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Program #5 algorithm

1. Prompt user to input what type of filter they would like on their picture.
   1. Function
      1. Grayscale
      2. Vintage
      3. Quit
         1. Break
2. Prompt user for what file they would like to use
   1. Function
      1. User file to be opened
         1. Try / except error handling
            1. FileNotFoundError

Print(“Invalid file name, please try again.”)

* + - * 1. IOError

Print(“IOError, please input file name again.”)

* + 1. Prompt for a file they would like to write out to
       1. Error handling for invalid file name format
    2. Close file

1. Check if file is formatted correctly
   1. Function
   2. Iterate over user file
      1. Run a check to verify the P3 is in the first line of the file
         1. If p3 not in first line of file
            1. Print(“Error, incorrect file”)
      2. Check that color depth is 255
         1. If color depth is not 255
            1. Print(“Error, incorrect file”)
2. If user selects grayscale
   1. For red in pixel: grayscale = 0.299\*red
   2. For green in pixel: grayscale = 0.587\*green
   3. For blue in pixel: grayscale = 0.114\*blue
   4. The sum of all of these pixels = total grayscale
3. If user selects vintage
   1. Iterate over user file
   2. Find the blue value in pixel
   3. Decrease the value of the blue pixel by ½ so that if it had been 100, it would be converted to 50.