# Algorithm for file updates in Python

## Project description

In this scenario, we are working as a security professional for a healthcare company. Our task is to manage a file that contains a list of IP addresses permitted to access restricted content. Employees gain access based on their IP addresses, and some IPs need to be removed periodically as specified in a separate remove list.

## Open the file that contains the allow list

Open the allow\_list.txt file in read mode.

## Read the file contents

Read all IP addresses from the file and store them as a list.

## Convert the string into a list

Strip newline characters and whitespace to ensure clean data.

## Iterate through the remove list

Open the remove\_list.txt file and read the list of IPs to be removed.

## Remove IP addresses that are on the remove list

Loop through the allow list and remove any IP found in the remove list.

## Update the file with the revised list of IP addresses

Rewrite the allow list file with the updated IP addresses.

## Python Script

# Define file paths

allow\_list\_file = "allow\_list.txt"

remove\_list\_file = "remove\_list.txt"

def update\_allow\_list(allow\_file, remove\_file):

# Read the allow list

with open(allow\_file, 'r') as f:

allow\_list = f.read().splitlines()

# Read the remove list

with open(remove\_file, 'r') as f:

remove\_list = f.read().splitlines()

# Remove IPs that are in the remove list

updated\_allow\_list = [ip for ip in allow\_list if ip not in remove\_list]

# Write the updated allow list back to the file

with open(allow\_file, 'w') as f:

f.write('\n'.join(updated\_allow\_list) + '\n')

print("Allow list updated successfully.")

# Execute the function

update\_allow\_list(allow\_list\_file, remove\_list\_file)

## Summary

his Python script automates the process of updating the allow list by removing IP addresses found in the remove list. It ensures that only authorized employees retain access to restricted content, maintaining security and compliance within the healthcare company. By following the structured algorithm, we efficiently manage the access control system.