

ECEN 602 MP4 Test Cases

1. A cache hit returns the saved data to the requester

Client:

```
(base) ben@ben-Latitude-7420:~/Documents/School/Classes/ECEN602/MP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1235 www.google.com/index.html
Requesting www.google.com/index.html
GET /index.html HTTP/1.0
Host: www.google.com
```

Server:

```
.....
Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {www.google.com}

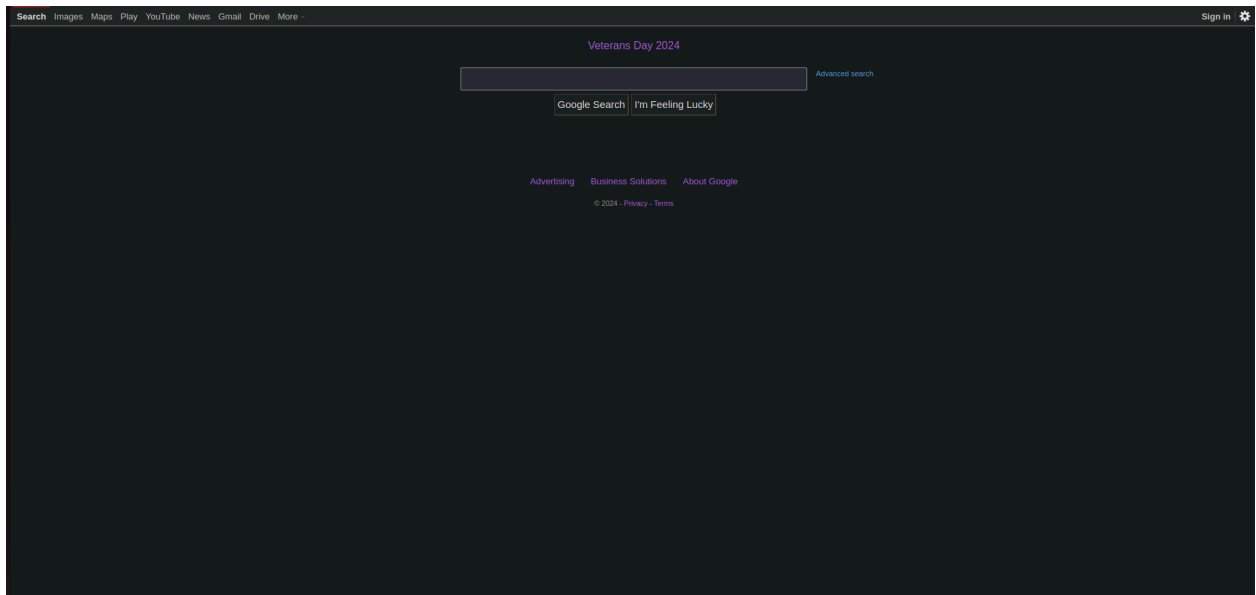
Cache hit! Further processing required to determine validity of Web Page.

Sending 'If-Modified-Since' request

$$$ Printing cache $$$
Host Recently Used --> {www.google.com/index.html : Last Accessed = Tue, 12 Nov 2024 01:51:35 GMT} --> {www.milliondollarhomepage.com/index.html : Last Accessed = Tue, 12 Nov 2024 01:44:26 GMT} --> {www.example.com/index.html : Last Accessed = Tue, 12 Nov 2024 01:43:55 GMT} --> Least Recently Used

Done serving client
.....
```

Saved file:



2. A request that is not in the cache is proxied, saved in the cache, and returned to the requester

Client:

```
(base) ben@ben-Latitude-7420:~/Documents/School/Classes/ECEN602/MP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1235 http://directory.sloop.nz/
Requesting http://directory.sloop.nz/
GET / HTTP/1.0
Host: directory.sloop.nz

File saved successfully.
```

Server:

```

Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to [directory.sloop.nz]
Cache Miss!
Element not found!. Adding Web Page to cache.

$$$ Printing cache $$$

Host Recently Used --> [directory.sloop.nz/ : Last Accessed = Tue, 12 Nov 2024 02:00:21 GMT] --> [web.mit.edu/dinitrib/www/datanets.html : Last Accessed = Tue, 12 Nov 2024 02:07:42 GMT] --> [www.google.co
n/index.html : Last Accessed = Tue, 12 Nov 2024 01:51:35 GMT] --> [www.milliondollarhomepage.com/index.html : Last Accessed = Tue, 12 Nov 2024 01:44:26 GMT] --> [www.example.com/index.html : Last Accessed
= Tue, 12 Nov 2024 01:43:55 GMT] --> Least Recently Used

Done serving client

```

Saved file:

[Home](#)
[Classic Web Directory](#)
[Modern Web Directory](#)
[World News](#)

link icon Web Directory

The Web Directory is a collection of websites and communities accessible to vintage, and modern computers. Our main focus is towards the retro computing community but we welcome many other types of personal pages and communities.

Feel free to [submit a website](#).

