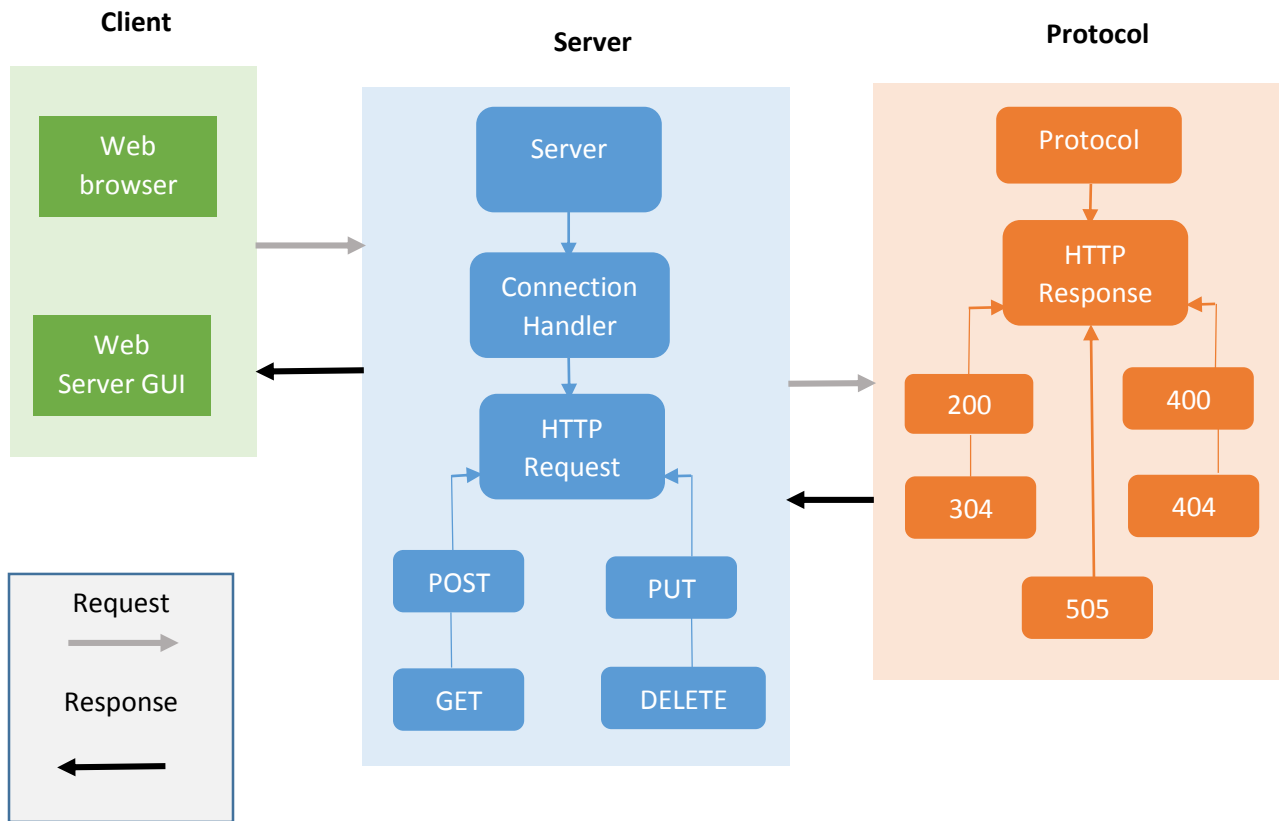


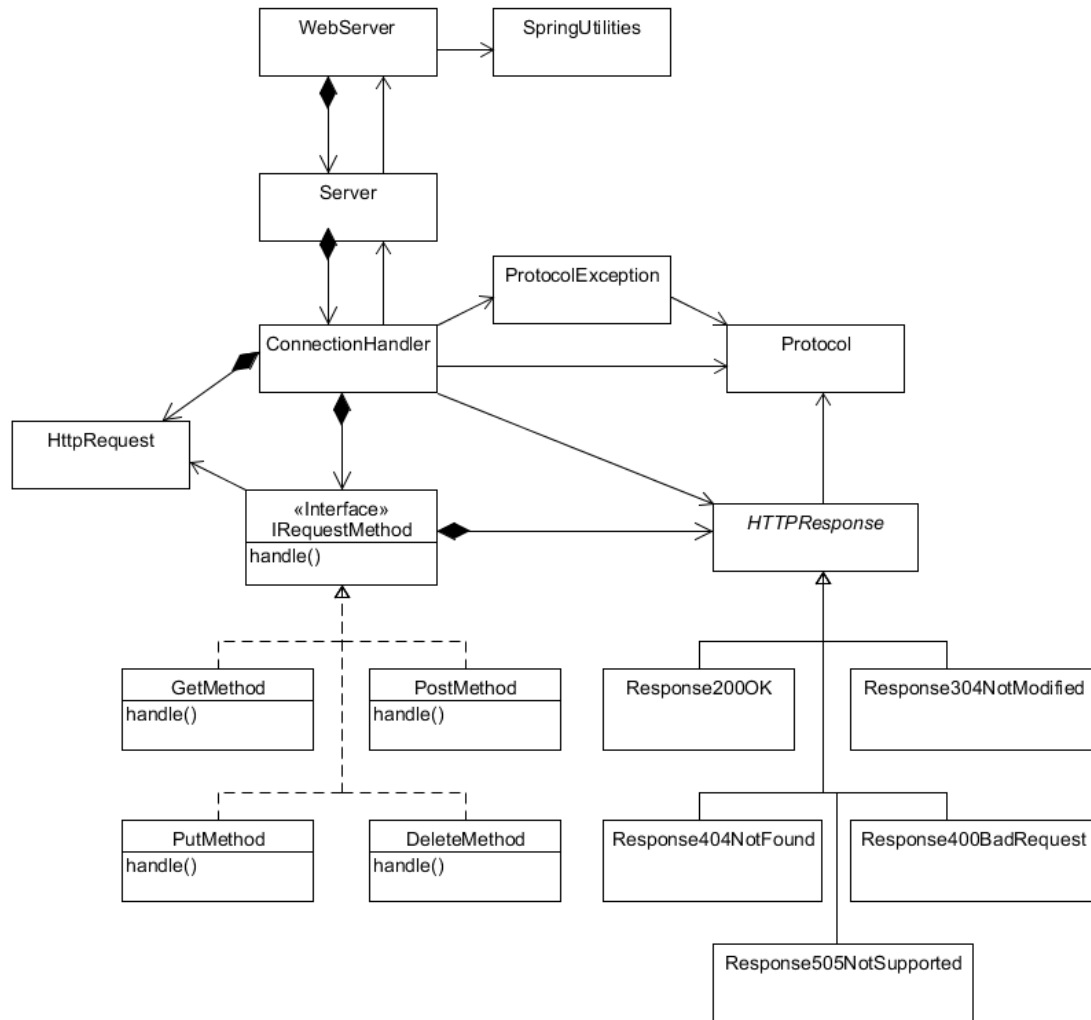
Milestone 1 – Web Server Report

Team RAJ – Angelica Rodriguez, John Krasich CSSE 477

Architecture Diagram



Detailed Design



Our refactoring of the web server utilized the following design patterns:

Strategy Pattern – The **IRequestMethod** interface allows for the various implementations of request handling to be completed in unique classes. This way, additional request handling can be implemented with minimal changes to the **ConnectionHandler** class – simply add the new request to the **ConnectionHandler**'s map of request methods.

Bridge Pattern – The abstract **HTTPResponse** class is used by the **ConnectionHandler** to write the generated response back to the client. However, the responses vary depending on the response code. Using a bridge pattern, each different response's implementation can be handled in separate classes without the **ConnectionHandler** needing to have any knowledge of how it is implemented.

