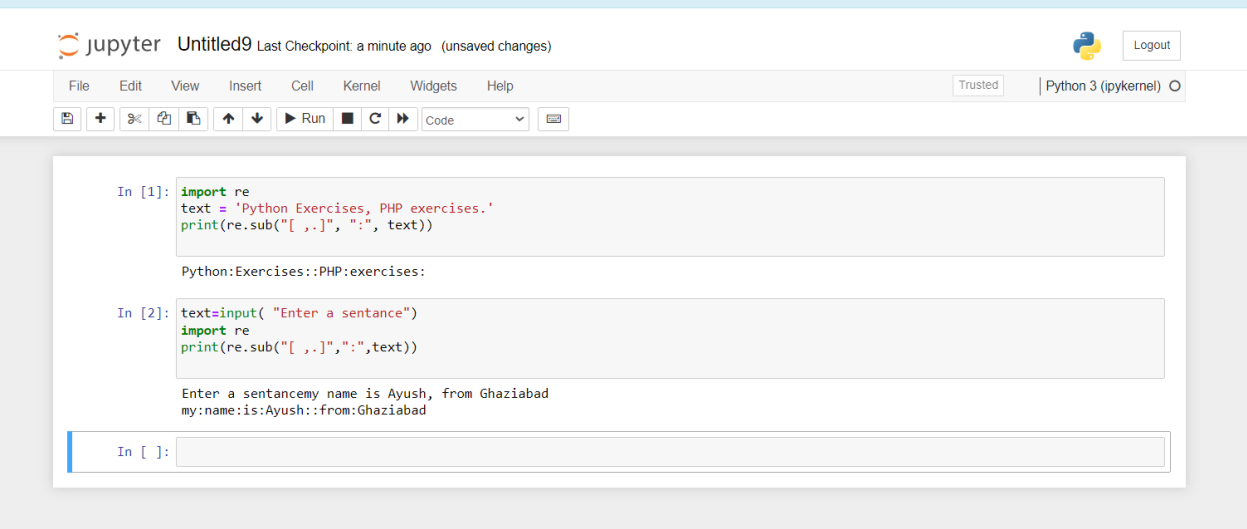
Ans- import re

text = 'Python Exercises, PHP exercises.'

print(re.sub("[,.]", ":", text))

Another Example of if string take input from user. Then program will be run this form

```
text=input( "Enter a sentance")
import re
print(re.sub("[ ,.]",":",text))
```



Question 2- Create a dataframe using the dictionary below and remove everything (commas (,), !, XXXX, ;, etc.) from the columns except words.

Ans- def my_assignment1():
  print("Ends")
#another
text=input("Enter a sentance")
import re
#text = 'Python Exercises, PHP exercises.
print(re.sub("[,.]",":",text))
#call the function
my_assignment()
#another

text=input("Enter a sentance")
import re
#text = 'Python Exercises, PHP exercises.
print(re.sub("[,.]",":",text))
my_assignment1()l

```
Enter a sentancemy name is Ayush, from Ghaziabad
my:name:is:Ayush::from:Ghaziabad
```

In [4]:
```
def my_assignment1():
  print("Ends")
#another
text=input( "Enter a sentance")
import re
#text = 'Python Exercises, PHP exercises.
print(re.sub("[ ,.]",":",text))
#call the function
my_assignment()
#another

text=input( "Enter a sentance")
import re
#text = 'Python Exercises, PHP exercises.
print(re.sub("[ ,.]",":",text))
my_assignment1()
```

```
Enter a sentanceAyush, From Delhi
Ayush::From:Delhi
```

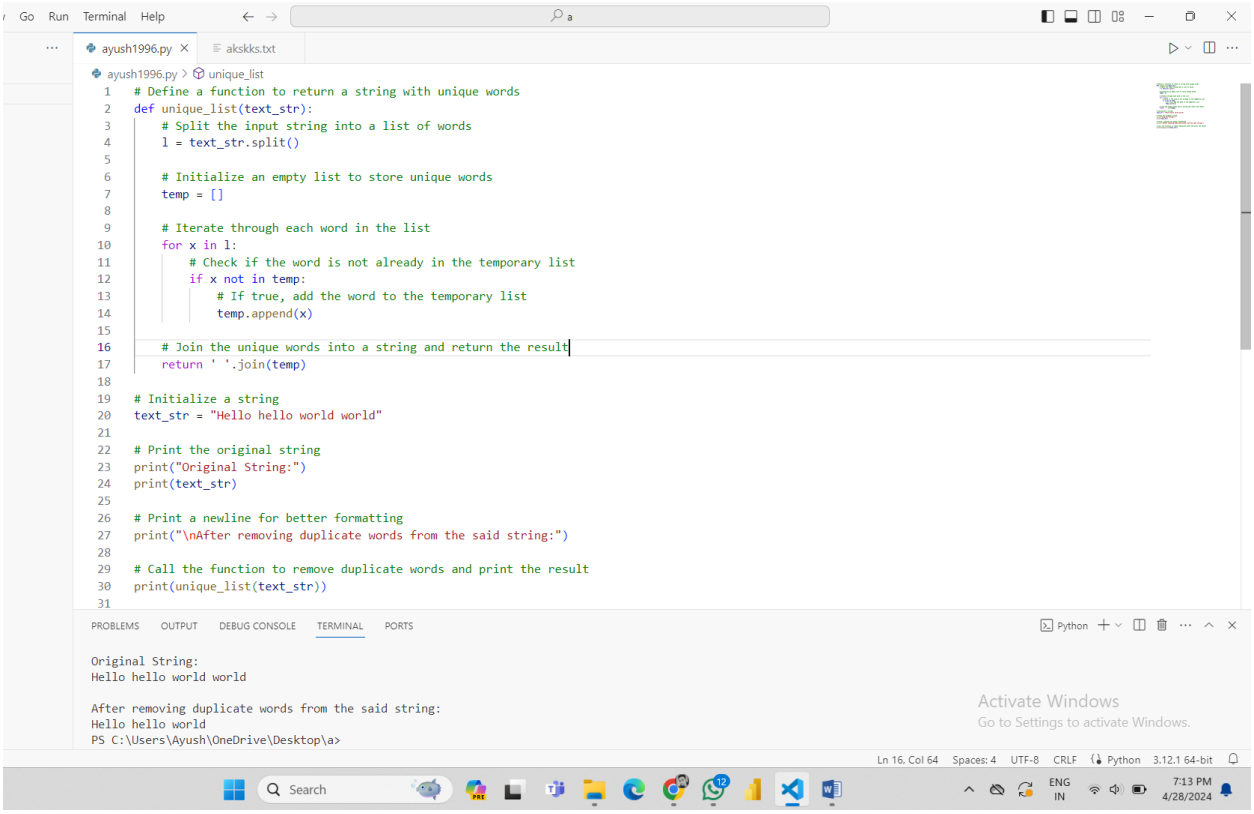
Question 3- Create a function in python to find all words that are at least 4 characters long in a string. The use of the re.compile() method is mandatory.

Ans-

Question 25- Write a Python program to remove continuous duplicate words from Sentence using Regular Expression.

Ans-
```
# Define a function to return a string with unique words

def unique_list(text_str):
    # Split the input string into a list of words
    l = text_str.split()

    # Initialize an empty list to store unique words
    temp = []

    # Iterate through each word in the list
    for x in l:
        # Check if the word is not already in the temporary list
        if x not in temp:
```

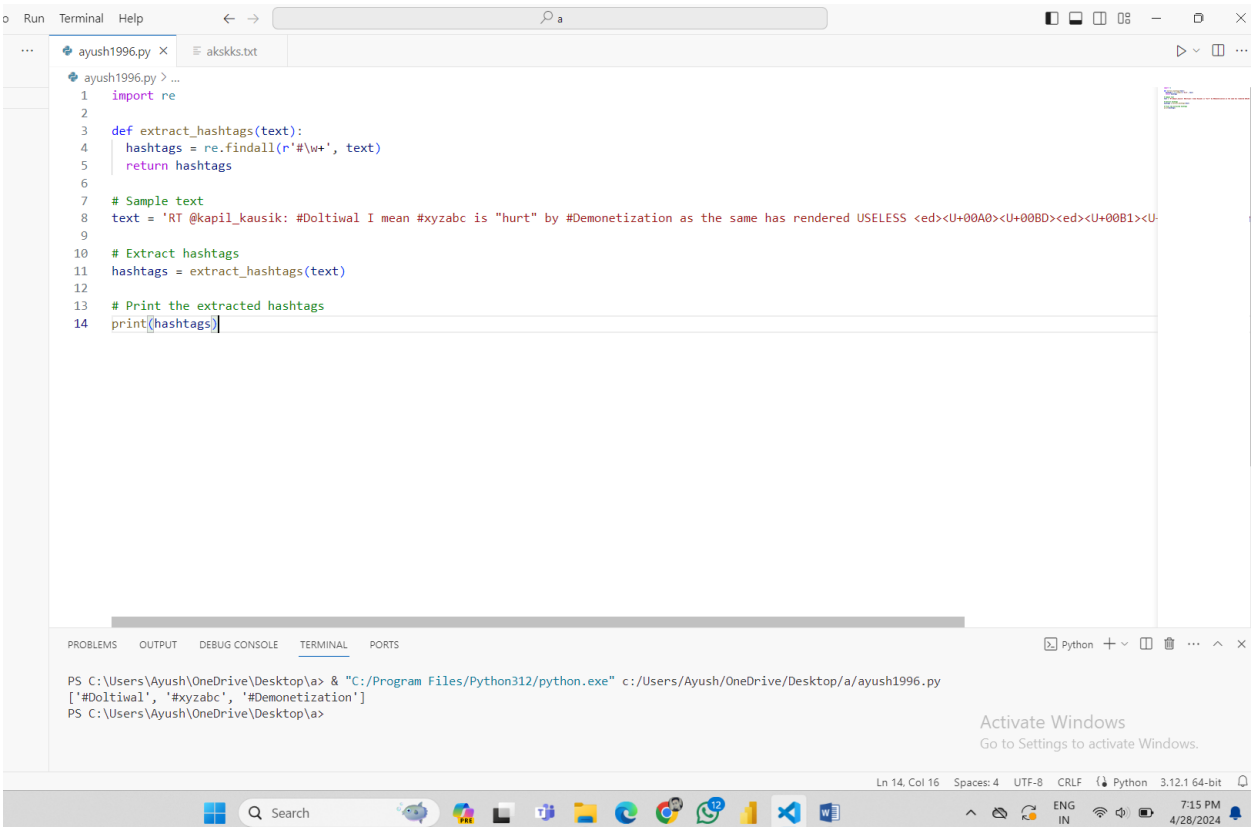
```
            # If true, add the word to the temporary list
            temp.append(x)

    # Join the unique words into a string and return the result
    return ' '.join(temp)

# Initialize a string
text_str = "Hello hello world world"

# Print the original string
print("Original String:")
print(text_str)

# Print a newline for better formatting
print("\nAfter removing duplicate words from the said string:")

# Call the function to remove duplicate words and print the result
print(unique_list(text_str))
```