Recent Additions

2024/11/07 [DOS Palmtops](#) - Modern Website Directory
2024/9/24 [The Cheapskate's Guide to Computers and the Internet](#) - Classic Website Directory
2024/8/24 [Blue Dwarf](#) - Classic Website Directory
2024/8/20 [Sakuya Central](#) - Modern Website Directory
2024/8/03 [SPARCinfo \(German\)](#) - Classic Website Directory
2024/6/29 [Vintage Bits Blog](#) - Modern Website Directory
2024/6/21 [SunHelp](#) - Classic Website Directory
2024/6/21 [Sun 3 Archive](#) - Modern Website Directory
2024/6/11 [Daryl Sun's Journal](#) - Modern Website Directory

Classic Website Directory
<p>Classic Website Directory The Classic Web Directory is a collection of websites and communities that are accessible to older web browsers/machines.</p> <p>View the Classic Website Directory View the Classic Website Directory</p>
Modern Website Directory
<p>Modern Website Directory The Modern Website Directory is a collection of modern websites and communities which are built for modern web browser access.</p> <p>View the Modern Website Directory View the Modern Website Directory</p>
Build a Website

3. A cache miss with 10 items already in the cache is proxied, saved in the LRU location in cache, and the data is returned to the requester

Client:

```

(base) ben@ben-Latitude-7420:~/Documents/School/Classes/ECEN602/MP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1235 http://www.ttl0.tripod.com/
Requesting http://www.ttl0.tripod.com/
GET / HTTP/1.0
Host: www.ttl0.tripod.com

File saved successfully.

```

Server:

```

Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to [www.ttl0.tripod.com]
Cache Miss!
Element not found!. Adding Web Page to cache.
Cache is at capacity! Removing Least Recently Used Element...

$$$ Printing cache $$$

Host Recently Used --> [www.ttl0.tripod.com/ : Last Accessed = Tue, 12 Nov 2024 02:24:44 GMT] --> [www.abandonia.com/ : Last Accessed = Tue, 12 Nov 2024 02:24:11 GMT] --> [brlray.com/web/webring-llst.ht
ml : Last Accessed = Tue, 12 Nov 2024 02:23:43 GMT] --> [www.physicsguy.com/ftl/ : Last Accessed = Tue, 12 Nov 2024 02:22:56 GMT] --> [netanlmations.net/ : Last Accessed = Tue, 12 Nov 2024 02:22:17 GMT] -
--> [directory.sloop.nz/ : Last Accessed = Tue, 12 Nov 2024 02:18:28 GMT] --> [google.com/index.html : Last Accessed = Tue, 12 Nov 2024 02:12:53 GMT] --> [web.mit.edu/dinitrib/www/datanets.html : Last Acce
ssed = Tue, 12 Nov 2024 02:07:42 GMT] --> [www.google.com/index.html : Last Accessed = Tue, 12 Nov 2024 01:51:35 GMT] --> [www.milliondollarhomepage.com/index.html : Last Accessed = Tue, 12 Nov 2024 01:44
:26 GMT] --> Least Recently Used

Done serving client

```

4. A stale Expires header in the cache is accessed, the cache entry is replaced with a fresh copy, and the fresh data is delivered to the requester

Client:

```
(base) ben@ben-Latitude-7420: /Documents/School/Courses/ECEN602/HP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1235 http://www.google.com/index.html
Requesting http://www.google.com/index.html
GET /index.html HTTP/1.0
Host: www.google.com

File saved successfully.
(base) ben@ben-Latitude-7420: /Documents/School/Courses/ECEN602/HP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1235 http://www.google.com/index.html
Requesting http://www.google.com/index.html
GET /index.html HTTP/1.0
Host: www.google.com

File saved successfully.
```

Server:

```
Socket created successfully.
Socket binding successful.
Listening for incoming connections...

Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {www.google.com}
Cache Hit!
Element not found!. Adding Web Page to cache.

$$$ Printing cache $$$
Host Recently Used --> {www.google.com/index.html : Last Accessed = Tue, 12 Nov 2024 02:29:25 GMT} --> Least Recently Used

Done serving client
-----
Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {www.google.com}

Cache hit! Further processing required to determine validity of Web Page.

Sending 'If-Modified-Since' request

$$$ Printing cache $$$
Host Recently Used --> {www.google.com/index.html : Last Accessed = Tue, 12 Nov 2024 02:29:32 GMT} --> Least Recently Used

Done serving client
-----
```

5. A stale entry in the cache without an Expires header is determined based on the last Web server access time and last modification time, the stale cache entry is replaced with fresh data, and the fresh data is delivered to the requester

Client:

```
(base) ben@ben-Latitude-7420: /Documents/School/Courses/ECEN602/HP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1235 http://www.example.com/index.html
Requesting http://www.example.com/index.html
GET /index.html HTTP/1.0
Host: www.example.com

File saved successfully.
(base) ben@ben-Latitude-7420: /Documents/School/Courses/ECEN602/HP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1235 http://www.example.com/index.html
Requesting http://www.example.com/index.html
GET /index.html HTTP/1.0
Host: www.example.com

File saved successfully.
```

