

Algorithm for file updates in Python

Project description

Complete Cybersecurity related tasks using Python. All the additional info can be found in code comments.

Open the file that contains the allow list

```
# Assign `import_file` to the name of the file
import_file = "allow_list.txt"

# Assign `remove_list` to a list of IP addresses that are no longer allowed to access restricted information.
remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "192.168.58.57"]

# First line of `with` statement
with open(import_file, "r") as file:
```

Read the file contents

```
# Assign `import_file` to the name of the file
import_file = "allow_list.txt"

# Assign `remove_list` to a list of IP addresses that are no longer allowed to access restricted information.
remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "192.168.58.57"]

# Build `with` statement to read in the initial contents of the file
with open(import_file, "r") as file:

    # Use `.read()` to read the imported file and store it in a variable named `ip_addresses`
    ip_addresses = file.read()

# Display `ip_addresses`
print(ip_addresses)
```

Convert the string into a list

```
# Assign `import_file` to the name of the file
import_file = "allow_list.txt"

# Assign `remove_list` to a list of IP addresses that are no longer allowed to access restricted information.
remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "192.168.58.57"]

# Build `with` statement to read in the initial contents of the file
with open(import_file, "r") as file:

    # Use `.read()` to read the imported file and store it in a variable named `ip_addresses`
    ip_addresses = file.read()

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

# Display `ip_addresses`
print(ip_addresses)
```

Iterate through the remove list

```
# Assign `import_file` to the name of the file
import_file = "allow_list.txt"

# Assign `remove_list` to a list of IP addresses that are no longer allowed to access restricted information.
remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40", "192.168.58.57"]

# Build `with` statement to read in the initial contents of the file
with open(import_file, "r") as file:

    # Use `.read()` to read the imported file and store it in a variable named `ip_addresses`
    ip_addresses = file.read()

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

# Build iterative statement
# Name loop variable `element`
# Loop through `ip_addresses`
for element in ip_addresses:
    # Display `element` in every iteration
    print(element)
```

Remove IP addresses that are on the remove list

```
# Build `with` statement to read in the initial contents of the file
with open(import_file, "r") as file:

    # Use `.read()` to read the imported file and store it in a variable named `ip_addresses`
    ip_addresses = file.read()

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

# Build iterative statement
# Name loop variable `element`
# Loop through `ip_addresses`
for element in ip_addresses:

    # Build conditional statement
    # If current element is in `remove_list`,

    if element in remove_list:

        # then current element should be removed from `ip_addresses`
        ip_addresses.remove(element)

# Display `ip_addresses`
print(ip_addresses)
```

Update the file with the revised list of IP addresses

```
for element in ip_addresses:

    # Build conditional statement
    # If current element is in `remove_list`,

    if element in remove_list:

        # then current element should be removed from `ip_addresses`

        ip_addresses.remove(element)

# Convert `ip_addresses` back to a string so that it can be written into the text file
ip_addresses = " ".join(ip_addresses)

# Build `with` statement to rewrite the original file
with open(import_file, "w") as file:

    # Rewrite the file, replacing its contents with `ip_addresses`

    file.write(ip_addresses)
```

Summary

Nothing to add.