Question 27-Write a python program using RegEx to extract the hashtags.

Ans- `import re`

```
def extract_hashtags(text):
  hashtags = re.findall(r'#\w+', text)
  return hashtags

# Sample text
text = 'RT @kapil_kausik: #Doltiwal I mean #xyzabc is "hurt" by #Demonetization
as the same has rendered USELESS <ed><U+00A0><U+00BD><ed><U+00B1><U+0089>
"acquired funds" No wo'

# Extract hashtags
hashtags = extract_hashtags(text)

# Print the extracted hashtags
print(hashtags)
```

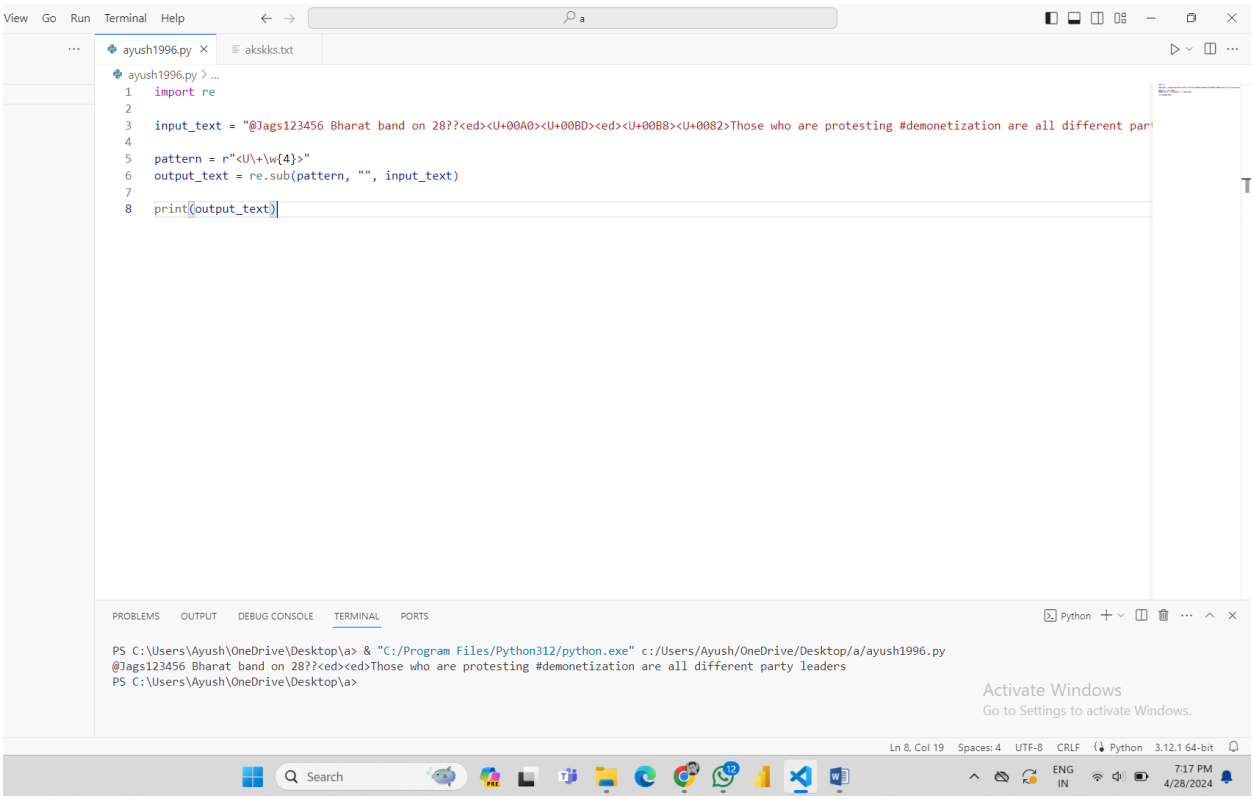


Question 28- Write a python program using RegEx to remove <U+..> like symbols

Check the below sample text, there are strange symbols something of the sort <U+..> all over the place. You need to come up with a general Regex expression that will cover all such symbols.

Ans-

```
import re

input_text = "@Jags123456 Bharat band on
28??<ed><U+00A0><U+00BD><ed><U+00B8><U+0082>Those who are protesting
#demonetization are all different party leaders"

pattern = r"<U\+\w{4}>"
output_text = re.sub(pattern, "", input_text)

print(output_text)
```



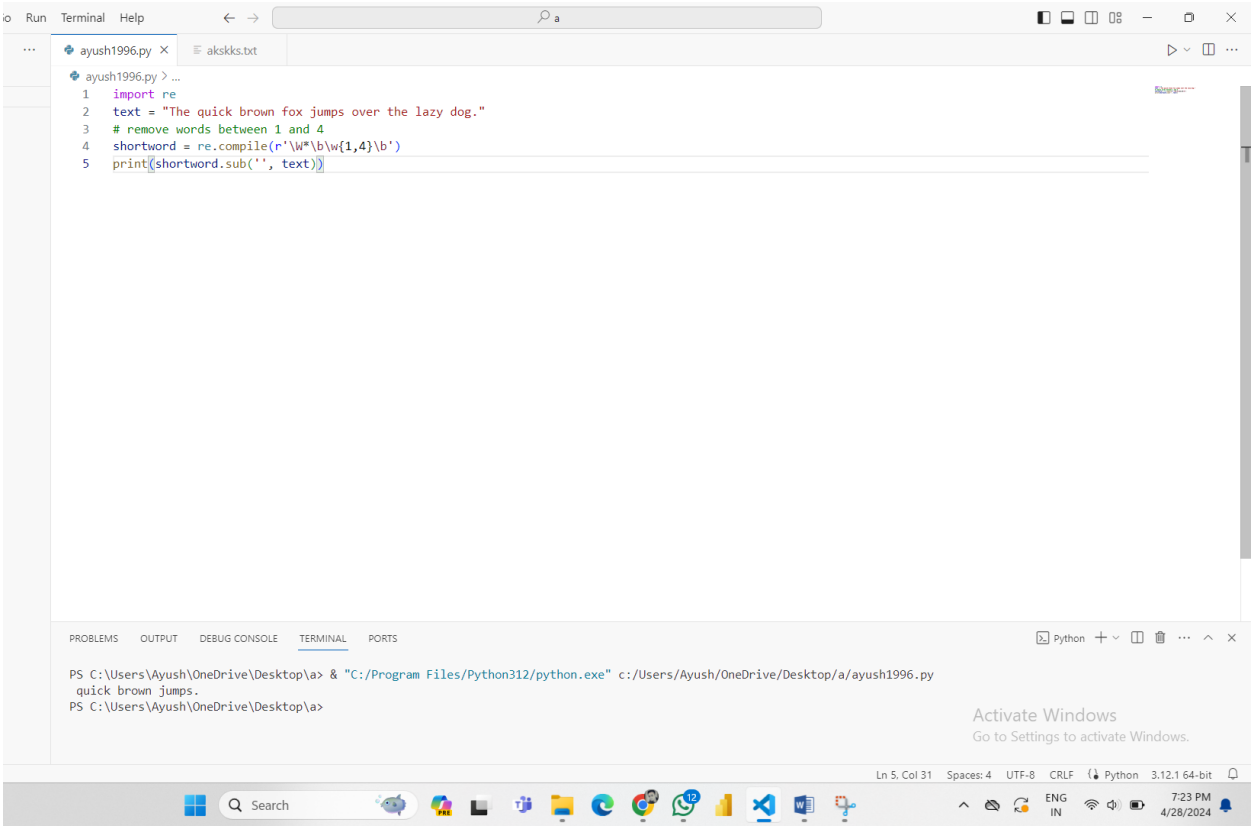
Question 30- Create a function in python to remove all words from a string of length between 2 and 4.

