*4 49. Mr i te a progr or to pr i nt Phone nus ber f-roin g i ven str i ng us i rig re gu L or ex pressi ons .*

import re

s = “ # This 7829203516 is Phone Number“ re.search('\d{10}\s', s)

<re.Match object; span=(8, 19), match='7829203516 ’>

*It S8. Mr i te a P ythou prog rair to che ch that a s tr i rig conto i us on I y a cer to i n set o f- choract:e rs (i n th i s case o - z, A - Z and 8 -9) .*

s = 'hellolsjfldj' re.search("[a-zA-Z0-9j+$’, s)

<re.Match object; span=(0, 12), match='hellolsjf1dj'>



s = ' abbb '

re . sea rch ( ' ^ab\*$ ' , s )

‹re.Match object; span=(0, 4), match='abbb'›



s = ' abbb '

re . sea re h ( ’ ^ab+$ ' , s)

<re.Match object; span=(0, 4), match='abbb’›

*# S3. Hri te a P ythou prog ran th ot notche s a s tr i rig th at hos on a f-o I I owed by zero or one ’ b ' .*

s = ' abbb '

re . seam c h ( ' ^a b °$ ' , s )

*4 54. Hr i te a Rythou prog ran th ot rio I:che s a s tri rig th at hos on a fo I I owed by th ree ' b’ .*

s = ' abbb '

re . sea rch ( ' ^ab(3}$ ' , s)

<re.Match object; span=(0, 4), match='abbb’>

*it SS . Hri t:e a P ythou prog ran* that *ma tche s a s tri rig th at has on a fo I I owed by two to three ’ b ' .*

s = ' a bbb '

re.search("ab(2,3}$', s)

‹re.Match object; span=(0, 4), match='abbb'›

*4 S6 . Mr i te a P ythou prog ran to fi nd seque nces o f- Lone rcose Le tte re joi ned by an unders core .*

s = ' abbb\_op kpo\_l j l kj\_lk j 1 kj '

re . Linda I1 ( ' [ a - z ] +\_ [ a - z ] + ' , s )

['abbb\_opkpo', 'ljlkj\_lkjlkj'j

*# 57. Hr i te a P ythou prograw to fi nd the sequence s of one upper cos e I et ter fo I I ored by I over cas e I et te rs .*

s = 'Abbb\_opkpo\_ljlkj\_lkjlkj' re.findall(' [A-Z][a-zj+’, s)

[ ' Abbb ’

# *S8. Ari te a P ythou prograw th ot notche s a s try rig th at hos on ’a ' f-o I I owed by anyth i ng endsrig i n ' b ' .*

s = ' agh b '

re . seam ch ( ' ^a . \* b$ ' , s)

‹re.Match object; span=(0, 4), match='aghb'›



lnport re

def text\_natch (text) :

patterns = ’ ^ \w+ '

If re . sea re h(patterns , text) :

return ' Found a mat c h ! '

else:

return('Not matched! ')

print(text\_match(”The quick brown fox jumps over the lazy dog.“)) print(text\_match(” The quick brown fox jumps over the lazy dog.”))

Found a match ! Not mate hed !

*It 68. Mr i te a P ythou prog r air* that *notche s a word ot th e end o f- a s tr i rig, wi th opt i ono I punctua t i on .*

in port re

def t ext\_nat ch (text ) :



patterns = ' \w+\S\*$ '

1f re. search(patterns, text) : return ' Found a match ! '

**e1se:**

return('Not matched!')

print(text\_match(“The quick brown fox jumps over the lazy dog;“)) print(text\_match(“The quick brown fox jumps over the lazy dog. ")) print(text\_match(“The quick brown fox jumps over the lazy dog "))





*# 61. mini ie a Python pnognan that notches a fiiond containing ’z ’ .*

import re

def- te xt\_natch(text) :

patterns = ' \w\*z . \w” '

1f re. search(patterns, text) :

return 'Found a match! '

else:

return('Not matched!')