Server:

```
(base) bengben-Latitude-7420: /Documents/School/Classes/ECEN602/HP4/ECEN-602-Machine-Problem$ ./proxy 127.0.0.1 1235
Socket created successfully.
Socket binding successful.
Listening for incoming connections...

Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to [www.example.com]
Cache Miss!
Element not found!. Adding Web Page to cache.

$$$ Printing cache $$$

Host Recently Used --> [www.example.com/Index.html : Last Accessed = Tue, 12 Nov 2024 02:37:12 GMT] --> Least Recently Used

Done serving client
.....
Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to [www.example.com]

Cache hit! Further processing required to determine validity of Web Page.

Sending 'If-Modified-Since' request

$$$ Printing cache $$$

Host Recently Used --> [www.example.com/Index.html : Last Accessed = Tue, 12 Nov 2024 02:39:56 GMT] --> Least Recently Used

Done serving client
.....
```

6. A cache entry without an Expires header that has been previously accessed from the Web server in the last 24 hours and was last modified more than one month ago is returned to the requester

Not applicable with implementation of the bonus

7. Three clients can simultaneously access the proxy server and get the correct data (you will need to access large documents to show this)

Clients:

```
(base) bengben-Latitude-7420: /Documents/School/Classes/ECEN602/HP4/ECEN-602-Machine-Problem$ ./client 127.0.0.1 1234 http://vfu.bg/en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf
f
Requesting http://vfu.bg/en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf
GET /en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf HTTP/1.0
Host: vfu.bg

File saved successfully.

(base) bengben-Latitude-7420: /Documents/School/Classes/ECEN602/HP4/ECEN-602-Machine-Problem$ ./client 127.0.0.1 1234 http://vfu.bg/en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf
f
Requesting http://vfu.bg/en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf
GET /en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf HTTP/1.0
Host: vfu.bg

File saved successfully.

(base) bengben-Latitude-7420: /Documents/School/Classes/ECEN602/HP4/ECEN-602-Machine-Problem$ ./client 127.0.0.1 1234 http://vfu.bg/en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf
f
Requesting http://vfu.bg/en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf
GET /en/e-Learning/Math--Bertsekas_Tsitsiklis_Introduction_to_probabllity.pdf HTTP/1.0
Host: vfu.bg

File saved successfully.
```

Server:

```
(base) ben@ben-Latitude-7420:~/Documents/School/Classes/ECEN602/MP4/ECEN-602-Machine-Problems$ ./proxy 127.0.0.1 1234
Socket created successfully.
Socket binding successful.
Listening for incoming connections...

Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {vfu.bg}
Cache Miss!
Element not found!. Adding Web Page to cache.

$$$ Printing cache $$$
Most Recently Used --> {vfu.bg/en/e-Learning/Math--Bertsekas-Tsitsiklis-Introduction_to_probability.pdf : Last Accessed = Tue, 12 Nov 2024 02:50:18 GMT} --> Least Recently Used

Done serving client
-----
Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {vfu.bg}

Cache hit! Further processing required to determine validity of Web Page.

Sending 'If-Modified-Since' request

$$$ Printing cache $$$
Most Recently Used --> {vfu.bg/en/e-Learning/Math--Bertsekas-Tsitsiklis-Introduction_to_probability.pdf : Last Accessed = Tue, 12 Nov 2024 02:50:19 GMT} --> Least Recently Used

Done serving client
-----
Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {vfu.bg}

Cache hit! Further processing required to determine validity of Web Page.

Sending 'If-Modified-Since' request

$$$ Printing cache $$$
Most Recently Used --> {vfu.bg/en/e-Learning/Math--Bertsekas-Tsitsiklis-Introduction_to_probability.pdf : Last Accessed = Tue, 12 Nov 2024 02:50:20 GMT} --> Least Recently Used

Done serving client
-----
□
```

8.

Client:

```
(base) ben@ben-Latitude-7420:~/Documents/School/Classes/ECEN602/MP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1234 http://example.com/
Requesting http://example.com/
GET / HTTP/1.0
Host: example.com

File saved successfully.
(base) ben@ben-Latitude-7420:~/Documents/School/Classes/ECEN602/MP4/ECEN-602-Machine-Problems$ ./client 127.0.0.1 1234 http://example.com/
Requesting http://example.com/
GET / HTTP/1.0
Host: example.com

File saved successfully.
```

Server:

```
Socket created successfully.
Socket binding successfull.
Listening for incoming connections...

Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {example.com}
Cache Miss!
Element not found!. Adding Web Page to cache.

$$$ Printing cache $$$

Most Recently Used --> {example.com/ : Last Accessed = Tue, 12 Nov 2024 02:55:22 GMT} --> Least Recently Used

Done serving client
-----
Got a new connection!
Successfully established a connection with the client!

Waiting for data...
Received data!
Connected to {example.com}

Cache hit! Further processing required to determine validity of Web Page.

Sending 'If-Modified-Since' request

$$$ Printing cache $$$

Most Recently Used --> {example.com/ : Last Accessed = Tue, 12 Nov 2024 02:55:28 GMT} --> Least Recently Used

Done serving client
-----
```