Further Improvements

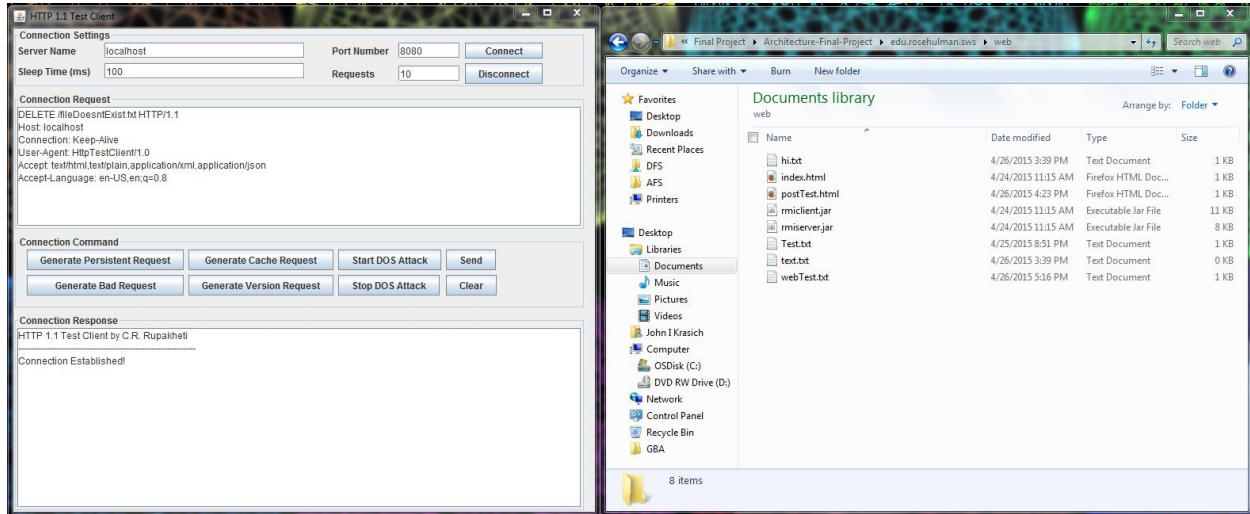
One area that can be further refactored would involve dividing the responsibilities of the `ConnectionHandler` class separately between requests and responses. The “run” method is rather long – breaking this up into different methods (or different classes) would make the code much more organized and easier to understand.

