Team MD5 AwSum

WHAT WE LEARNED:

Importance of Design:

We believe it would not have been possible to complete this project without having a fully fleshed-out design before beginning to write code.Working alone on small projects, sometimes a beginner programmer can write a few lines of code that generally accomplish the task at hand, and then later modularize this small bit of code into a larger project. As the complexity of our projects increases, this method no longer works. For a large scale project with collaboration, the project must be fully designed before any development begins.We attribute the success of our project to our design process.

Utility of Source Control:

This was many of our team member's first experience using git. Once we all had a clear understanding of the mechanics of pulling, pushing, and committing things went very smoothly.We only met in person twice, and the rest of our work and communication happened remotely. The team leaders were able to monitor changes via the commit log, and revert if anything went wrong. Our team now understands the value of these tools.

FUTURE WORK

If we were to continue work on MD5AwSum we would make the following additions and changes:

Replace md5lib.cpp with a more well known hashing library:

While our implementation of the md5 hashing algorithm is functional, and quite efficient, we feel that as an open source project it would be better to work from a pre-existing popular library that more members of the open source community are likely to have experience with. For this reason we would find a popular hashing library to replace our implementation.

Create a way for users to reference individual entries in a hash table, for future features:

There are a number of features that we considered adding, but chose not to, because we had not designed a way of referencing individual entries in the local repository. Adding this functionality would let us create a few new features. One feature discussed would be removing individual entries from the local hash table (as opposed to removing entire repositories). And other is allowing entries to have a "url" attribute, allowing our program to download and verify files by referencing their hash table entry. This functionality would also allow us to warn the user when duplicate entries are added, and replace the duplicate after prompting the user.

Overall, we feel that our project was successful. We did meet our goals, and also managed to add a few extra features that were not part of our initial design.