The use of the re.compile() method is mandatory.

Ans-

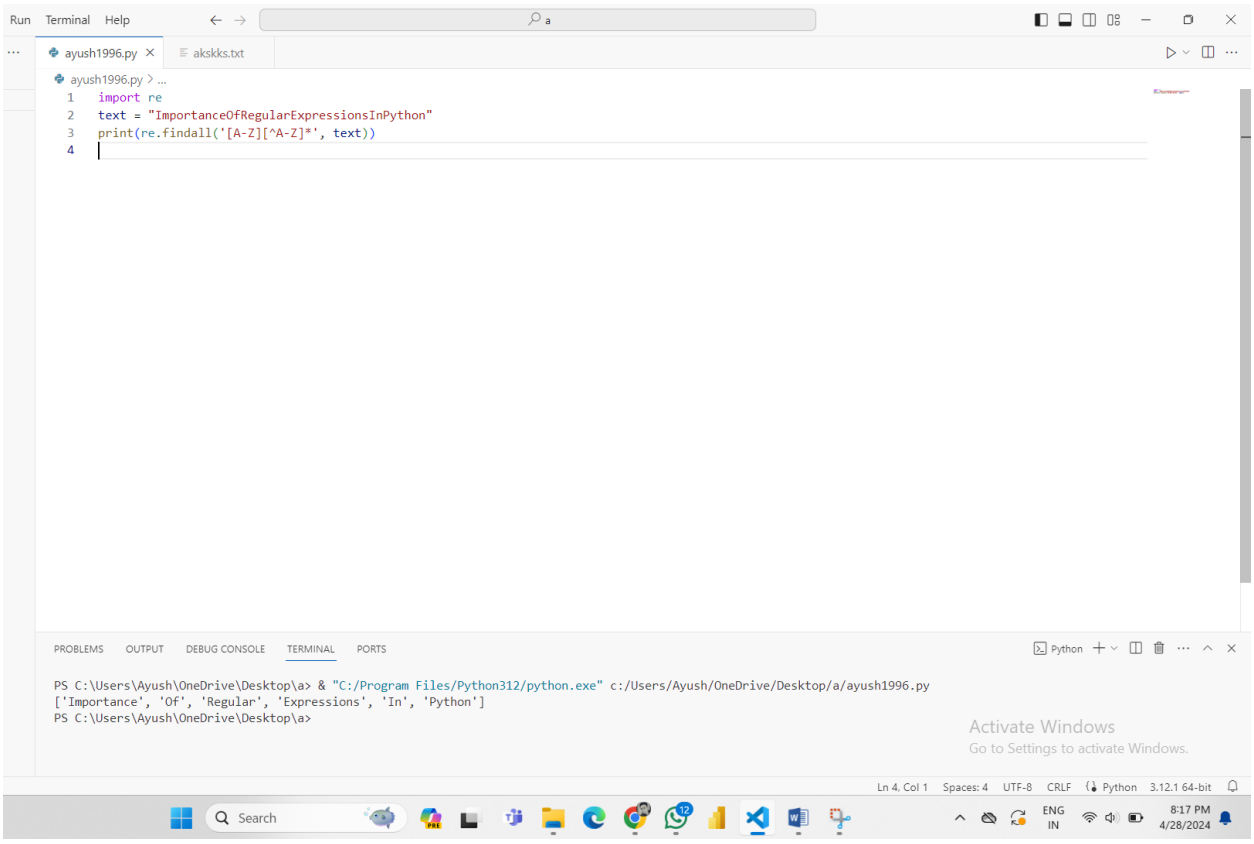
```
import re

text = "The quick brown fox jumps over the lazy dog."
# remove words between 1 and 4
```

```
shortword = re.compile(r'\W*\b\w{1,4}\b')
print(shortword.sub('', text))
```



Question 7- Write a regular expression in Python to split a string into uppercase letters.

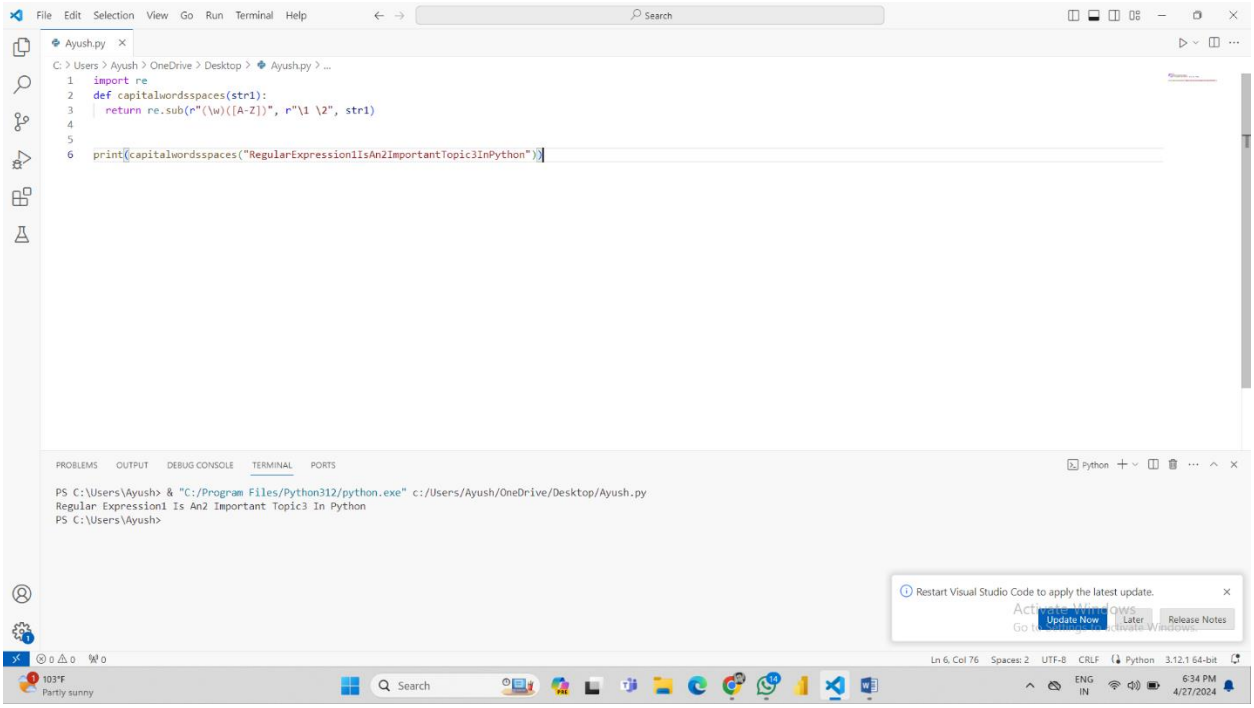
Ans-
```
import re

text = "ImportanceOfRegularExpressionsInPython"
print(re.findall('[A-Z][^A-Z]*', text))
```



Question 8- Create a function in python to insert spaces between words starting with capital letters or with numbers.

Ans-

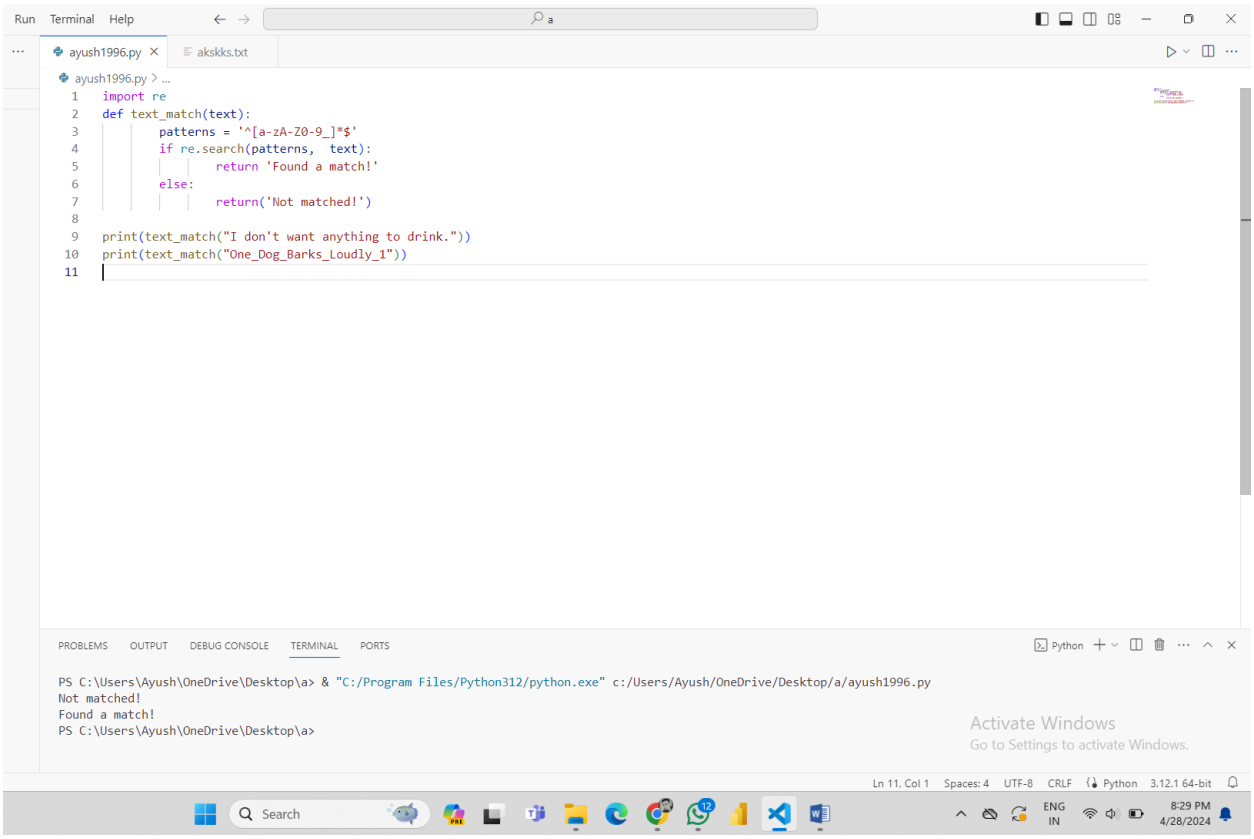
```
import re

def capitalwordsspaces(str1):
    return re.sub (r"(\w) ([A-Z])", r"\1 \2", str1)
print(capitalwordsspaces("RegularExpression1IsAn2ImportantTopic3InPython"))
```



Question 11- Write a Python program to match a string that contains only upper and lowercase letters, numbers, and underscores.