Test Report

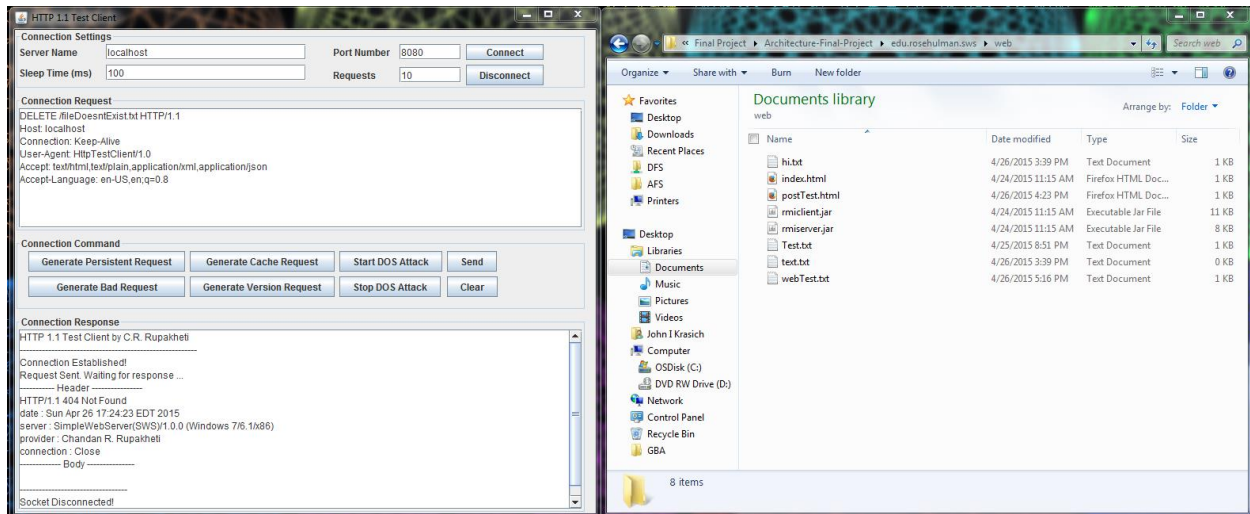
Testing Utility

DELETE of Non-Existent File

Before:

