# Algorithm for file updates in Python

## Project description

In this project we are going to develop an algorithm to strengthen the security of a health care company. With this algorithm we are going to identify the employees who can access restricted content and update a file with this information.

The contents of this file are based on who is working with personal patient records. Employees are restricted access based on their IP address. There is an allow list for IP addresses permitted to sign into the restricted subnetwork. There's also a remove list that identifies which employees you must remove from this allow list.

## Open the file that contains the allow list

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| # Assign `import\_file` to the name of the file  import\_file = "allow\_list.txt"  # 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() |

## Read the file contents

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| # Use `.read()` to read the imported file and store it in a variable named `ip\_addresses`  ip\_addresses = file.read() |

## Convert the string into a list

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| # Use `.split()` to convert `ip\_addresses` from a string to a list  ip\_addresses = ip\_addresses.split() |

## Iterate through the remove list

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| # Build iterative statement  # Name loop variable `element`  # Loop through `ip\_addresses`  for element in ip\_addresses: |

## Remove IP addresses that are on the remove list

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| # 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) |

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

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| # 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

In this project we’ve used a log file to parse and write it using the with and open methods.