print(text\_match(“The quick brown fox jumps over the lazy dog.“))

print(text\_natch( "Python E xerc1ses ." ) )







*# 62.IIni ie a Python pnognan to match a sthing that contains onLy uppen and # Louencase Lettens, nu*/r *bers, and undenscones.*

impont re

def text\_match(text):

pattenns = '[a-zA-Z0-9\_]\*$'

if ne.search(patterns, text):

return 'Found a match! ’

else:

return('Not matched!')

print(text\_match(“The quick brown fox jumps oven the lazy dog.“)) print(text\_match(“Python\_Exercises\_l“))







*# 63. Nni ie a Python pnognam that stants each s Ining with a specifii c numben.*

impont re

def match\_num(stning):

if re.search(”’5“, string): return True

**else :**

return **False**

point ( mat c h\_num ( ' S- 2345861 ' )) point ( mat c h\_num ( ' 6- 2345861 ' ))







*# 64. Sri te a Python program to renove I eod!rig zeros f-ron an IP oddres s .*

impont re

Ip = "216. 08. 094.196"

string = re.sub('\.[0]\*', ip)

print(string)





*# 65. Am ie a Python pnognan to chech for a nu*m*ber at the end of- o str‘ing.*

1mport re

def- end\_nun(str1ng) :

1f re . search( " .\*[0-9]$" , st r1ng) :

return Tnue

else:

return False

print(end\_num('abcdef')) print(end\_num('abcdef6'))







*# 66. !^tri te o Python progra*m *to search for L i tera L stry ngs*w *k th i n o stry rig.*

impont re

patterns = [ 'fox', 'dog', 'honse' ]

text = 'The quick bnown fox jumps over the lazy dog.' for pattern in patterns:





*# 67. Hri te a Python program to -fi nd the subs trings or thin a string .*

import re

text = ' Python exerc ises, PHP exerc ises, C# exerclses ’ pattern = ’ exercl ses '

re.findall(pattern, text)

print('Searching for', pattern, 'in', text) if re.search(pattern, text):

print('Matched!')

**else :**

print('Not Matched!')



*# 68. Amie a Python pnognan to extract year month and date mom an URL .*

import re

def extract\_date(url):

return re.findall(r'/(\d{4})/(\d{1,2})/(\d{1,2})/', url)

urll= [“https://www.washingtonpost.com/news/football-insider/wp/2016/09/02/](http://www.washingtonpost.com/news/football-insider/wp/2016/09/02/) odell-beckhams-fame-rests-on-one-stupid-little-ball-josh-norman-tells-author/“ print(extract\_date(urll))





*4 69. Sri te o Python progra*m *to* convert *o dote o f- y y y y -erm - dd foreiot to dd-riri -y y y y f-oroat.*

**inport** re

def change\_date\_fonmat(dt):

return ne.sub(r'(\d{4})-(\d{1,2})-(\d{1,2})', '\\3-\\2-\\1', dt) dt1 = “2026-01-02“

print(“Original date in YYY-MM-DD Format: ",dt1)

print(“New date in DD-MM-YYYY Format: ",change\_date\_format(dt1))





*# 78. !^tri te a Python program* to *separate ond pr!nt the numbers i* n *o g! ven stry ng.*

**inport re**

*# Sanp I e string.*

text = “Ten 10, Twenty 20, Thinty 30“ result = re.split(“\D+“, text)

*# Pri nt resu L ts .*

for element in nesult: print(element)









*It 71 . Ari te a Python program* to *find a L L words starti rig oi th ’a ’ or ’ e’ in a gi ven string.*

**inport re**

*# Input.*

text = “The following example creates an AnnayList with a capacity of 50 elements.

