5.75/10

Group_06_Exercise_Homework

January 11, 2021

1 Exercice 1:

1/3 pt

write a function that takes a filename and then all the urls in the file "urls.txt" line by line. Remove the `http://www.` parts of each url and write the urls without `http://www.`part in the file "domains.txt". The function returns nothing.

Examples:

`http://www.rakuten.co.jp` should be `rakuten.co.jp`

`http://www.craigslist.org` should be `craigslist.org`

`http://www.amazon.de` should be `amazon.de`

[47]:
```
myfile = open('urls.txt')
myfile.seek(0)
new_file = myfile.readlines()
str_new_file= ''.join(new_file)
#print(str_new_file)
#str_new_file.split('http://www.')
str_new_file.replace('http://www.','')
```

[47]:
```
'youtube.com\nfacebook.com\nbaidu.com\nyahoo.com\namazon.com\nwikipedia.org\nqq.
com\ngoogle.co.in\ntwitter.com\nlive.com\ntaobao.com\nbing.com\ninstagram.com\nw
eibo.com\nsina.com.cn\nlinkedin.com\nyahoo.co.jp\nmsn.com\nvk.com\ngoogle.de\nya
ndex.ru\nhao123.com\ngoogle.co.uk\nreddit.com\nebay.com\ngoogle.fr\nt.co\ntmall.
com\ngoogle.com.br\n360.cn\nsohu.com\namazon.co.jp\npinterest.com\nnetflix.com\n
google.it\ngoogle.ru\nmicrosoft.com\ngoogle.es\nwordpress.com\ngmw.cn\ntumblr.co
m\npaypal.com\nblogspot.com\nimgur.com\nstackoverflow.com\naliexpress.com\nnaver
.com\nok.ru\napple.com\ngithub.com\nchinadaily.com.cn\nimdb.com\ngoogle.co.kr\nf
c2.com\njd.com\nblogger.com\n163.com\ngoogle.ca\nwhatsapp.com\namazon.in\noffice
.com\ntianya.cn\ngoogle.co.id\nyouku.com\nrakuten.co.jp\ncraigslist.org\namazon.
de\nnicovideo.jp\ngoogle.pl\nsoso.com\nbilibili.com\ndropbox.com\nxinhuanet.com\
noutbrain.com\npixnet.net\nalibaba.com\nalipay.com\nmicrosoftonline.com\nbooking
.com\ngoogleusercontent.com\ngoogle.com.au\npopads.net\ncntv.cn\nzhihu.com\namaz
on.co.uk\ndiply.com\ncoccoc.com\ncnn.com\nbbc.co.uk\ntwitch.tv\nwikia.com\ngoogl
e.co.th\ngo.com\ngoogle.com.ph\ndoubleclick.net\nonet.pl\ngoogleadservices.com\n
accuweather.com\ngoogleweblight.com\nanswers.yahoo.com'
```

[48]:
```
myfile.close()
```

2 Exercice 2: (Hint: Use lists inside a list to write a two dimensional array. Also use a for loop inside a for loop could be helpful)

3.5 / 3.5 pts

Without using exernal library, create a function which print a matrix `n x n`with `1`on the diagonal, otherwise `0`. The function should take an argument `n`and then print the matrix.

Example: . for `n = 3`

```
1  0  0
0  1  0
0  0  1
```

. for `n = 4`

```
1  0  0  0
0  1  0  0
0  0  1  0
0  0  0  1
```

etc...

[22]:
```
# your code here
n = int(input('Please give a number hier:'))
for i in range(0,n):
    #print('0'*(i),'1' ,'0'*(n-i-1))
    matrix = '0'*(i),'1' ,'0'*(n-i-1)
    #ls_matrix = list(matrix)
    str_matrix = ''.join(matrix)
    print(str_matrix)
    #print(matrix.split(''))
    #i += 1
```

```
Please give a number hier:3
100
010
001
```

[31]:
```
def matrix(n)->list:
    for i in range(0,n):
        matrix = '0'*(i),'1' ,'0'*(n-i-1)
        str_matrix = ''.join(matrix)
        print (str_matrix)
matrix(3)
```

```
100
010
001
```

3 Exercice 3:

1.25/3.5 pts

Without using exernal library, compute the sum of two matrix. The sum of two matrix can be done as shown in the WIKI-PAGE . The function should be able to sum both `n x n` matrix and `n x m` matrix. Write a function witch takes two matrix and return the (sum) matrix.

You can use the function from exercice 2, to print the result :)

1 3 0 0 1+0 3+0 1 3 1 3 2 0 0 1 0 + 7 5 = 1+7 0+5 = 8 5 2 3 1 0 0 1 2 2 1 1+2 2+1 3 3 0 0 0 1 6 0 0 0 0 1 matrix1 = [[1,3,2],[2,3,1]] matrix2 = [[1,6],[0,1]] = [[1,3,2,0,0] [2,3,1,0,0] [0,0,0,1,6] [0,0,0,0,1]]

[1]:
```
def sum_entrywise(matrix1,matrix2):
    if len(matrix1) == len(matrix2):
        format_print_1 = []
        for j in range(0,len(matrix1)):
            a = matrix1[j]
            b = matrix2[j]
            j += 1
            res_ab = []
            for i in range(0,len(a)):
                c = a[i] + b[i]
                d = res_ab.append(c)
                format_print_1.append(res_ab)
                format_print_same = []
                for m in format_print_1:
                    if m not in format_print_same:
                        format_print_same.append(m)
        return format_print_same
    else:
        for i in range(0,len(matrix1)):
            for a in matrix2:
                x_1 = ([0] * len(a))
                x = list(matrix1[i]) + x_1
            print(x)
        for j in range(0,len(matrix2)):
            for b in matrix1:
                y_1 = ([0] * len(b))
                y = y_1 + matrix2[j]
            print(y)


matrix1 = [[1,3],[1,0],[5,5],[3,5]]
matrix2 = [[1,0,3],[5,5,5],[1,2,1],[1,6,2],[2,5,1]]
sum_entrywise(matrix1,matrix2)
```

```
[1, 3, 0, 0, 0]
[1, 0, 0, 0, 0]
[5, 5, 0, 0, 0]
[3, 5, 0, 0, 0]
```

```
[0, 0, 1, 0, 3]
[0, 0, 5, 5, 5]
[0, 0, 1, 2, 1]
[0, 0, 1, 6, 2]
[0, 0, 2, 5, 1]
```

[ ]: