import socket, requests, re, sys

opponent\_board = r".\opponent\_board.txt"

def main():

IP\_address = str(sys.argv[1]) #the first argument is an IP address

port\_number = str(sys.argv[2]) #the second argument is the port number

x\_coord = str(sys.argv[3]) #the third argument is the x coordinate

y\_coord = str(sys.argv[4]) #the fourth argument is the y coordinate

http\_message = "http://" + IP\_address + ":" + port\_number + "/?x=" + x\_coord + "&y=" + y\_coord

print(http\_message)

fire(http\_message, int(x\_coord), int(y\_coord))

def fire(message, x\_coord, y\_coord):

response = requests.post(message) #sends a URL formatted like 'http://0.0.0.0:0000/?x=#&y=#'

http\_code = int(response.status\_code)

if http\_code == 200:

response\_body = str(response.content) #get the reponse message from the body and make it a string from bytes

hit\_result\_list = re.findall(r'\d', response\_body) #get whether the hit was successful or not

hit\_result = int(hit\_result\_list[0])

matches = re.findall(r'=\w', response\_body) #intermediary step to find ship sunk

ship\_sunk = re.findall(r'\w', matches[-1]) #get char of ship sunk

board = open(opponent\_board, "r") #open the board to read the lines in

board\_rows = board.readlines() #reads the current lines of the board

board.close() #closes the file

if hit\_result == 1: #we hit a ship

print('That shot is a Hit!')

if(ship\_sunk[0]=='D'):

print("Destroyer Sunk")

elif(ship\_sunk[0]=='B'):

print("Battleship Sunk")

elif(ship\_sunk[0]=='C'):

print("Carrier Sunk")

elif(ship\_sunk[0]=='R'):

print('Cruiser Sunk')

elif(ship\_sunk[0]=='S'):

print('Sub Sank')

board\_rows[y\_coord] = board\_rows[y\_coord][0:x\_coord] + "X" + board\_rows[y\_coord][x\_coord + 1:]

elif hit\_result == 0:

print('Swing and a Miss') #we missed the ships

board\_rows[y\_coord] = board\_rows[y\_coord][0:x\_coord] + "O" + board\_rows[y\_coord][x\_coord + 1:]

else:

print("Do I need to put an else statement?")

board = open(opponent\_board, "w") #open the board again but to write this time

for i in board\_rows: #write the new lines into the board

board.write(i)

board.close() #close the file

elif http\_code == 404: #the shot was outside the limits of the board

print("HTTP/1.1 404 Not Found")

print("Fire again, sailor!")

elif http\_code == 410: #the player has already used those coordinates this game

print("HTTP/1.1 410 Gone")

print("You've already fired on that location, sailor!")

elif http\_code == 400: #the command line arguments were formatted incorrectly

print("HTTP/1.1 400 Bad Request")

print("Your fire message could not be read properly. Fire again, sailor!")

elif http\_code == 403: #it's not the player's turn

print("HTTP/1.1 403 Forbidden")

print("Sailor! This is a gentlemen's game, you must wait your turn!")

if \_\_name\_\_ == "\_\_main\_\_": main()