

Jose Alvarado, Sagar Joshi, Luan Nguyen

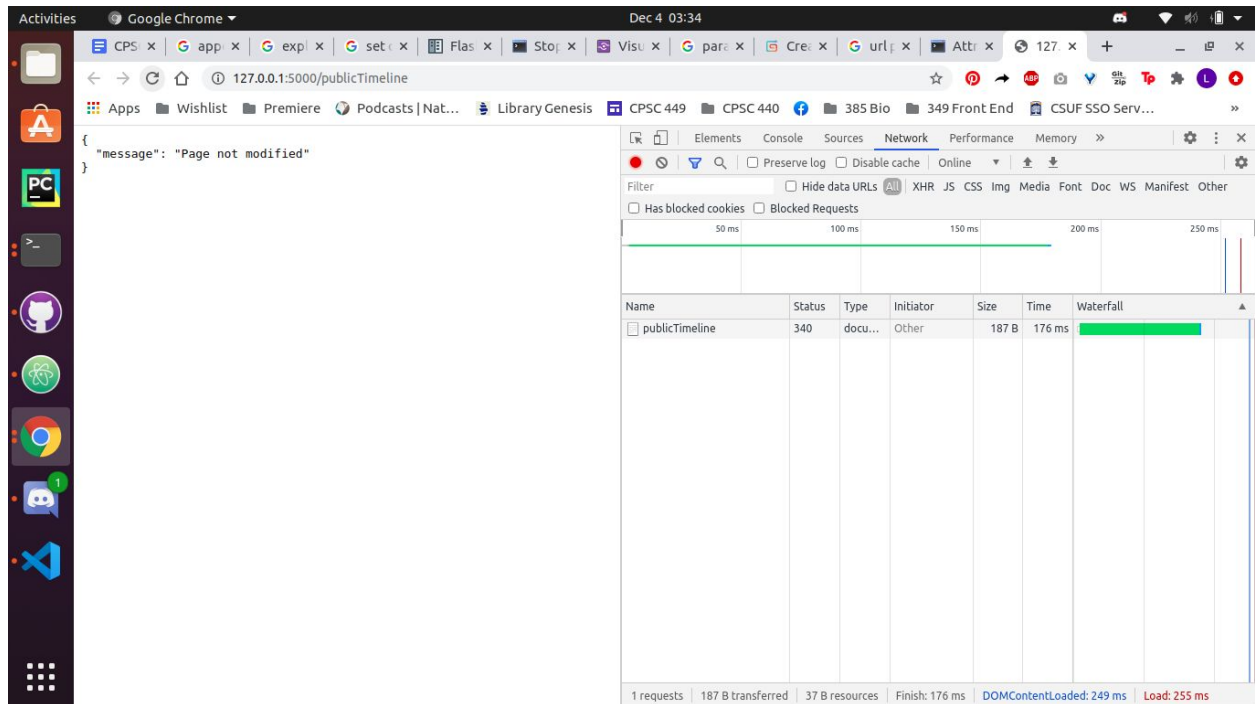
Project 6

HTTP Caching:

