Lessons Learned

Throughout the last few months, our group has learned a lot about proper coding practices/techniques and even more so about the environment programmers face when working with a team on software development. Some of the lessons we learned are:

- How to delegate work. With seven people in a group, it can often be difficult to delegate work in such a way as to give every person an equal amount of work and not have overlapping code. Through this project we learned how to split up work evenly, making our code very modular and able shareable.
- How to use reference structures in C++. Often times, our code needed something done to it that was behind the scope of what was covered in Java. Thus, lots of the techniques (such as using pointers or dynamic arrays) that we learned this semester were put to use, increasing our familiarity with the OOP of C++.
- The importance of sticking to deadlines. While all of us did a fairly good job getting our work done before the due date, we had some touch ups to make a day before it was due. In performing these small enhancements, we realized that the anxiety last minute coding does not allow us to function to our fullest. Fortunately the temporary set-backs were fixed, and we learned important lessons from them.

Future Work

Related to our Current Project

Overall, our group is very proud of the work we accomplished over the last few months. We have over 1000 lines of in-depth code that accurately displays the vast amount of work we put in. That said, we do have a few things that we would change in the future:

- We would build a G.U.I. Many of the TAs advised against this due to the fact that GUIs have caused many students to stumble in past. Because of how many parts make up our project, however, a GUI would be especially well suited to allow users to effectively use all the tools we provided.
- We would fix our time complexity issues. Because none of us have taken data structures, we had to take a brute force approach to a section of our code. This approach elongated the amount of time the program takes to run. Had we gained slightly more experience, we would have been able to fix this issue so that users could effectively decrypt things that have been more securely encrypted.
- We would also be more consistent in keeping each other accountable. While everyone did finish their sections, there were instances where we would overstep the deadlines that we imposed on ourselves, and those cases affected everyone else. In the future, we will remedy this by each person keeping someone else accountable to finish their work.