Foun elements ane then added to the ArrayList and the ArnayList is tnimmed accondingly.“

*#f-And a I I the words start i eg* w*k th ’a ’ or ’ e ’*

list = re.findall(“[ae]\w+“, text)

*# Print nesuLt.*

print(11st)





*# 72. Sri te a Python program to abbreviate 'Road ' as 'Rd. ' i n a gi ven string.*

inport re

st neet = ' 21 Rarnk nis hna Road '

pnint ( we . sub( ' Road$ ' , ' Rd . ' , st neet ) )





*# 73. Hni ie a Python pnognaai to nep Lace a L L occunnences of a space, coaaa on dot with a co Lon.*

import re

text = 'Python Exercises, PHP exercises. ' print(re.sub(“[ ,.]“, “:“, text))





*# 74. tin te a Python program to rep Lace max iriuir 2 occurrences o-f- space coriria, or dot wi th a co I on .*

inport re



text = 'Python Exercises, PHP exercises. ' print(re.sub(“[ ,.]“, “:“, text, 2))



*It 75 . Sri te o Python program to con vert a come L - case stry rig to a snoke - case stry rig .*

def camel\_to\_snake(text): import re

strl = re.sub('(.)([A-Z][a-z]+)', '\\1\_\\2', text)

return re.sub('([a-z0-9])([A-Z])', '\\1\_\\2', str1).lower()

print(camel\_to\_snake('PythonExercises'))





*# 76. Sri te a Python progra*m *to remove* m*u I t i p I e spaces -from a string and store the output in I i st.*

import re

textl = '“Python“, “PHP“, “Java“'

print(re.findall('“(.\*?)“', textl))





*It 77. Hri te o Python progra*m *to remove em L t i p I e s paces f-roir a stry ng .*

impont re

textl = 'Python Exercises' print(“Original string:“,text1)

print(“Without extra spaces:“,re.sub(' +',' ',textl))





*# 78. Hri te a Python program to renove a I I th! tee paces from a str i ng .*

import re

textl = ' Python Exercises ' print(“Original string:“,text1)

print(“Without extra spaces:“,re.sub(r'\s+', '',text1))





*# 79. mini te a Python pnognaifl to sp L i I a s wing into uppercase Letter•s .*

import re

text = “PythonTutorialAndExercises“ print(re.findall('[A-Z][’A-Z]\*', text))





*# 88. Hri te o Python program to remove the porenthes is area i n a string.*

import we

items = ["example (.com)“, "w3school“, “github (.com)“, “stackoverflow (.com)“] for item in items:

pnint(re.sub(“ ?\([’)]+\)“, ““, item))





*4 81. Sri te a Python program to i nsert space*w*s bet een words start i rig oi th capita L Letters .*

import re

def capital\_words\_spaces(str1):

return re.sub(“(\w)([A-Z])“, “\\1 \\2“, strl)

print(capital\_words\_spaces(“Python“)) print(capital\_wonds\_spaces(“PythonExercises“)) print(capital\_wonds\_spaces(“PythonExencisesPracticeSolution“))





*4 82. Hr•i ie a Python pnognam I:hat neads a gi ven express hon and eua Luates it.*

1mport re

print(“Input number of data sets:“) class c(int):

def paddy(self,n):

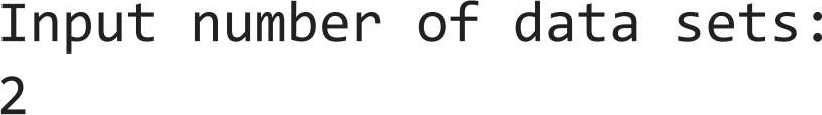
return c(int(self)+int(n)) def sub (self,n):

return c(int(self)-int(n)) def mul (self,n):

return c(int(self)\*int(n)) def truediv (self,n):

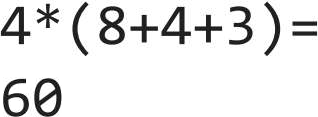
return c(int(int(self)/int(n))) for \_ in range(int(input())):

print(”Input an expression:“) print(eva1(re.sub('(\d+)','c(\\1)',input()[:-1])))











*tt 83. Hri te a Python program to remove Lowercas e subs try ngs -from a gi ven str i eg.*

import re

strl = 'KDeoALOklOOHserfLoAJSIskdsf' print(“Original string:“) print(str1)

print(“After removing lowercase letters, above string becomes:“) remove\_lower = lambda text: re.sub('[a-z] ', text)

result = remove\_lower(str1)

print(result)