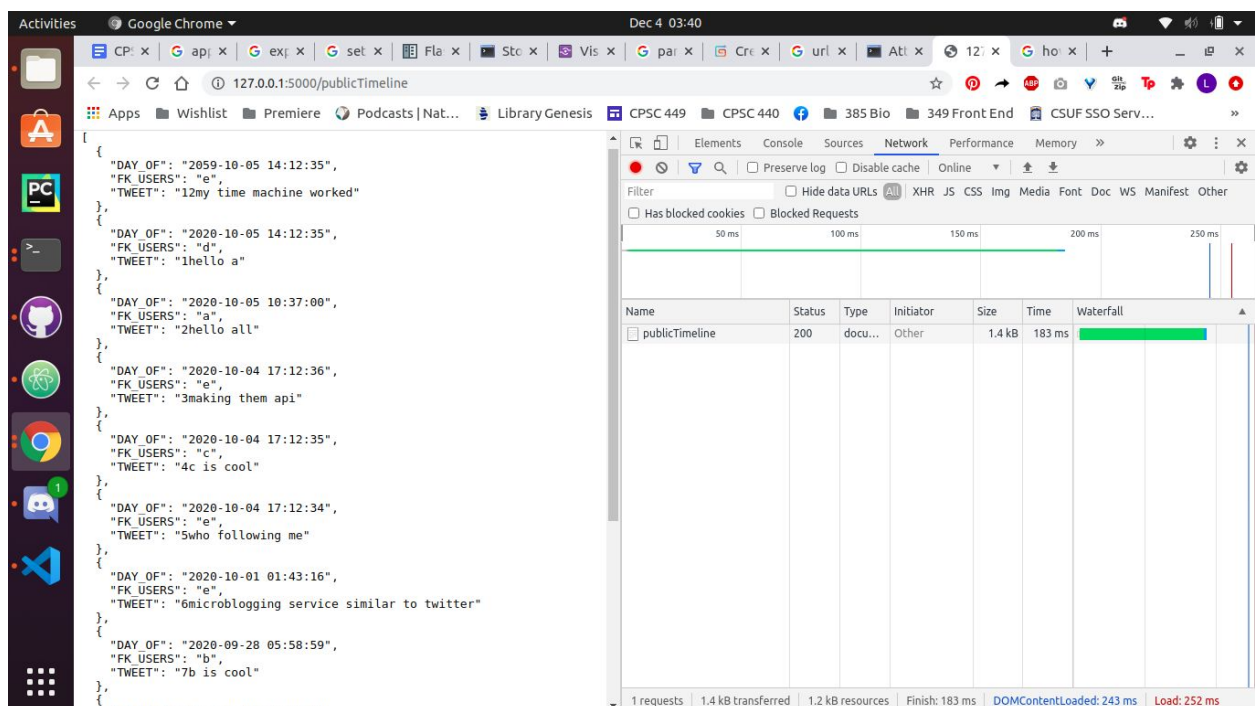
The screenshot displays the Google Chrome DevTools interface. The top panel shows the browser's address bar with the URL `127.0.0.1:5000/publicTimeline`. The left sidebar contains the 'Library Genesis' extension, which is displaying a list of tweets. The right sidebar is open to the 'Network' tab, showing a single request named 'publicTimeline'. The request details indicate a status of 200, a type of document, and a size of 1.4 kB. The waterfall chart shows the request was completed in 178 ms. The bottom status bar summarizes the network activity: 1 requests, 1.4 kB transferred, 1.2 kB resources, Finish: 178 ms, DOMContentLoaded: 231 ms, and Load: 321 ms.

```
{
  "DAY_OF": "2059-10-05 14:12:35",
  "FK_USERS": "e",
  "TWEET": "12my time machine worked"
},
{
  "DAY_OF": "2020-10-05 14:12:35",
  "FK_USERS": "d",
  "TWEET": "1hello a"
},
{
  "DAY_OF": "2020-10-05 10:37:00",
  "FK_USERS": "a",
  "TWEET": "2hello all"
},
{
  "DAY_OF": "2020-10-04 17:12:36",
  "FK_USERS": "e",
  "TWEET": "3making them api"
},
{
  "DAY_OF": "2020-10-04 17:12:35",
  "FK_USERS": "c",
  "TWEET": "4c is cool"
},
{
  "DAY_OF": "2020-10-04 17:12:34",
  "FK_USERS": "e",
  "TWEET": "5who following me"
},
{
  "DAY_OF": "2020-10-01 01:43:16",
  "FK_USERS": "e",
  "TWEET": "6microblogging service similar to twitter"
},
{
  "DAY_OF": "2020-09-28 05:58:59",
  "FK_USERS": "b",
  "TWEET": "7b is cool"
},
{
  "DAY_OF": "2020-09-28 05:58:59",
  "FK_USERS": "a",
  "TWEET": "8a is cool"
}
```

The above image is a get request to the publicTimeline where we get a 200 OK Response



When we make the call again, we get a 304 Response instead of the “if-modified” tag, within 30 seconds after the first screenshot was taken



Then, we waited over 5 minutes to make another get request at 3:40 where we get a 200 OK Response.

