

Visual Studio Code interface showing a Python file named `lab1_Proxy.py` with the following code:

```
87 if ":443" in resource:
88     port = 443
89     print("Sorry, so far our program cannot deal with HTTPS yet")
90     tcpCliSock.close()
91     return
92
93 print("Requesting...", end="")
94 resourceRequested = proxy_cache(webServer, resource, port, message)
95 print("acquired.")
96 tcpCliSock.send(resourceRequested)
97
98 tcpCliSock.close()
99
100 if len(sys.argv) <= 1:
101     print(
102         'Usage: "python ProxyServer.py server_ip"\nserver_ip : It is the IP Address Of
103         sys.exit(2)
104
105 # Create a server socket, bind it to a port and start listening
106 tcpSerSock = socket(AF_INET, SOCK_STREAM)
107 tcpSerSock.bind((sys.argv[1], proxy_port))
108 tcpSerSock.listen(15)
109
110 print('Proxy ready to serve at', sys.argv[1], proxy_port)
111
112 try:
113     while True:
114         # Start receiving data from the client
115         tcpCliSock, addr = tcpSerSock.accept()
116         print('Received a connection from:', addr)
117
118         # the following function starts a new thread, taking the function name as the fi
119         thread.start_new_thread(client_thread, (tcpCliSock,))
```

The terminal output shows the following logs:

```
DNT: 1
Connection: keep-alive
Cookie: _ga=GA1.2.817859894.1568787421; PHPSESSID=t90ffa6gnchqmp2f7gffsrul0; _gid=GA1.2.17940996.1569229615

webServer: www.ucla.edu
resource: www.ucla.edu/img/apple-touch-icon.png
Requesting...acquired.
Received a connection from: ('127.0.0.1', 29961)
CONNECT push.services.mozilla.com:443 HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:69.0) Gecko/20100101 Firefox/69.0
Proxy-Connection: keep-alive
Connection: keep-alive
Host: push.services.mozilla.com:443

non-supported request CONNECT User-Agent:
Received a connection from: ('127.0.0.1', 29971)
error <class 'UnicodeDecodeError'>
```

UCLA website interface showing the following content:


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TRUE BRUIN WELCOME

EXPLORE UCLA, MAKE NEW FRIENDS AND GET INVOLVED WITH A VARIETY OF EVENTS AND ACTIVITIES.


1 of 4

FEATURED STORIES




Welcome, Bruins!

From move-in to Volunteer Day, a buffet of activities awaits students



Implant helps the blind

With wireless device, people without sight can detect motion, distinguish light and dark



Hungry black hole

UCLA astronomers notice brightest light in 24 years of observations

```
→ Labs python3 lab1 Proxy.py localhost
Proxy ready to serve at localhost 8079
Received a connection from: ('127.0.0.1', 29998)
non-supported request CONNECT User-Agent:
Received a connection from: ('127.0.0.1', 30085)
webServer: www.ucla.edu
resource: www.ucla.edu/
Requesting...Socket GET..receiving.....7265..acquired.
Received a connection from: ('127.0.0.1', 30088)
webServer: www.ucla.edu
Received a connection from: ('127.0.0.1', 30089)
resource: www.ucla.edu/css/main.css
Received a connection from: ('127.0.0.1', 30090)
webServer: www.ucla.edu
resource: www.ucla.edu/css/responsive.css
Requesting...Received a connection from: ('127.0.0.1', 30091)
webServer: www.ucla.edu
Requesting...Received a connection from: ('127.0.0.1', 30092)
resource: www.ucla.edu/css/print.css
Received a connection from: ('127.0.0.1', 30093)
webServer: www.ucla.edu
webServer: www.ucla.edu
webServer: www.ucla.edu
Requesting...Received a connection from: ('127.0.0.1', 30094)
resource: www.ucla.edu/js/modernizr.js
resource: www.ucla.edu/css/centennial-takeover-2017.css
resource: www.ucla.edu/js/analytics.js
Received a connection from: ('127.0.0.1', 30095)
webServer: www.ucla.edu
Requesting...Requesting...Requesting...Received a connection from: ('127.0.0.1', 30096)
resource: www.ucla.edu/js/respond.js
webServer: www.ucla.edu
webServer: www.ucla.edu
Requesting...resource: www.ucla.edu/js/plugins.js
resource: www.ucla.edu/js/global.js
Received a connection from: ('127.0.0.1', 30097)
Requesting...Requesting...Received a connection from: ('127.0.0.1', 30099)
webServer: www.ucla.edu
Received a connection from: ('127.0.0.1', 30100)
resource: www.ucla.edu/js/responsive.js
webServer: www.ucla.edu
webServer: www.ucla.edu
Requesting...resource: www.ucla.edu/js/weather.js
resource: www.ucla.edu/js/search.js
Requesting...Requesting...Socket GET..receiving..Socket GET..receiving..Socket GET..receiving..Socket GET..receiving..Socket GET..receiving..Socket GET..receiving..Socket GET..receiving..Socket GET..receiving..Socket GET..receiving....387..acquired.
..387..acquired.
..387..acquired.
..386..acquired.
..400..acquired.
..402..acquired.
..403..acquired.
```

