Algorithm for file updates in Python

Project description

This small project is about working with called allow_list.txt .it has IP address inside.The idea is to open the file ,read the data ,turn it into a list ,remove some IPs we Don't want ,and then save the cleaned list back to the same list.

Open the file that contains the allow list

First i made a variable for the file name :
I also made a list called remove_list that has the IP addresses i don't want in the allow list.
Finally , I printed both variables .

```
:[1] In

import_file = "allow_list.txt"

remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "

print(import_file)

print(remove_list)
```

```
allow_list.txt
192.168.58.5' ,'192.168.201.40' ,'192.168.158.170' ,'192.168.97.225']
['7
```

Read the file contents

I used with open(import _file, "r") as file: to open the file and file.read()
To load everything into a variable called allow_text

:[3] In

```
import_file = "allow_list.txt"

remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "

with open (import_file , "r") as file:
    allow_text = file.read()
    print(allow_text)
```

```
ip_address
192.168.25.60
192.168.205.12
192.168.97.225
192.168.6.9
192.168.52.90
192.168.158.170
192.168.90.124
192.168.186.176
192.168.133.188
192.168.203.198
192.168.201.40
192.168.218.219
192.168.52.37
192.168.156.224
192.168.60.153
192.168.58.57
192.168.69.116
```

Convert the string into a list

A first ,everything from the file came in as one big string .I used .splitlines() to Python list.

```
import_file = "allow_list.txt"

remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "

with open(import_file, "r") as file:
    ip_addresses = file.read()

ip_addresses = ip_addresses.splitlines()

print(ip_addresses)
```

```
ip_address', '192.168.25.60', '192.168.205.12', '192.168.97.225', '1']
92.168.6.9', '192.168.52.90', '192.168.158.170', '192.168.90.124', '19
2.168.186.176', '192.168.133.188', '192.168.203.198', '192.168.201.4
0', '192.168.218.219', '192.168.52.37', '192.168.156.224', '192.168.6
['0.153', '192.168.58.57', '192.168.69.116
```

Iterate through the remove list

Now that I split the string into a list ,I made a for loop to go through each IP one by one.

```
import_file = "allow_list.txt"

remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "

with open(import_file, "r") as file:
    ip_addresses = file.read()

ip_addresses = ip_addresses.split()

for element in ip_addresses:
    print(element)
```

```
ip_address
192.168.25.60
192.168.205.12
192.168.97.225
192.168.6.9
192.168.52.90
192.168.158.170
192.168.90.124
192.168.186.176
192.168.133.188
192.168.203.198
192.168.201.40
192.168.218.219
192.168.52.37
192.168.156.224
192.168.60.153
192.168.58.57
192.168.69.116
```

Remove IP addresses that are on the remove list

I made a simple for loop that goes through each IP .Inside the loop I just checked if the current IP was in the removed list ,and if it was ,I took it out of the main list ,then I printed that.

```
import_file = "allow_list.txt"

remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "

with open(import_file, "r") as file:
    ip_addresses = file.read()

ip_addresses = ip_addresses.split()

for element in ip_addresses:
    if element in remove_list:
        ip_addresses.remove(element)

print(ip_addresses)
```

```
ip_address', '192.168.25.60', '192.168.205.12', '192.168.6.9', '192.']
168.52.90', '192.168.90.124', '192.168.186.176', '192.168.133.188', '1
92.168.203.198', '192.168.218.219', '192.168.52.37', '192.168.156.22
['4', '192.168.60.153', '192.168.69.116
```

Summary

I put all the steps into one function called update_file,which takes the file name and the list of IPs to remove. then I called it with “allow_list_txt” and the four IPs.After that,I opened the file again ,read the new contents into “text” ,and printed it.

```
def update_file(import_file, remove_list):
    with open(import_file, "r") as file:
        ip_addresses = file.read()

    ip_addresses = ip_addresses.split()

    for element in ip_addresses:
        if element in remove_list:
            ip_addresses.remove(element)

    ip_addresses = " ".join(ip_addresses)

    with open(import_file, "w") as file:
        file.write(ip_addresses)



update_file("allow_list.txt", ["192.168.97.225", "192.168.158.170", "19
```

```
with open("allow_list.txt", "r") as file:
    text = file.read()


print(text)
```

```
ip_address 192.168.25.60 192.168.205.12 192.168.6.9 192.168.52.90 192.
168.90.124 192.168.186.176 192.168.133.188 192.168.203.198 192.168.21
8.219 192.168.52.37 192.168.156.224 192.168.60.153 192.168.69.116
```