

```

1 import os, sys, socket, _thread
2
3 BACKLOG = 50      # maximum number of pending connections
4 DATA = 99999     # maximum number of bytes that can be received
5 port = 8080       # the port number
6 host = ''         # we leave the host blank for localhost
7
8 def main():
9
10     try:
11         print("localhost\nport:", port)
12
13         # we create a socket and and bind it with our host and
14         # property
15         s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
16         s.bind((host, port))
17
18         # the function that listens to spot when the browser wants
19         # to connect
20         s.listen(BACKLOG)
21
22     except socket.error as e:
23         if s:
24             s.close()
25         print (e)
26         sys.exit(1)
27
28     while True:
29         # when the browser connects we accept and we start a new
30         # proxy thread
31         conn, address = s.accept()
32         _thread.start_new_thread(proxy_function, (conn, address))
33
34     s.close()
35
36 def proxy_function(conn, address):
37     # the request we get from browser
38     req = conn.recv(DATA)
39
40     # we need to get the first line of the request to find
41     # the url of the webserver
42     line = req.decode().split('\n')[0]
43     url = line.split(' ')[1]

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43 url = line.split()[1]
44
45 # we find the index of the port and the webserver
46 http_index = url.find("://")
47
48 if ( http_index != -1):
49     url = url[(http_index + 3):]
50
51 port_index = url.find(":")
52 webserver_index = url.find("/")
53 if webserver_index == -1:
54     webserver_index = len(url)
55
56 port = -1
57 webserver = ""
58
59 if (port_index== -1 or webserver_index < port_index):
60     port = 80
61     webserver = url[:webserver_index]
62 else:
63     port = int((url[(port_index+1):])[:webserver_index-
        • port_index-1])
64     webserver = url[:port_index]
65
66 # we check whether the webserver is in the blocklist
67 # if it is we don't send anything to the webserver
68 f = open("blockedURLs.txt", "r")
69 lines = f.readlines()
70
71 for i in lines:
72     print(i)
73     print(webserver)
74     if str(webserver) == str(i):
75         print("That webserver was blocked.")
76         conn.close()
77         sys.exit(1)
78
79 print("Request:\n", req)
80 print("Port: ", port)
81 print("Webserver: ", webserver)
82 try:
83     # we connect to the webserver and send the request
84     s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
85     s.connect((webserver, port))
86     s.send(req)

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87
88     while True:
89         # we receive data from the webserver and send it
90         # to browser
91         data = s.recv(DATA)
92
93         if (len(data) > 0):
94             conn.send(data)
95             print("sent")
96         else:
97             break
98
99         s.close()
100        conn.close()
101    except socket.error as e:
102        if s:
103            s.close()
104        if conn:
105            conn.close()
106        print(e)
107        sys.exit(1)
108
109
110 if __name__ == '__main__':
111     main()
112
```