

Design Document  
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Erinstagram

### Functionality (Game Play)

Give the user multiple options to recreate their image in multiple ways. Treat it as if it were a regular simple editing software for a grayscale image. These edits should allow the basics such as cropping, dimming, and brightening of any inputted image with an additional rotation effect. The user should then be able to save the image

### Functions

main()

**Data:** Switch statements

**Functionality:** Provide a first menu to allow the user to upload a new image, display the current image, edit the image, or exit the program.

**Algorithm:**

- Get image

- Repeat until exit

- Display menu options

  - If the user wants to change the image

    - Let the user upload a new image

  - If the user wants to display the current image

    - Display the image

  - If the user wants to edit the image

    - Go to edit options

  - If the user wants to exit the program

    - Quit

new()

**Functionality:** Allows the user to upload a new image to replace the current one.

**Algorithm:**

- Replace old image with new image

display()

**Functionality:** Displays the current image.

**Algorithm:**

- Display input image.

editMenu()

**Data:** Switch statements

**Functionality:** Brings the user to a second menu to edit the image. The menu will allow the image to be cropped, dimmed, brightened, or rotated.

**Algorithm:**

- Repeat until exiting

- Display menu

- If user wants to crop

- Go to the cropping option

- If the user wants to darken the image

- Go to the dim option

- If the user wants to brighten the image

- Go to the brighten option

- If the user wants to rotate the image

- Go to the rotate option

- If the user wants to quit

- Save it

crop()

**Functionality:** Allows the user to take chunks off of the image (crop it).

**Algorithm:**

- Repeat until exiting option

- Display the image

- Let the user remove parts of the image

- Save it

dim()

**Data:** Switch statements (space, period)

**Functionality:** Allows the user to make the image darker.

**Algorithm:**

- Repeat until exiting option

- Display the image

- Let the user choose which dark value they want

- Save the image

brighten()

**Data:** Switch statements (O, 0)

**Functionality:** Allows the user to make the image brighter.

**Algorithm:**

- Repeat until exiting option

- Display the image

- Let the user choose which brightness value they want

- Save the image

rotate()

**Functionality:** Allows the user to “rotate” the image 90 degrees.

**Algorithm:**

- Repeat until exiting option

- Display the image

- Let the user choose how many times to make the pixels move

- Save the image

save()

**Data:** String

**Functionality:** Allow the user to save the edits on their image by letting them name the file. After, return to the main menu.

**Algorithm:**

- Ask the user to name the image

- Get the name

  - If there is no name or no valid name, repeat until given a valid name

- If there is a valid name, save the image

- Return to first menu

