

(a) For the second part of your mini project, think about a web proxy server. What is different in request handling in a proxy server and a web server that hosts your files? Write down the detailed specifications you come up with for a minimal proxy server only using the knowledge you have from module (2) slides 29-34 (2 points), and implement them (4 points).

Proxy server Requirements:

- Maintain a cache of all previously requested objects
  - Cache their last modified date
- Receive HTTP requests from client
- The proxy server will:
  - Check if the requested object is in the cache
    - if the desired object is in the cache, then the proxy will perform a conditional get request to the web server
    - If the desired object is not in the cache, then the proxy server will perform a get request to the web server

As such we will implement a cache system which will check the modified date of the object, if the object has not been modified before then HTTP will respond with a 304 Not modified code

If the cached copy is not up to date: HTTP/1.0 200 OK

If the cached copy of the object is up to date: HTTP/1.0 304 Not modified

Need to:

- Implement code to have proxy server populate its cache
- Implement code to have client make first request to proxy server and proxy server then retrieves html file and caches
- Have client request file that was just cached, the proxy return file from cache and return 304 code
- Have client request same file but it was now updated by the server, proxy retrieves updated file, the cached file becomes updated and sends it to the client returns 200 code
- Implement conditional get request function in server code