

**Design Document**  
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**Image Software**

Main function Algorithm:

- Display a menu to the user:
  - Load an image
    - Utilize a load image function
  - Display current image
  - Edit current image
    - Utilize an edit image function
  - Exit program
- Prompt the user for the option they would like

Load Image Function Algorithm:

- Close current image file open
- Prompt the user for the new image file's name to connect to a new stream
- Check the size of the image(utilize a 2D array)
  - Counts the amount of rows and columns the file has
- Save as new reference file for future tasks to complete if the user desires so
- Return back to the main menu

Edit Image Function Algorithm:

- Display a menu to the user:
  - Crop
    - Utilize a cropping function
  - Dim
    - Utilize a dimming function
  - Brighten
    - Brightening function
  - Rotate 90 degrees

- Utilize a rotate image function
- Prompt the user for the option they would like

#### Crop Function Algorithm:

- Prompt the user for the range of pixels they would like to crop into a new image
  - Perform task with selection of 2D array coordinates
- Utilize the save file function after task is complete

#### Dim Function Algorithm:

- Prompt the user for how much dimmer they would like their image to be(numerical value)
  - Reduce brightness
- Utilize the save file function after task is complete

#### Brighten Function Algorithm:

- Prompt the user for how much brighter they would like their image to be(numerical value)
  - Increase brightness
- Utilize the save file function after task is complete

#### Rotate Function ALgorithm:

- Prompt the user how many 90 degree rotations they would like to make to the image for desired orientation
  - Move all pixels in the image left/right/up/down based on location
    - Direction would move the length or height of the image
- Utilize the save file function after task is complete

#### Save File Function Algorithm:

- If an edit to an image file has been made,  
prompt the user to save to a file
  - If yes, prompt the user for a filename to  
save the changes to
  - Save the changes to file
  - Return back to the main menu