Ans-

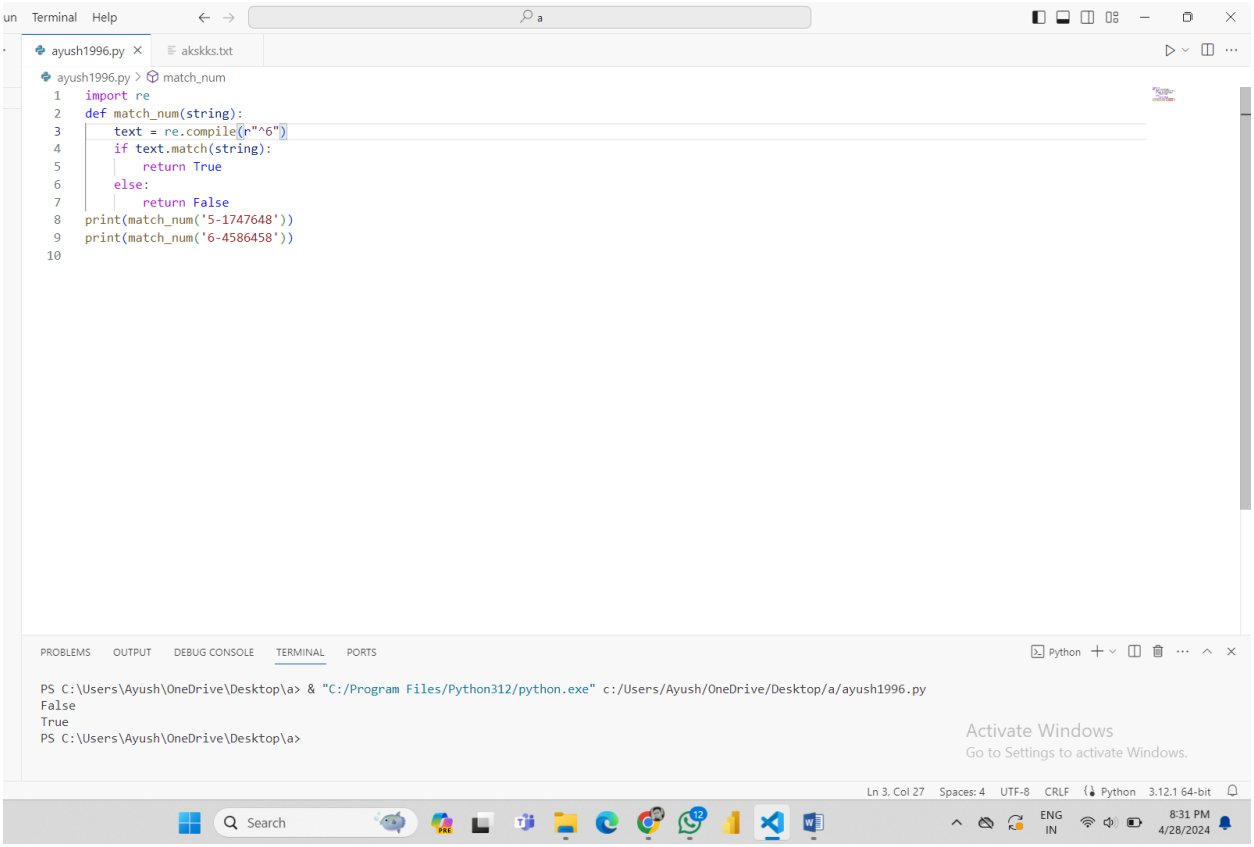
```
import re

def text_match(text):
        patterns = '^[a-zA-Z0-9_]*$'
        if re.search(patterns,  text):
                return 'Found a match!'
        else:
                return('Not matched!')

print(text_match("I don't want anything to drink."))
print(text_match("One_Dog_Barks_Loudly_1"))
```



Question 12- Write a Python program where a string will start with a specific number.

Ans-

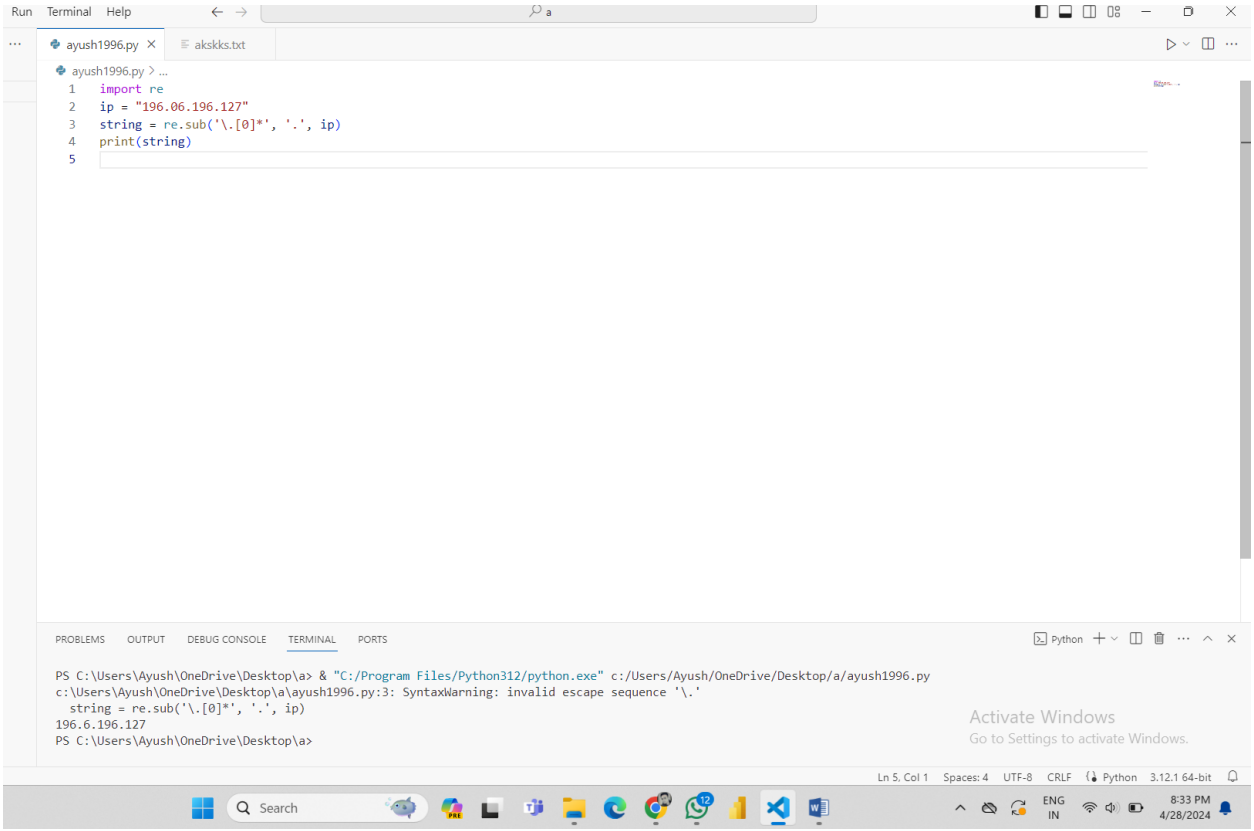
```
import re

def match_num(string):
    text = re.compile(r"^6")
    if text.match(string):
        return True
    else:
        return False
print(match_num('5-1747648'))
print(match_num('6-4586458'))
```