*# 84. ”Am ie a Python pnognan that chechs fiihethen a word sWants and ends with a vote L in a gi ven s Ining. # Retur•n tnue ifi a fiiond matches the condi I ion; otherwise, netunn fa L se.*

*# Sanp Le Data:*

*# (””Red Onange th i ie " ") -› True # (””Red Hhi te BL ocfii “ “) -> FaL se*

*# (””abcd dfi'Use eosfiisu“ ”) -› True "*

impont re

def test(text):

return bool(re.findal1('[/’[aeiou]$|’([aeiou]).\*\1$/', text))

text =“Red Orange White“ print(“0riginal string:“, text)

print(“Check beginning and end of a word in the said string with a vowel:") print(test(text))

text =“Red White Black“ print(“\n0riginal stning:“, text)

print(“Check beginning and end of a wond in the said stning with a vowel:") print(test(text))

text =“abcd dkise eosksu“ print(“\n0riginal string:“, text)

print(“Check beginning and end of a word in the said string with a vowel:") print(test(text))







*# 85. ”Hri te o Python progra*m *thot tahes o str i ng or th some words . -or trio coiisecut i ve words in the said stry ng, # check whether the fi ret word ends wi th o* vo et *and the next word begins or th a vote L.*

*#1 f- the program rieets the condi t ion, return true, otherwi se f-aLse . On I y one space i s aL Loved betureen the words . # Soap Le oata:*

*4 ( ” ”These exerc i s es can be used f-or proct i ce . ” “) - › True*

*4 ( ” ”F-o I fowl eg exerc! s es shou Ld be re* m*oved f-or prac t i ce. ” “) - › Fa I se tt ( ” ”I use these stor! es i n my c tassroon. ” ”) - › True ”*

import re

def test(text):

return bool(re.findal1('[AEIOUaeiou] [AEIOUaeiou]', text))

text =“These exercises can be used for practice.“ print(“Original string:“, text)

print(“Two following words begin and end with a vowel in the said string:“) print(test(text))

text =“Following exercises should be removed for practice.“ print(“\nOrigina1 string:“, text)

print(“Two following words begin and end with a vowel in the said string:“) print(test(text))

text =“I use these stories in my classroom.“ print(“\n0riginal string:“, text)

print(”Two following words begin and end with a vowel in the said string:“) print(test(text))

Original string: These exercises can be used for practice.

Two following words begin and end with a vowel in the said string: True

Original string: Following exercises should be removed for practice. Two following words begin and end with a vowel in the said string: False

Original string: I use these stories in my classroom.

Two following words begin and end with a vowel in the said string: True

*4 86 . Creote a f-unct i on co I I ed Pr i nt\_rie s s age, thot accepts the rites s ages tr i rig*

*4 as as orguoent and pr i nts i t . Co L L th i s f-unct i on i n two di f fe ren t th re od s .*

*4 In* the *fi rs t th reod, po s s th e res s age ”P ythou 1 ” and i n the second t hre od,*

*4 pas s the res s age “P yhon 2 ” .*

import threading import time

def Print\_message(msg, stime): print ('Thread started') for i in range(5):

print (msg, - ', (i+1))

time . skeep ( stime)

t1 = t hreading . Thread(target=Pnint\_mes sage , args =( ' Pyt hon 1 ' , 1) ) t2 = t hreading . Thread(target=Pn1nt\_mes s age , args =( ' Pyt hon 2 ' , 1) ) pnlnt (t ime . ct ime ( ) )

t1. sta rt ( ) t2. sta rt ( ) t1. j oin ( )

t2. j oin ( )

pnlnt (t ime. ct ime( ) )

Tue May 16 12:57:54 2023

Thread started

Python 1 1

Thread started Python 2 - 1

Python 1Python 2 2

2

Python 1Python 2 3

3

Python 1Python 2 4

4

Python 1 5

Python 2 5

Tue May 16 12:57:59 2023