**Week2 Group Discussion**

1. Project outline of the key milestones.

Our group has created a Project plan to distribute the task roles, and each week we will have a group discussion to update and rearrange our weekly task roles.

We have also explicitly decided on the group member to be responsible for each week’s assignment by rotation. Other group members will still be required to give input on each week’s assignment.

Considering the 8-week time limit, we haven’t decided if we will deploy the unit testing framework for the main functions: encoding and decoding the image.

For the project, Jonathan Mainhart will be taking the lead role for the tasks: project design and implementation for the main function of encoding and decoding the uploaded image.

Linden Crandall and I will be giving input on the following tasks: project design and implementation of GUI, File I/O, error handler, and overall test plan.

As a group organizer, I will frequently update and modify the project plan based on the group members' feedback and our progress.

Below is a screen capture of the group project plan with the key milestones for the project.

A picture containing table

Description automatically generated

1. Project description.

The project will be a Python GUI application that allows a user to encode a plain text message inside of an image file. The image can then be sent to a receiver who can decode the hidden message.

Below is a list of project features and scenarios.

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| Features | Scenarios |
| Open Image | A user wants to choose the image to hide data so that the image doesn’t look suspicious. |
| Save Image | A user wants to save and rename the new image that contains the hidden data so that the original image can keep unchanged. |
| Reset Image | A user wants to undo the steganography in the case that the user needs to rewrite the message or selects a different photo. |
| Delete  Image | A user wants to have the option to replace and delete the original photo with the new photo containing the text message in order to enhance security and remove any frame of reference(s). |
| Hide Data | A user wants to hide a text message inside of an image so that the contents of the message do not draw attention. |
| Show Data | A user wants to reveal the text message inside of an image (if any) so that the user can read the hidden message. |
| Text Field | A user wants to enter the text message so that the user can choose to encode the written message into the image. |
| Image Display Area | A user wants to see the image before encoding the text message so that the user can make sure of the image. |
| Message Dialog | A user wants to be informed after the encode/decode of the image is done so that the user knows immediately whether the encode/decode is successful or failed. |

1. System specification.

The application will be written in Python 3.9 and run on any system with Python 3.9 or newer installed.