Question 13- Write a Python program to remove leading zeros from an IP address

Ans-

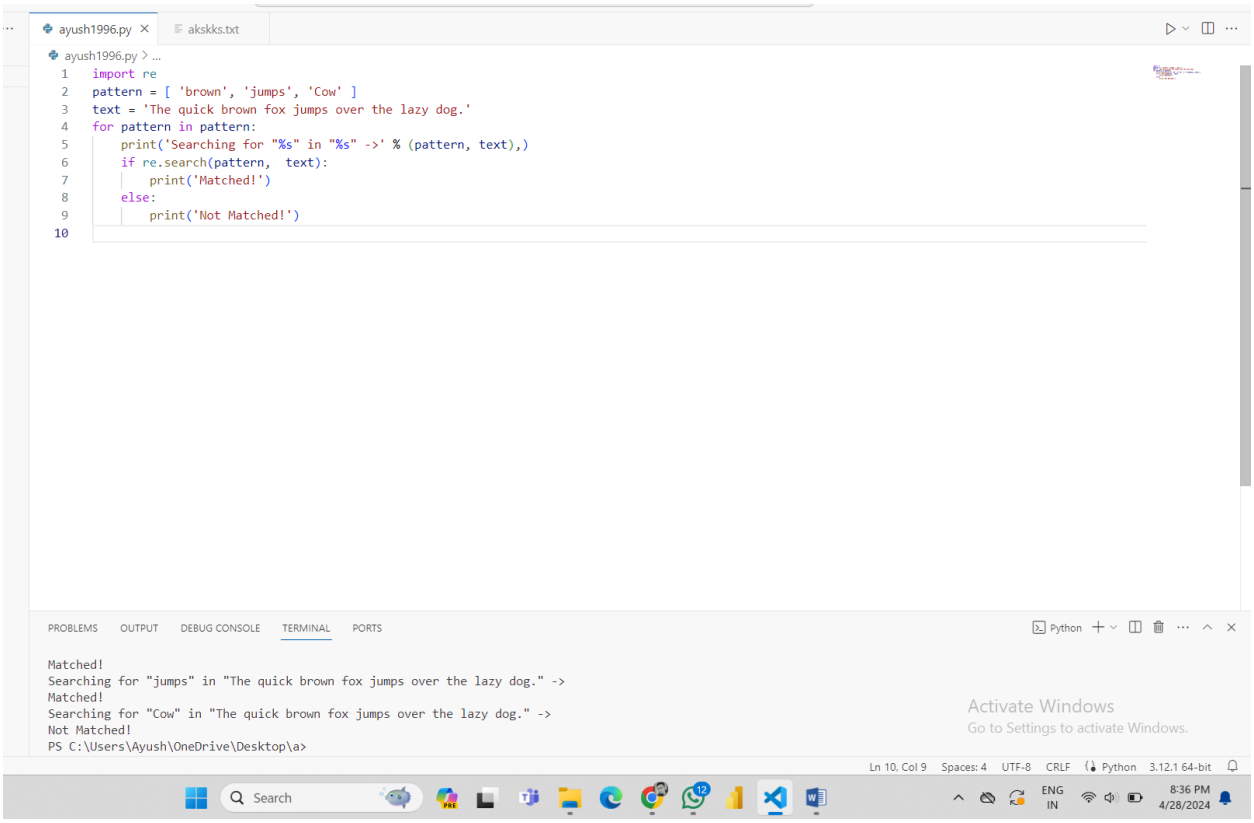
```
import re

ip = "196.06.196.127"
string = re.sub('\.[0]*', '.', ip)
print(string)
```



Question 15- Write a Python program to search some literals strings in a string.

Ans-

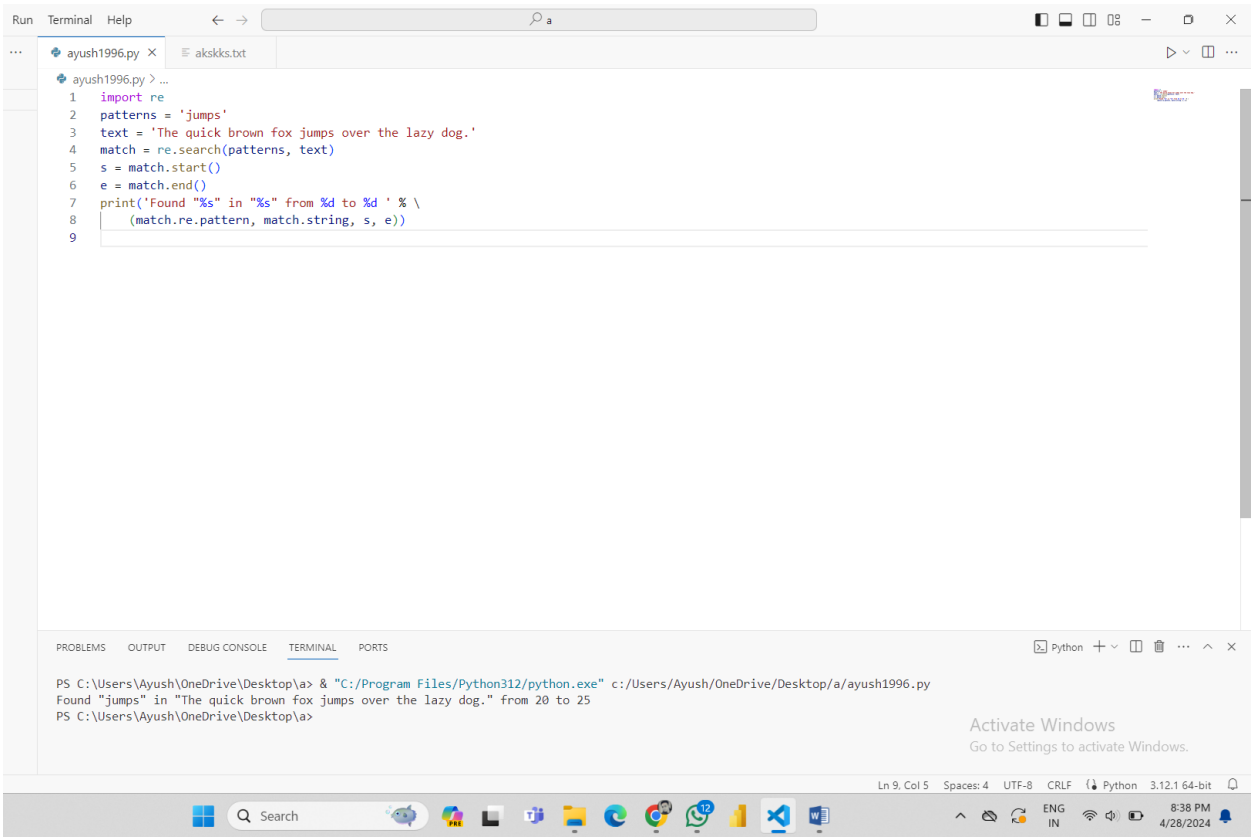
```
import re

pattern = [ 'brown', 'jumps', 'Cow' ]
text = 'The quick brown fox jumps over the lazy dog.'
for pattern in pattern:
    print('Searching for "%s" in "%s" ->' % (pattern, text),)
    if re.search(pattern,  text):
        print('Matched!')
    else:
        print('Not Matched!')
```



Question 16- Write a Python program to search a literals string in a string and also find the location within the original string where the pattern occurs

Ans-

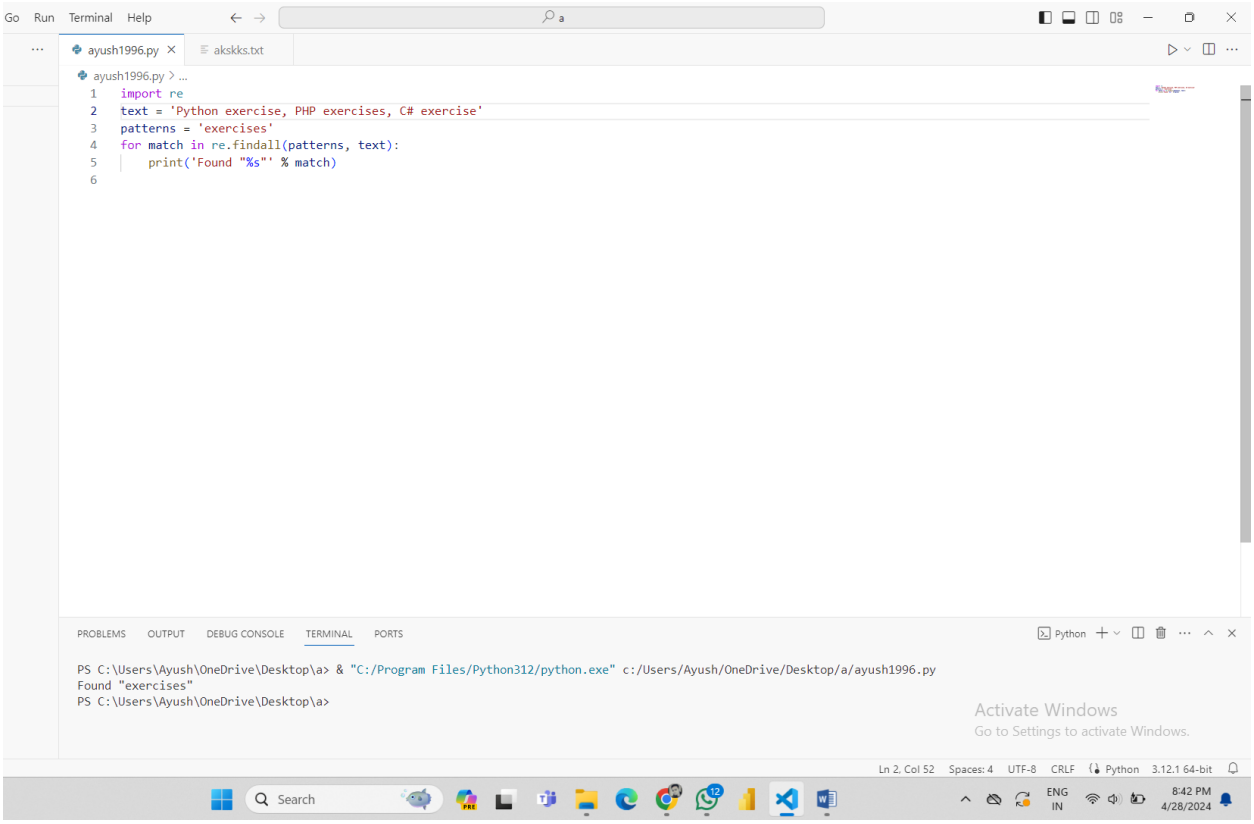
```
import re

patterns = 'jumps'
text = 'The quick brown fox jumps over the lazy dog.'
match = re.search(patterns, text)
s = match.start()
e = match.end()
print('Found "%s" in "%s" from %d to %d ' % \
    (match.re.pattern, match.string, s, e))
```



Question 17- Write a Python program to find the substrings within a string.