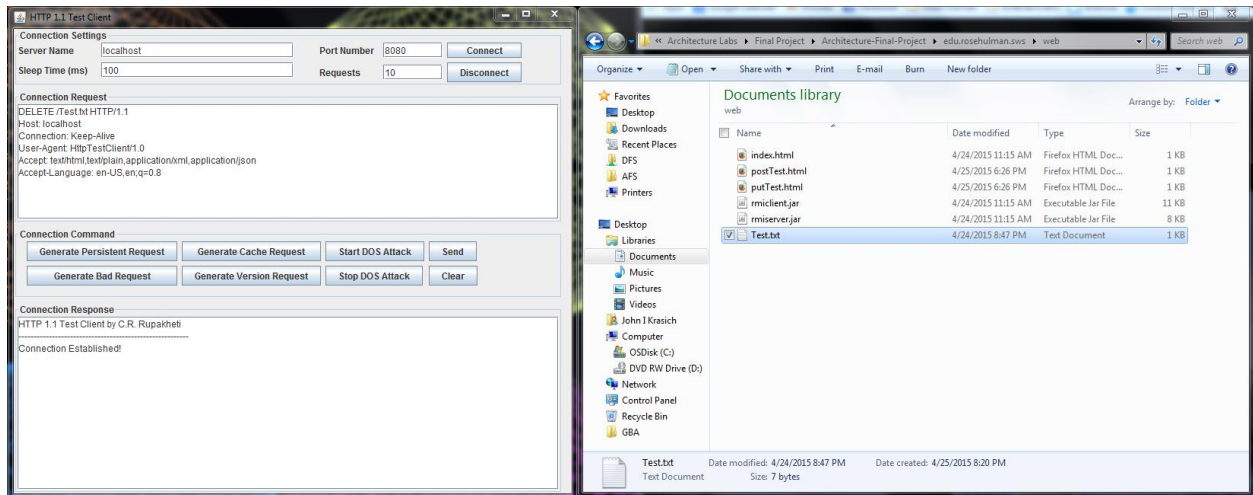


After: Response 404 Not Found

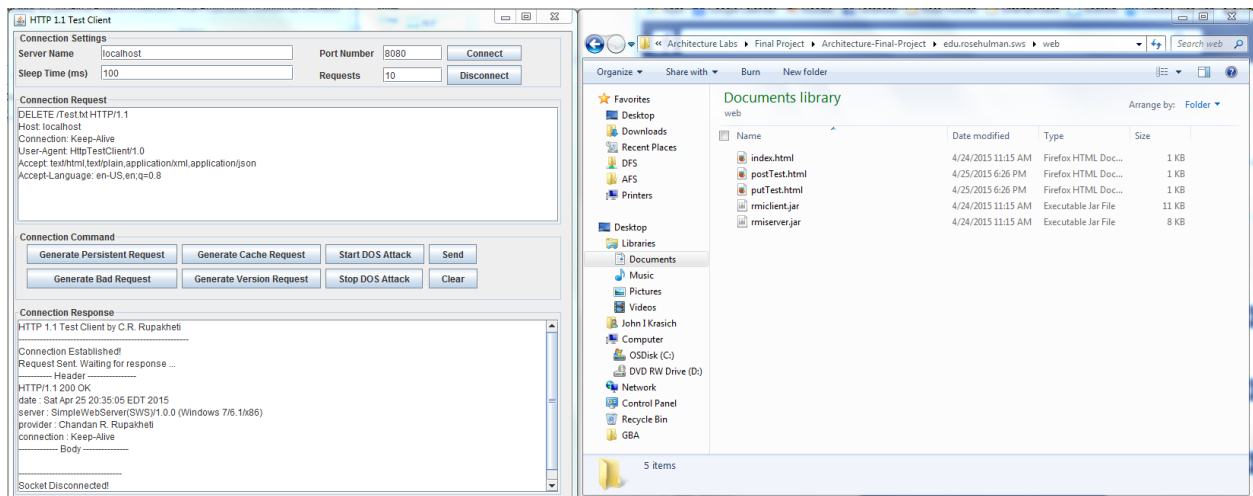


DELETE

Before:

