

proxsox

proxy server in c using sockets and openssl requests to localhost:8080 will return the response of a get request to [smu.edu](https://www.smu.edu) this is my submission for **networks homework 6**

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quickstart

assuming you have docker installed on your computer

```
docker build -t proxsox .
```

```
docker run -it --rm --name run -p 8080:8080 proxsox
```

this will start the server listening on port 8080, then follow the onscreen prompts for any other info

output

Program output while running

```
\ docker run -it --rm --name run -p 8080:8080 proxsox
Server listening at port 8080
Server received request...
Server received the following request from the client: GET / HTTP/1.1
Host: localhost:8080
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:60.0) Gecko/20100101 Firefox/60.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Cookie: ASP.NET_SessionId=irdvphtagiytszwb3y2a4yq; SC_ANALYTICS_GLOBAL_COOKIE=fffb96386e29419abc56d529ca1f528b|False; _ga=GA1.1.1898183090.1524690361; _gid=GA1.1.661455748.1524690361; __atuvc=3%7C17; __atuvs=5ae26087fd1e7e1a002
Connection: keep-alive
Upgrade-Insecure-Requests: 1

Establishing socket connection to https://www.smu.edu...
Established ssl connection with https://smu.edu
Ready to send get request

Sending request to https://www.smu.edu

GET / HTTP/1.1
Host: www.smu.edu

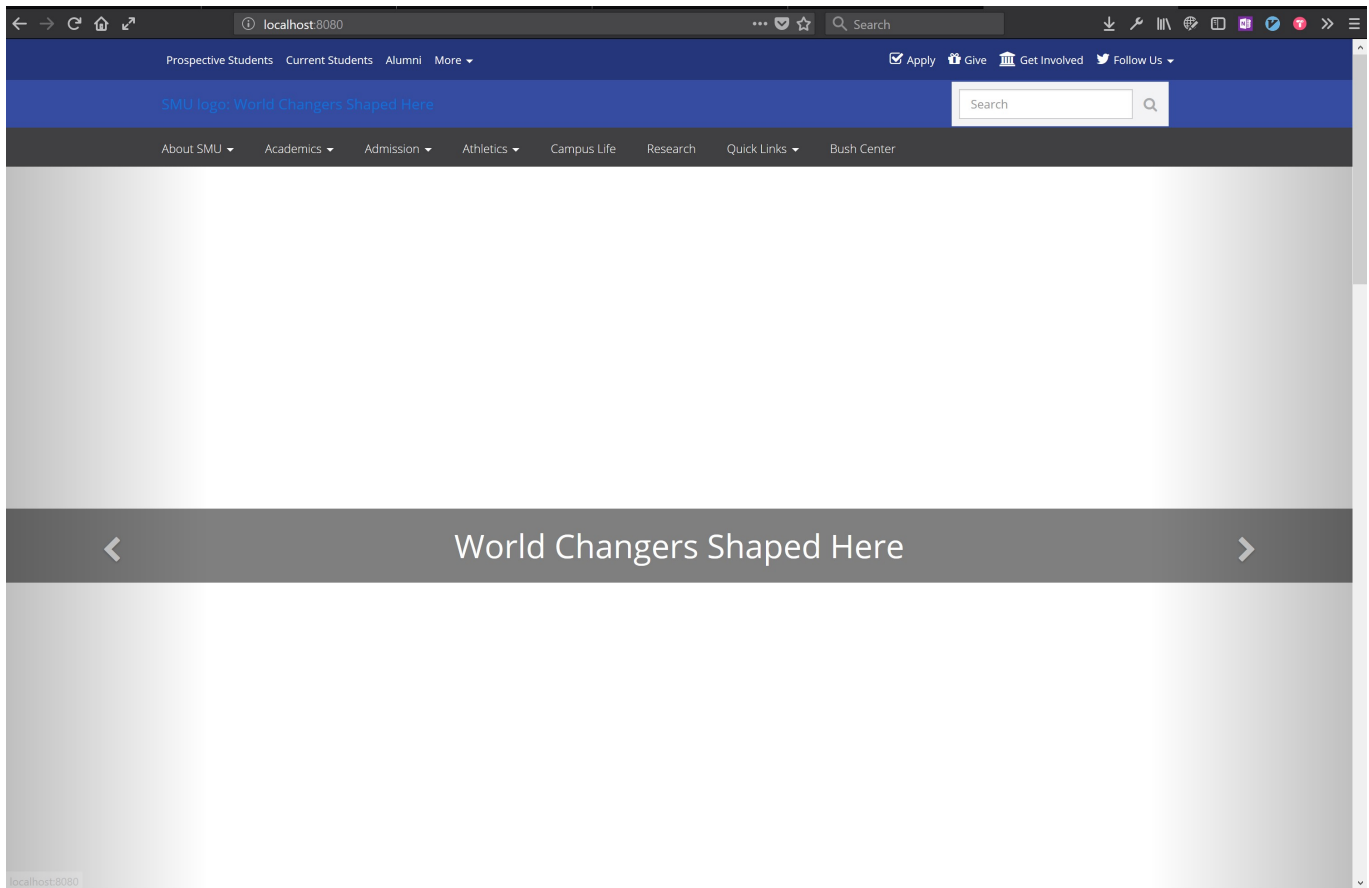
Request to https://www.smu.edu sent...

Reading response from https://www.smu.edu
Constructing response buffer...

Received 51311 total bytes of data from https://www.smu.edu

Server ready to respond...
Server responded yay!
```

Program response page



how to run

since i have a windows computer, development and testing has been done using docker, and so i've included the dockerfile necessary to run and build the program.

but if you have gcc, libssl-dev, and the ability to use a Makefile, you should be able to build locally without an issue.

if that doesn't work then **please use the docker environment**

local build

If you have make, then you can just use the included Makefile. Simply run `make` and then run the executable as `./proxsox` and you should be good to go.

docker build

If you don't want to build the application locally, then you can also run in docker.

First, build the container with `docker build -t proxsox .` Then, you can run the container with `docker run -it --rm --name run -p 8080:8080 proxsox`

references

- [stackoverflow thread on http requests in c](#)
- [stackoverflow thread on makefiles](#)
- [the gcc docker image](#)
- [compilation flags](#)
- [integrating openssl](#)
- [the man pages for openssl](#)
- [beej's guide to network programming](#)