Ans-

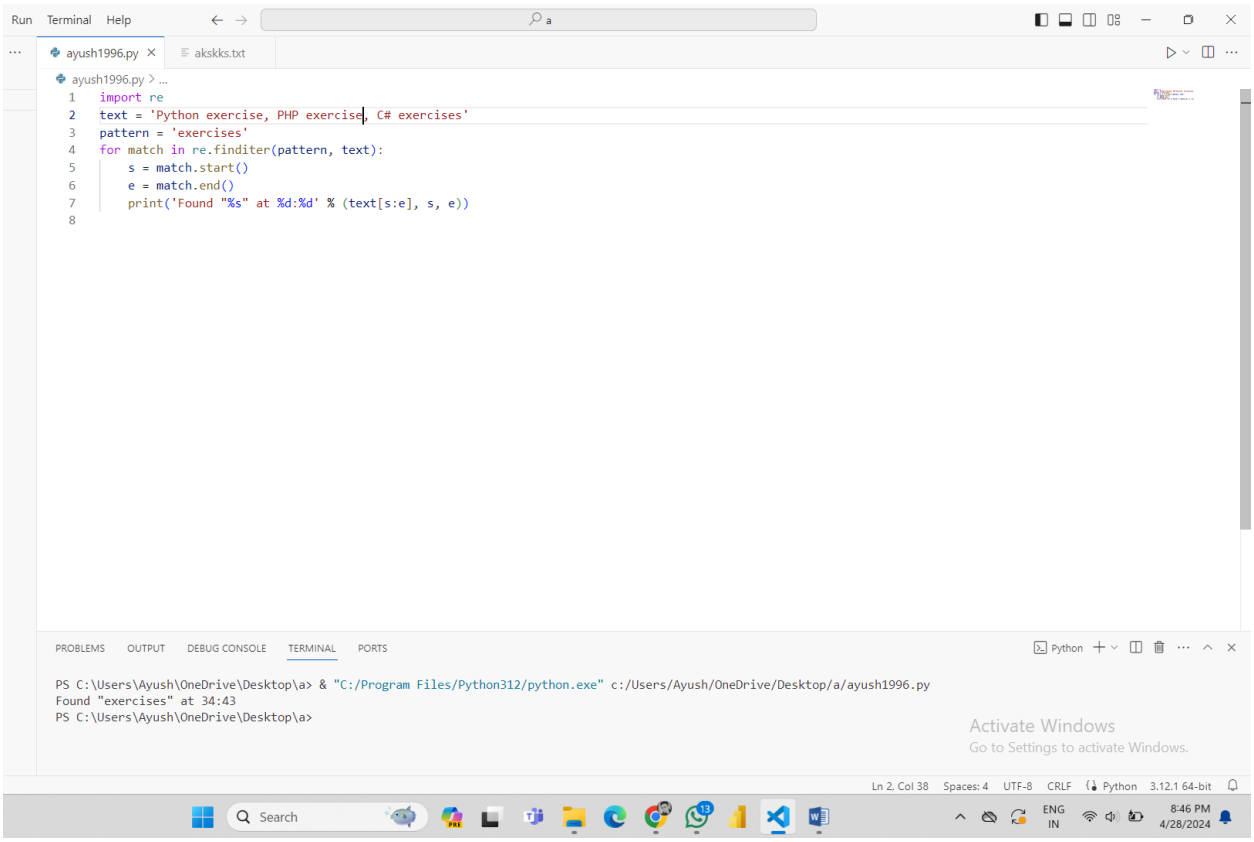
```
import re

text = 'Python exercise, PHP exercises, C# exercise'
patterns = 'exercises'
for match in re.findall(patterns, text):
    print('Found "%s"' % match)
```



Question 18- Write a Python program to find the occurrence and position of the substrings within a string.

Ans-

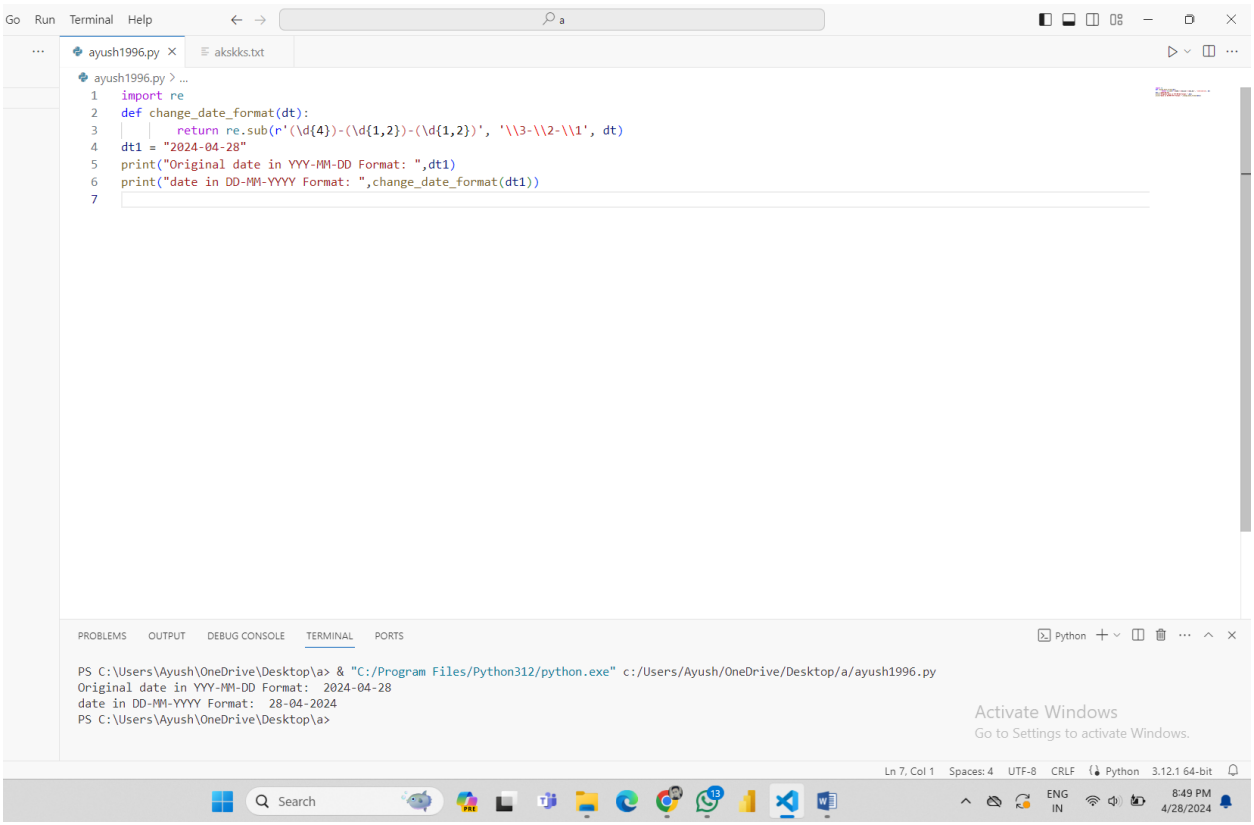
```
import re

text = 'Python exercise, PHP exercise, C# exercises'
pattern = 'exercises'
for match in re.finditer(pattern, text):
    s = match.start()
    e = match.end()
    print('Found "%s" at %d:%d' % (text[s:e], s, e))
```



Question 19- Write a Python program to convert a date of yyyy-mm-dd format to dd-mm-yyyy format.

