CS 176B

Winter 2018

Project Deliverable #A

Network Computing

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Title:

FTPxpress

Team Members:

- Ben Patient
- Danish Vaid
- Jake Can

Team Size Justification: Having been in the same capstone team for CS 189A/B the three of us established a good workflow and our similar schedules let us coordinate and work well together. We hope to use these advantages to build a solid project and have many ideas for features we could implement and networking challenges for us to overcome.

Project Description:

For our project, we would like to create our own version of a FTP server, client, and protocol. In doing this we would also be implementing custom headers to tailor the protocol to our priorities and for features we want to implement. These headers would include information on file name, file type, packet ordering, payload size, etc. Upon the basics of FTP, we also plan to add network security features (for user privacy and ensuring data integrity) and support for parallelized multi-file upload/download for performance. We hope for our server program to server multiple clients, this feature would have us identify specific users to differentiate who is sending what packet to ensure there are no errors.

Deliverables:

At minimum we want to deliver a basic FTP protocol with our custom headers and a minimal terminal UI for usage. Having finished the features discussed about, we would like to support basic commands such as list files, delete file, move file, and such. Finally, our physical deliverable will be our source code, and a report that describes the project, its completion and usage, and performance analysis.

Timeline:

Week 3: Design our headers and protocol schematics
Week 4: Successfully send over a file from 1 user to another
Week 5: Implement basic terminal UI and command support
Week 6: Implement parallelized upload/download
Week 7: Implement network security
Week 8: Run performance testing methods
Week 9: Refine code and finalize project/report.