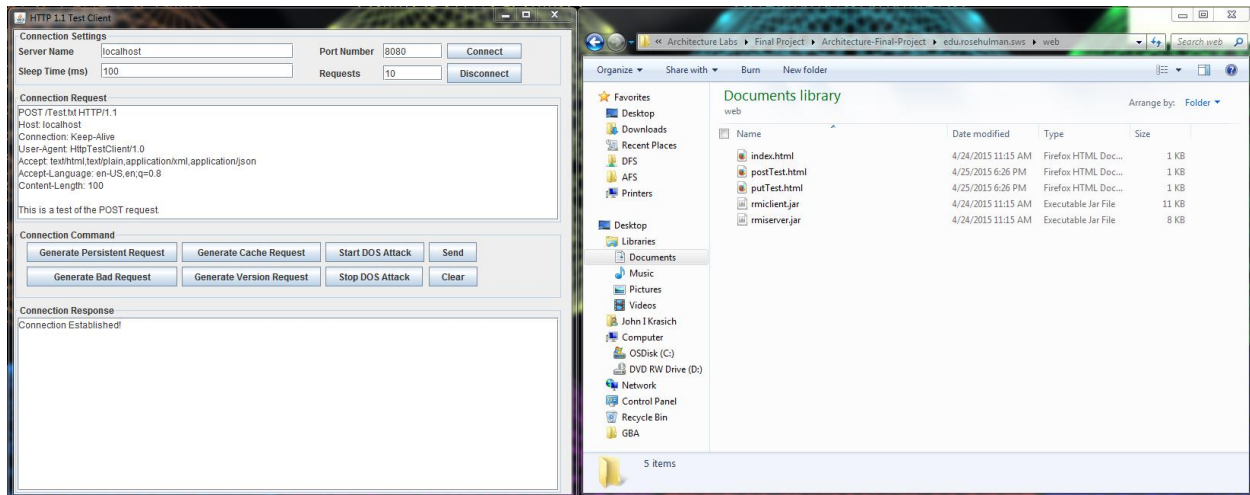


After: Response – 200 OK. File Test.txt has been deleted successfully

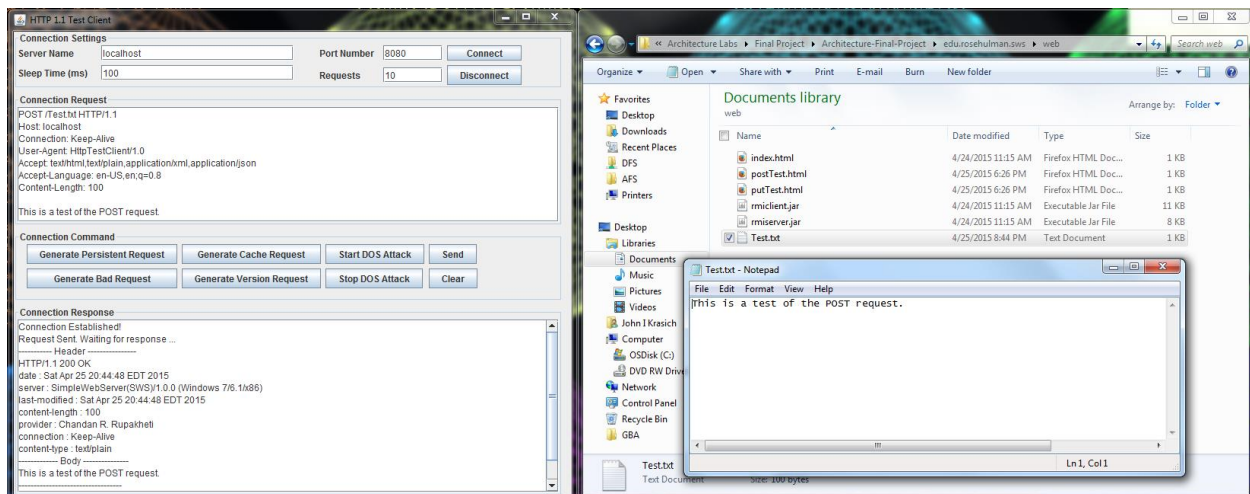


POST

Before:

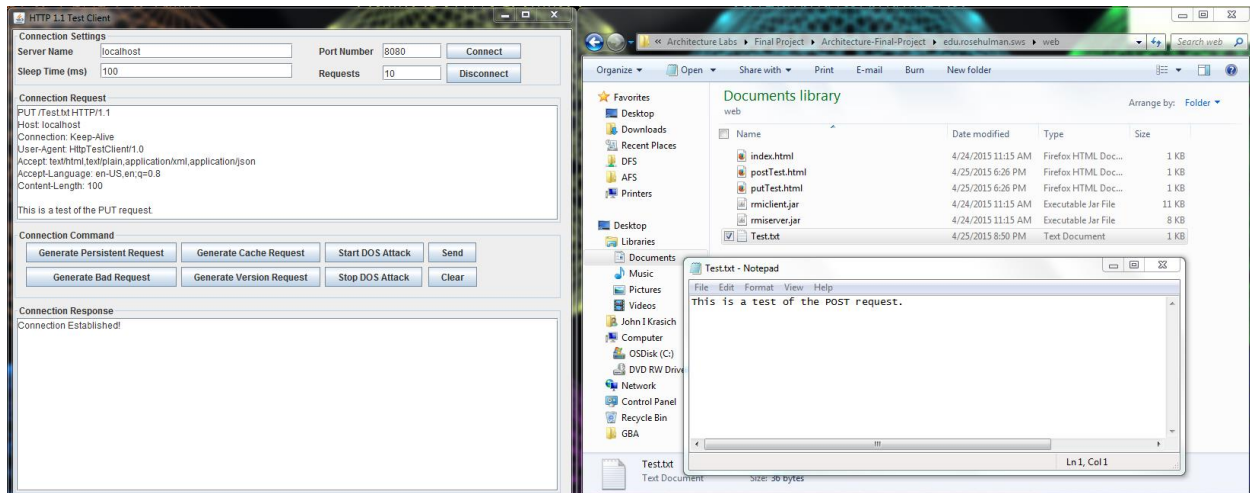


After: Response 200 OK. The file Test.txt has been created and filled with the body of the request.