Ans-

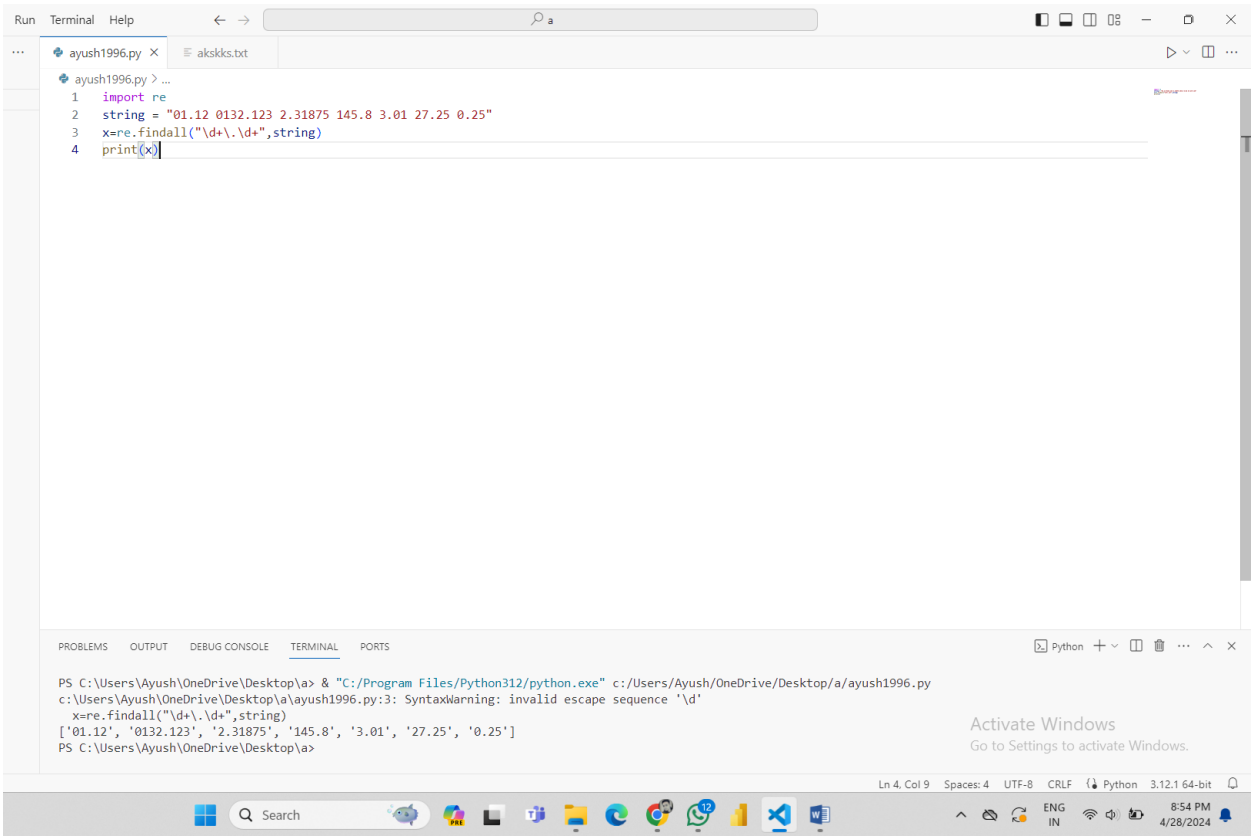
```
import re

def change_date_format(dt):
        return re.sub(r'(\d{4})-(\d{1,2})-(\d{1,2})', '\\3-\\2-\\1', dt)
dt1 = "2024-04-28"
print("Original date in YYY-MM-DD Format: ",dt1)
print("date in DD-MM-YYYY Format: ",change_date_format(dt1))
```



Question 20- Create a function in python to find all decimal numbers with a precision of 1 or 2 in a string. The use of the re.compile() method is mandatory.

Ans-

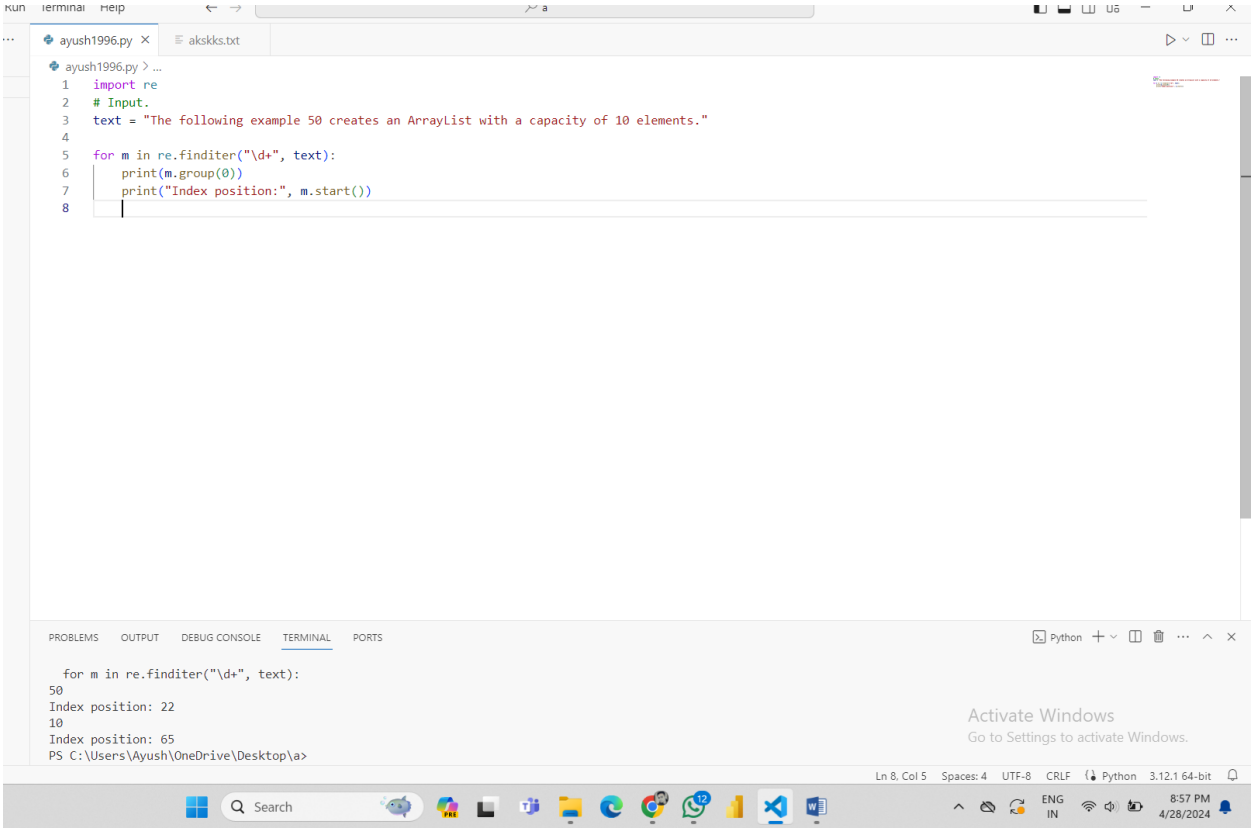
```
import re

string = "01.12 0132.123 2.31875 145.8 3.01 27.25 0.25"
x=re.findall("\d+\.\d+",string)
print(x)
```



Question 21- Write a Python program to separate and print the numbers and their position of a given string.

Ans-

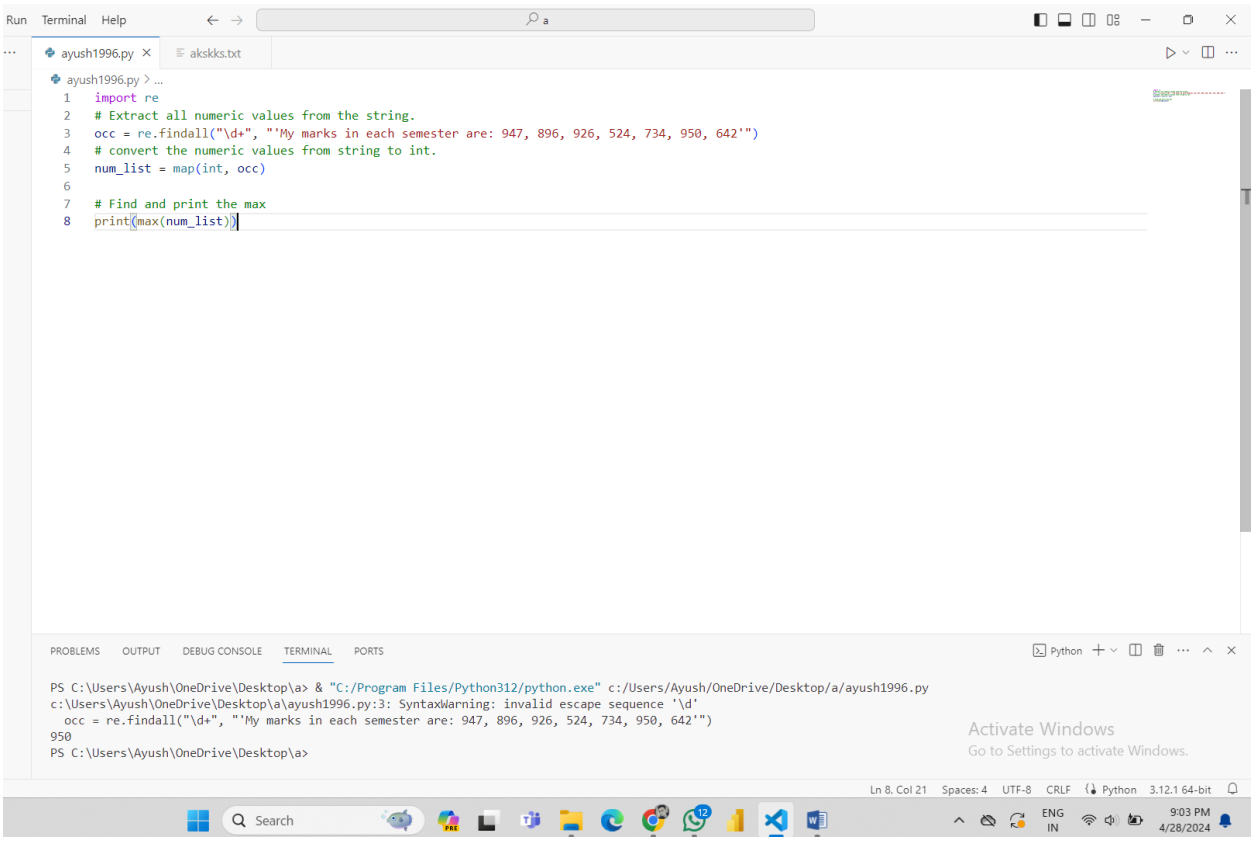
```
import re

# Input.
text = "The following example 50 creates an ArrayList with a capacity of 10 elements."

for m in re.finditer("\d+", text):
    print(m.group(0))
    print("Index position:", m.start())
```



Question 22- Write a regular expression in python program to extract maximum/largest numeric value from a string.