Object Caching:

```
HTTP/1.0 201 CREATED
Content-Length: 641
Content-Type: application/json
Date: Wed, 30 Dec 2020 02:59:59 GMT
Server: Werkzeug/1.0.1 Python/3.8.5

[{"username": "a",
  [
    {
      "DAY_OF": "2020-09-28 05:50:59",
      "FK_USERS": "b",
      "TWEET": "7b is cool"
    },
    {
      "DAY_OF": "2020-10-04 17:12:35",
      "FK_USERS": "c",
      "TWEET": "4c is cool"
    },
    {
      "DAY_OF": "2019-10-05 14:12:35",
      "FK_USERS": "c",
      "TWEET": "9b is wack"
    }
  ],
  {
    "DAY_OF": "2020-10-05 14:12:35",
    "FK_USERS": "d",
    "TWEET": "ihello a"
  },
  {
    "DAY_OF": "2014-10-05 14:12:35",
    "FK_USERS": "d",
    "TWEET": "10d is best"
  }
]
```

```
GET /homeTimeline HTTP/1.1
Accept: application/json, */*
Accept-Encoding: gzip, deflate
Authorization: Basic Ylph
Connection: keep-alive
Content-Length: 17
Content-Type: application/json
Host: 127.0.0.1:5000
User-Agent: HTTPie/1.0.3

{"username": "c"}

HTTP/1.0 201 CREATED
Content-Length: 256
Content-Type: application/json
Date: Wed, 30 Dec 2020 03:00:11 GMT
Server: Werkzeug/1.0.1 Python/3.8.5

[{"username": "c",
  [
    {
      "DAY_OF": "2020-10-05 10:37:00",
      "FK_USERS": "a",
      "TWEET": "2hello all"
    },
    {
      "DAY_OF": "2020-05-05 23:59:59",
      "FK_USERS": "a",
      "TWEET": "8goodbye all"
    }
  ],
  {
    "DAY_OF": "2020-10-05 14:12:35",
    "FK_USERS": "d",
    "TWEET": "10d is best"
  }
]
```

We see the data comes from the database since it was not already in the cache. The above screenshots show tweets from a and c's timelines

```
Activities Terminal Dec 29 19:00 CPU 35°C
sagar@sagar-Vostro-14-3468: ~/cpsc449-Project6
sagar@sagar-Vostro-14-3468: ~/cpsc449-Project6
18:59:52 users.3 | * Debugger is active!
18:59:52 users.3 | * Debugger PIN: 284-030-816
18:59:52 timeline.1 | * Debugger is active!
18:59:52 timeline.1 | * Debugger PIN: 284-030-816
18:59:52 timeline.3 | * Debugger is active!
18:59:52 timeline.3 | * Debugger PIN: 284-030-816
18:59:52 users.1 | * Debugger is active!
18:59:52 users.1 | * Debugger PIN: 284-030-816
18:59:52 gateway.1 | * Debugger is active!
18:59:52 gateway.1 | * Debugger PIN: 284-030-816
18:59:52 timeline.2 | * Debugger is active!
18:59:52 timeline.2 | * Debugger PIN: 284-030-816
18:59:52 auth.1 | * Debugger is active!
18:59:52 auth.1 | * Debugger PIN: 284-030-816
18:59:59 auth.1 | 127.0.0.1 - - [29/Dec/2020 18:59:59] "POST /login HTTP/1.1" 201 -
18:59:59 timeline.1 | [2020-12-29 18:59:59,854] DEBUG in timeline_api: homeTimeline data from db user:
18:59:59 timeline.1 | [2020-12-29 18:59:59,854] DEBUG in timeline_api: homeTimeline data from db user:
18:59:59 timeline.1 | 127.0.0.1 - - [29/Dec/2020 18:59:59] "GET /homeTimeline HTTP/1.1" 201 -
18:59:59 gateway.1 | 127.0.0.1 - - [29/Dec/2020 18:59:59] "GET /homeTimeline HTTP/1.1" 201 -
19:00:11 auth.1 | 127.0.0.1 - - [29/Dec/2020 19:00:11] "POST /login HTTP/1.1" 201 -
19:00:11 timeline.2 | [2020-12-29 19:00:11,208] DEBUG in timeline_api: homeTimeline data from db user:
19:00:11 timeline.2 | 127.0.0.1 - - [29/Dec/2020 19:00:11] "GET /homeTimeline HTTP/1.1" 201 -
19:00:11 gateway.1 | 127.0.0.1 - - [29/Dec/2020 19:00:11] "GET /homeTimeline HTTP/1.1" 201 -
```

We see that this user shares a following user as the previous . We see that two of the user's tweets come from the database while one of the user's tweet comes from the cache where it was stored.