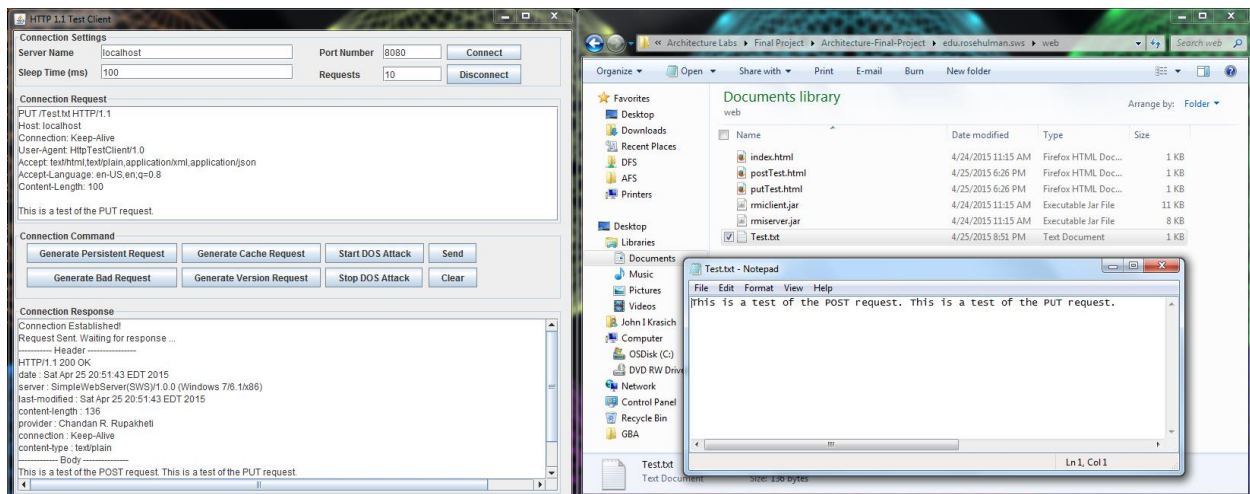


PUT

Before:



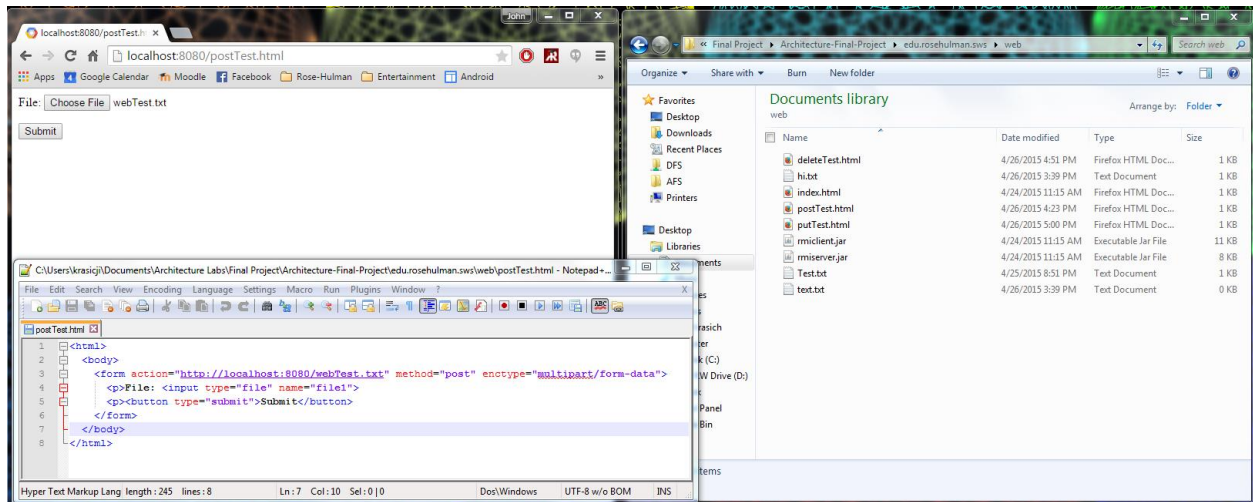
After: Response 200 OK. The body of the request was appended to the Test.txt file.



Web Browser

POST

Before:



After: Response 200 OK – the text of the file was written into webTest.txt and returned as the body in the response.