Ans-

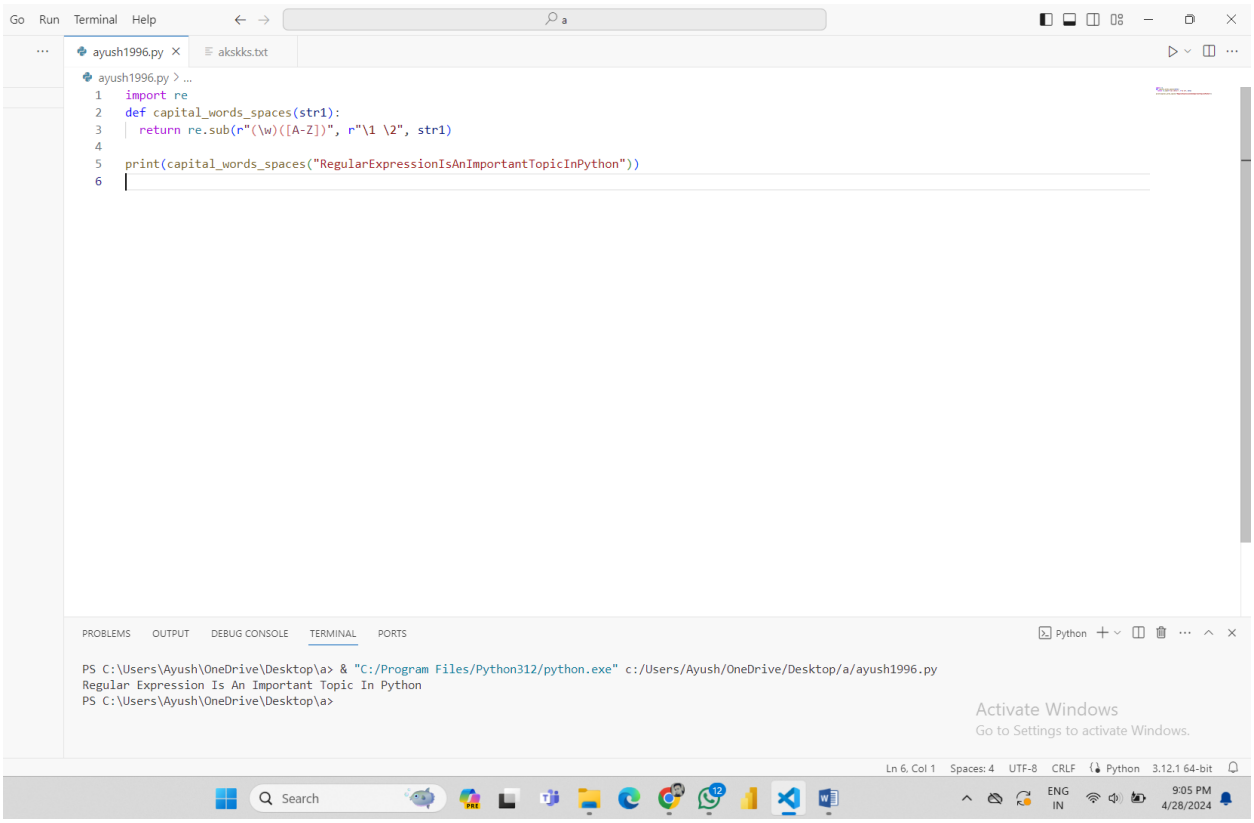
```
import re

# Extract all numeric values from the string.
occ = re.findall("\d+", "'My marks in each semester are: 947, 896, 926, 524, 734, 950, 642'")
# convert the numeric values from string to int.
num_list = map(int, occ)

# Find and print the max
print(max(num_list))
```



Question 23- Create a function in python to insert spaces between words starting with capital letters.

Ans-

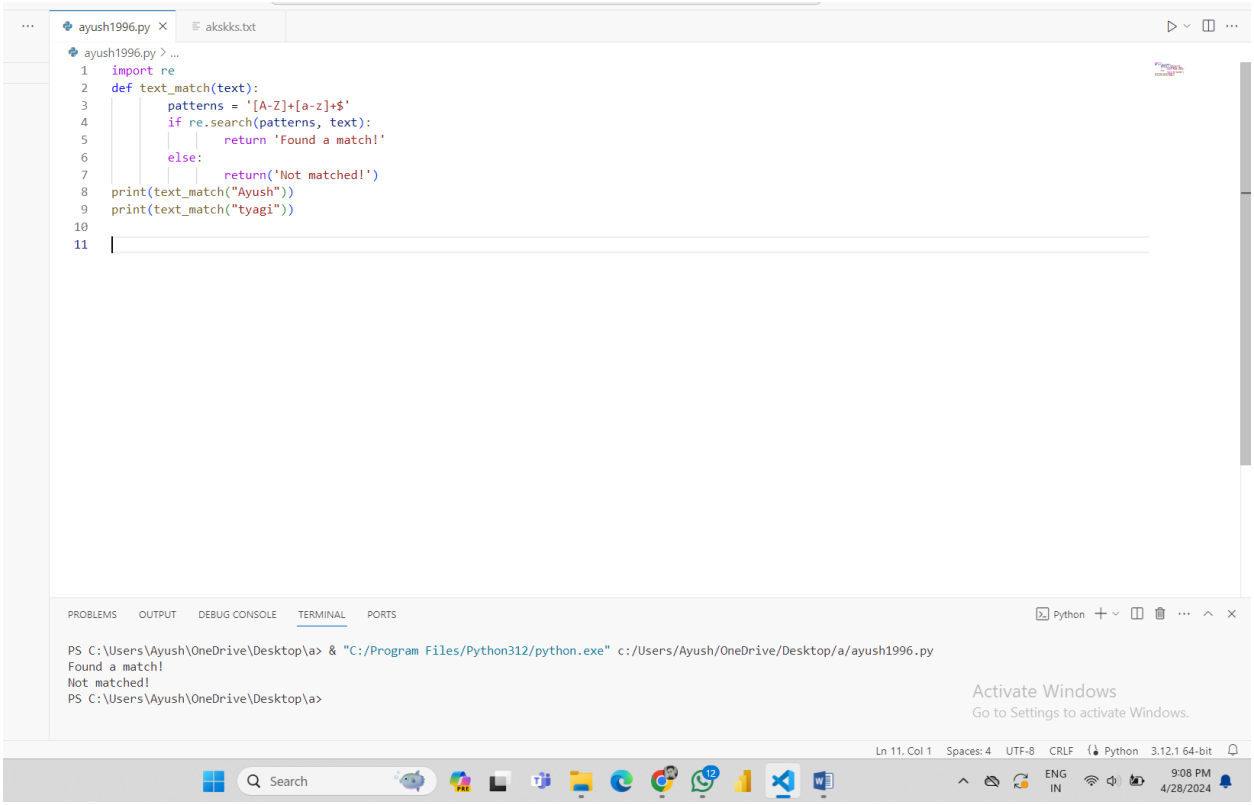
```
import re

def capital_words_spaces(str1):
  return re.sub(r"(\w)([A-Z])", r"\1 \2", str1)

print(capital_words_spaces("RegularExpressionIsAnImportantTopicInPython"))
```



Question 24- Python regex to find sequences of one upper case letter followed by lower case letters

Ans-

```
import re

def text_match(text):
        patterns = '[A-Z]+[a-z]+$'
        if re.search(patterns, text):
                return 'Found a match!'
        else:
                return('Not matched!')
print(text_match("Ayush"))
print(text_match("tyagi"))
```


ayush1996.py
akskks.txt
ayush1996.py > ...
1 import re
2 def text_match(text):
3 patterns = '[A-Z]+[a-z]+$'
4 if re.search(patterns, text):
5 return 'Found a match!'
6 else:
7 return('Not matched!')
8 print(text_match("Ayush"))
9 print(text_match("tyagi"))
10
11
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Python
PS C:\Users\Ayush\OneDrive\Desktop\a> & "C:/Program Files/Python312/python.exe" c:/Users/Ayush/OneDrive/Desktop/a/ayush1996.py
Found a match!
Not matched!
PS C:\Users\Ayush\OneDrive\Desktop\a>
Activate Windows
Go to Settings to activate Windows.
Ln 11, Col 1 Spaces: 4 UTF-8 CRLF Python 3.12.1 64-bit
Search
ENG
IN
9:08 PM
4/28/2024