CS 242 Final Project Proposal

<ASCII Video Converter>
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1.   Abstract
1.1.   Project Purpose
What is the purpose of this project? What problems do you want to solve?

The ASCII Video converter can let users customize their own ASCII video.
We will focus on implementing playing video in a single terminal window instead of outputting dozens of pictures. After that, we want to do more research on processing image with multi-thread and multi-process. Therefore, the performance of this converter can be further optimized.

1.2.   Background/Motivation
Why are you interested in doing this project? Have you worked on something similar before?

Because the Star War ASCII video is famous online, we want to make a tool that helps everyone can generate his/her own ASCII video. Also, the train animation in Linux system inspired us to build this project can play a movie in the terminal window.

2.   Technical Specifications

2.1.   Platform: Windows, Linux
2.2.   Programming Languages: Python
2.3.   Stylistic Conventions: camelCase
2.4.   SDK: Python 3
2.5.   IDE: Pycharm
2.6.   Tools/Interfaces: Email, Browser
2.7.   Target Audience: ASCII art lover

3.   Functional Specifications
3.1.   Features
Several bullet points of what kind of functionality your project will feature. What should the user be able to do?
        - Sending email via files to convert general video to ASCII video
        - Playing ASCII video in terminal
3.2.   Scope of project
What are some of the limitations of this product?
        - Internet required, not run-time

4.   Timeline:

4.1.   Week 1
4.1.1. Parse pixel into ASCII code depending on its Alpha value.
4.1.2. Parse input video into a collection of images.

4.2.   Week 2
4.2.1   Setup email server and enable email receiving and sending service
4.2.2   Process the images into ASCII form, and output in the terminal.

4.3.   Week 3
4.3.1   Terminal single window play. Assemble outputs as video.
4.3.2   Optimize converting algorithm

4.4.   Week 4
4.4.1   Add sound in Terminal
4.4.2   Attach link via email to play video on the website

5.   Future Enhancements
What are some cool tweaks you'd want to make to your product after the core functionality is done? Are you planning to work on it in the future?

Giving chance to users to customize characters might add some interesting factor for this project. Further optimization of running time can be another direction we can work on in the future.