**Project #3: Network Communication Using Sockets**

**Summary**

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OBJECTIVE:

The aim of the project was to implement a web browser which is capable to read the HTML pages and images and is able to present it to the user. The web browser applies the concept of server client model. The user as a client connects to the webserver by entering the desired URL. It sends an HTTP GET request to the server the data which is received will be parsed or will display error message in case of anomalies. For images it sends extra HTTP GET requests for each one. All this data is fetched via use of sockets and is shown on the page to the user.

Implementation of the Project:

There are two classes, BrowserClientBackend and MyBrowser.

BrowserClientBackend is responsible for making socket connection and fetching the image and html data from socket.

MyBrowser is responsible for getting valid URL from user and send to it backend and get the raw HTML content. After getting raw content, it parses the content and shows refined content on the UI.

Division of Labour:

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| Rahul | Image Retrieval, HTML parsing, Socket connections |
| Abhimanyu | HTML Retrieval, Image Parsing, Debugging the code |

We both divided the task in such a manner so that both of us get the proper knowledge of the project and will get insight of every part of it. Rahul handled the Image Retrieval, HTML parsing part as well as Socket connection while Abhimanyu managed HTML retrieval and Image parsing and code debugging part. Thus we both learned both the aspects of project i.e. how to connect the user to webserver via sockets and how to retrieve the text and image data as well as how to parse them and make it available to the user in desired format.

Code is well commented, which shows which methods are written by Rahul and Abhimanyu.

Learning Experience:

Understanding the Socket communication was quiet challenging as well as a good experience. We understood how Sockets works and what are the issues which we faced during the data retrieval and parsing phase. One of the biggest concern was removal of HTTP header during image fetching. The image representation was also one of the issues as the images were of different resolution which made it quite difficult to extract them and represent it in proper format.