

Project Report

1. Design

Once a server is open, a client like a browser can send http requests to the server. Then the server will check if the request is a valid one or not and send data back to the client and this is how things work.

Now we have a proxy in the middle position, which means it is like a server at the beginning to wait for a client to send requests. After checking the requests, it can send it to the actual server and get data back from the server and send it back to the client.

So, we make a proxy object like a server first, once it accepts a request then it will create a client object and the client send the http request to the proxy. In this process, a socket is opened to offer the input stream and output stream between client and proxy.

When the proxy gets the request, a request class will check if the request is in the correct format, which means the first word should be 'GET' and the second should be an url in the absolute URI form and the third word should be the correct http version 'HTTP/1.0'. If the second part is not in absolute URI format just make it in that format.

Now comes the response class. It will use url Connection to communicate with the actual server as the url is already known from the request. And buffer reader is used to write data to socket's output stream.

And a connection class is created to store the request and response. A flag is set to check if the request is successful or not, if it is not then the response will be skipped.

Multi-thread is added when a new client is created. So, each client will be in its own thread to do the connection including the request and response.

2. Testing

Firefox is installed and setting is changed to meet the environment requirement.

When <http://www.cs.utah.edu/~kobus/simple.html> is requested then it shows 'real simple' on the browser.

When www.google.com is requested it shows incomplete google website which is reasonable since we are just doing a simple proxy.

However, when www.youtube.com is requested it shows 'The connection was reset' which means it fails to open it also because the proxy is not good enough.

And whether or not 'http://' is put in the beginning of the url did not affect the result.

3. Output

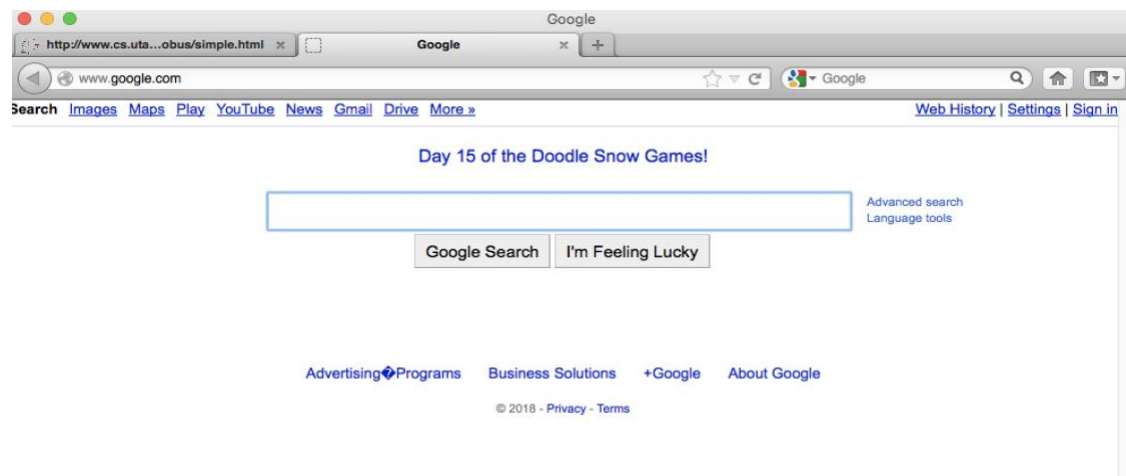
The output screenshots are shown below.

(1) <http://www.cs.utah.edu/~kobus/simple.html>:



Real Simple

(2) www.google.com:



(3) www.youtube.com:

