Algorithm for file updates in Python

Project description

I am a security analyst working in the health care company, I have to regularly update the file

that identifies the employees who have access, the file contents consists of personal patient records, for that

Employees are granted and restricted access based on their IP address. as a security analyst I have two lists of Employees allow list of IP addresses of all the employees that are going to access the file and other list (remove list) that identifies which employees IP addresses I have to remove from the allow list.

Open the file that contains the allow list

# Assign the allow\_list.txt file to import\_file variable, below is the Python syntax I used

import\_file = "allow\_list.txt"

# using with statement and open() funciton open the import\_file content for read and

# store the content of the file in the file variable, below is the Python syntax I used

with open(import\_file, "r") as file:

Read the file contents

#using file.read() to read the content of the file variable to string so that it can be

# readable and store it in the variable ip\_addresses, below is the python syntax I used

ip\_addresses = file.read()

Convert the string into a list

# using the split() of the string I convert the ip\_addresses string to the list so that I can

easily extract and remove the IP addresses from the allow list, below is the python synatax I used

ip\_addresses = ip\_addresses.split()

Iterate through the remove list

# In this step I used the for loop to iterate over the remove list with the iterable variable

# variable element, below is the Python syntax I used

for element in remove\_list:

Remove IP addresses that are on the remove list

# In this step I remove those IP addressses that are in IP\_addresses list by itrating over the remove\_list# which matching the IP addresses from the remove\_list

for element in remove\_list:

ip\_addresses.remove(element)

Update the file with the revised list of IP addresses

# In this step I convert the IP\_addressess list back to the string using join()

ip\_addresses = " ".join(ip\_addresses)

# In this step I use the with statement to rewrite over the orignal file of the IP addressess that are

# allowed

with open(import\_file, "w") as file:

# using write() to rewrite the valid IP addresses

file.write(ip\_addresses)

Summary

In this scenerio I sucessfully allow those Employees form the Health care company that are

allowed and denied access the restrictred file from there IP addresses using Python algorithm to automate the process.