

Project description

Update the Allow List to remove IP addresses that no longer should have access to the restricted subnet.

Open the file that contains the allow list

with open - to open the file allow_list.txt as file in read only to load the contents of the file
with open('allow_list.txt', 'r') as file:

The with statement is used with opens allow_list.txt as a file to read in the file.

Read the file contents

#reading the contents of allow_list.txt into file and assigns it to the variable ip_addresses
ip_addresses = file.read()

In order to read or use the contents of allow_list.txt. You have to read the contents of file. Here we assigned the results of the read() function to the variable ip_addresses.

Convert the string into a list

Use `.split()` to convert `ip_addresses` from a string to a list

ip_addresses = ip_addresses.split()

The read() method will load a single string into the variable ip_addresses. In order to iterate and move through the file we can use split() function to convert the string into a usable list of ip addresses.

Iterate through the remove list and remove IP addresses that are on the remove list

Loop through `ip_addresses`

```
for element in ip_addresses:
```

```
# conditional statement checks if ip address is in remove list then.
```

```
if element in remove_list:
```

```
# then current element should be removed from `ip_addresses`
```

```
ip_addresses.remove(element)
```

This for loop is used to iterate through the list of ip addresses. A conditional statement was created that compares the ip address in the allow file to the remove list. If an ip address is in the remove list. It will be removed from the list stored in ip_addresses.

Update the file with the revised list of IP addresses

```
# Join the ip_address list as string for writing back to file
```

```
ip_addresses = "\n ".join(ip_addresses)
```

```
#Open file allow_list.txt as write only and write ip_addresses back to file.
```

```
with open('allow_list.txt', 'w') as file:
```

```
file.write(ip_addresses)
```

The final step is to write the new list of allowed ip addresses back to the allow_list.txt file. Here we use the join() method to convert our list back into a string. Then we open the allow_list.txt and write the string back to the txt file.

Summary

In this activity we created an algorithm that can be used to update a hospitals restricted allow list in accessing patient information. The file was open and read into memory then parsed and iterated through to remove IP address. The file was then opened again and the new list of allowed IP addresses were written back to the file.