**Data**

Image- 2D array of chars

**How it works**

The user will be presented with options to load a new image, display the current image, edit the current image, and exit the program. The image will be stored in files which will have numerical brightness values that will be presented with characters to the user. Should the user choose to edit the image, they will be able to crop, dim, and brighten the image. Afterwards, they will be able to save the image to a file with a name they provide and returned to the first menu.

**Functions**

main()

**Data:** Array for image

**Functionality:** Display menu and prompt user to choose between loading a new image, displaying the current image, editing the current image, and exiting the program. Choose between cropping, dimming, and brightening. Prompt user to save file and give file name and return to first menu.

menuOption()

**Input Parameters:** choice pointer

**Returned Output:** None

**Functionality:** Get user choice from the options presented in the menu.

loadNewImage()

**Input Parameters:** int rows, int column, char 2D array, file pointer

**Returned Output:** None

**Functionality:** Get the image from the file or array, change numerical values to corresponding character values, and assign the values to the array using a loop.

displayImage()

**Input Parameters:** int rows, int column, char 2D array

**Returned Output:** None

**Functionality:** Display the values in the array using loops.

getEditChoice()

**Input Parameters**: None

**Returned Output:** The editing option selected by user.

**Functionality:** Get user’s editing choice.

getCropImageSize()

**Input Parameters:** int\* length, int\* width

**Returned Output:** none

**Functionality:** Ask user to input by how much they want to crop the length and width of the image by

cropImage()

**Input Parameters:** int\* rows, int\* column, length, width

**Returned Output:** None

**Functionality:** Subtract the rows and columns of array by the length and width.

dimImage()

**Input Parameters:** int rows, int column, char 2D array, file pointer

**Returned Output:** none

**Functionality:** Get image from file and assign to array using loops. Subtract values in array by 1 using loops.

brightenImage()

**Input Parameters:** int rows, int column, char 2D array, file pointer

**Returned Output:** none

**Functionality**: Get image from file and assign to array using loops. Add values in array by 1 using loops.