USEME

How to use GUI

Run the .jar file without any arguments using the command "java -jar IMEA.jar" from the res folder.
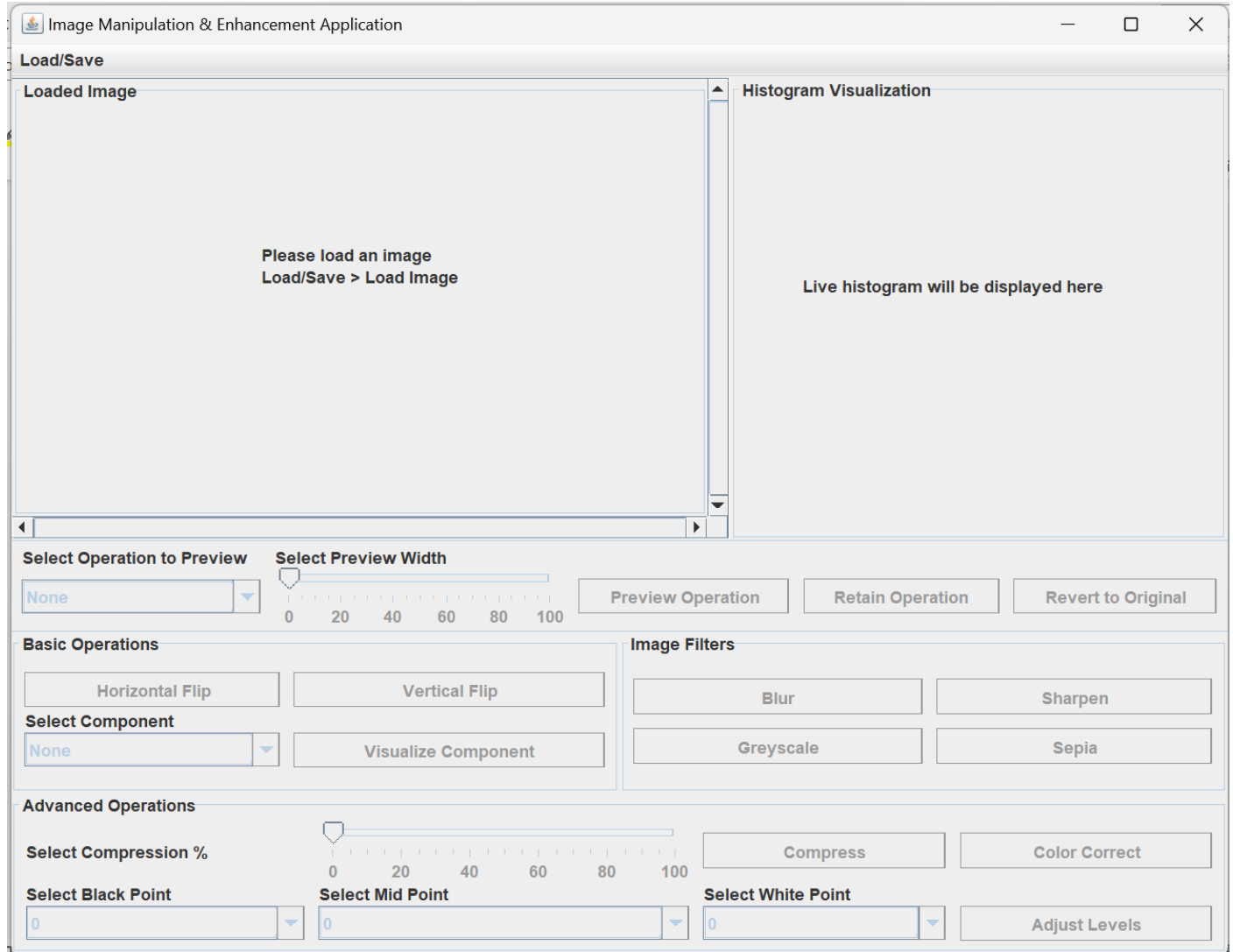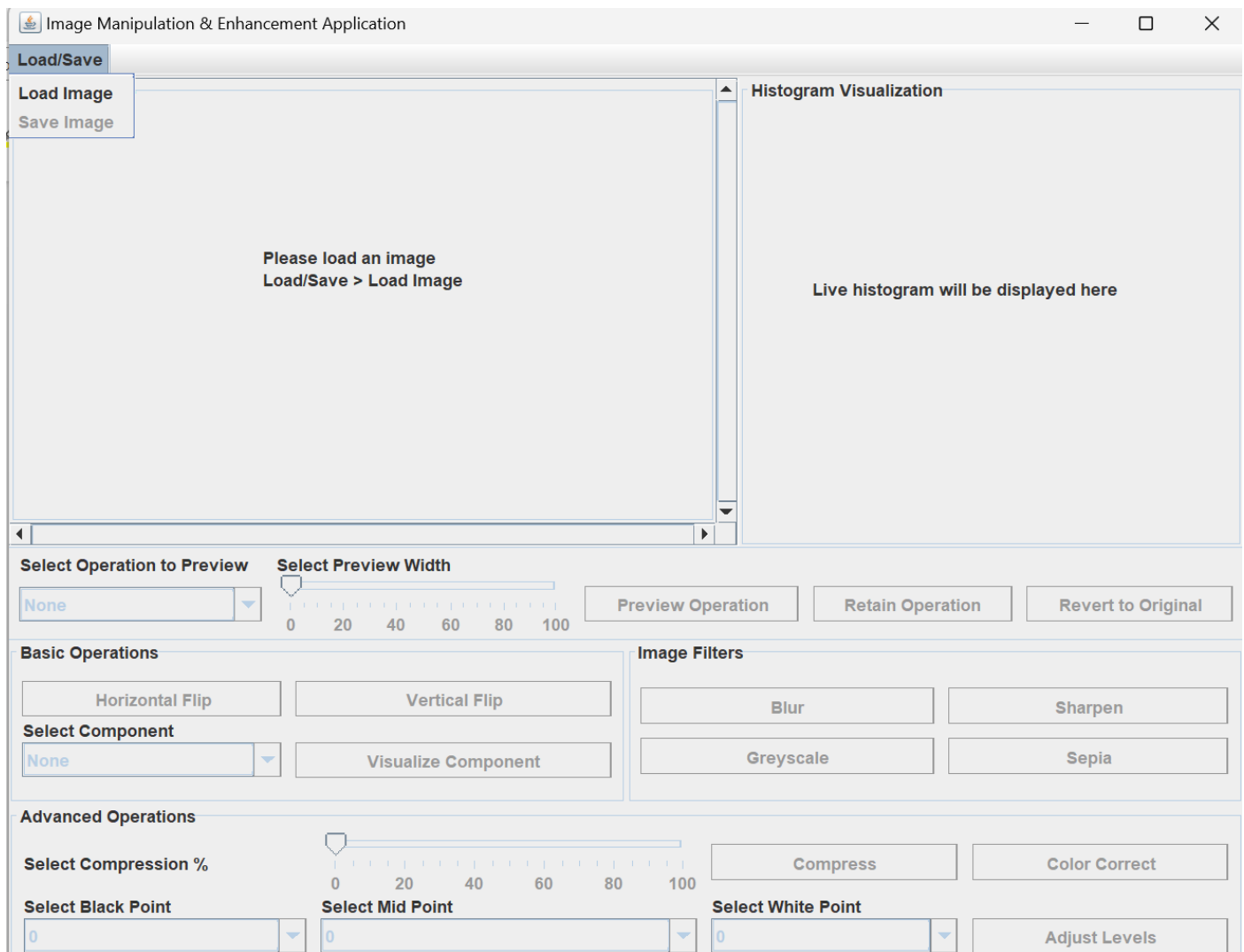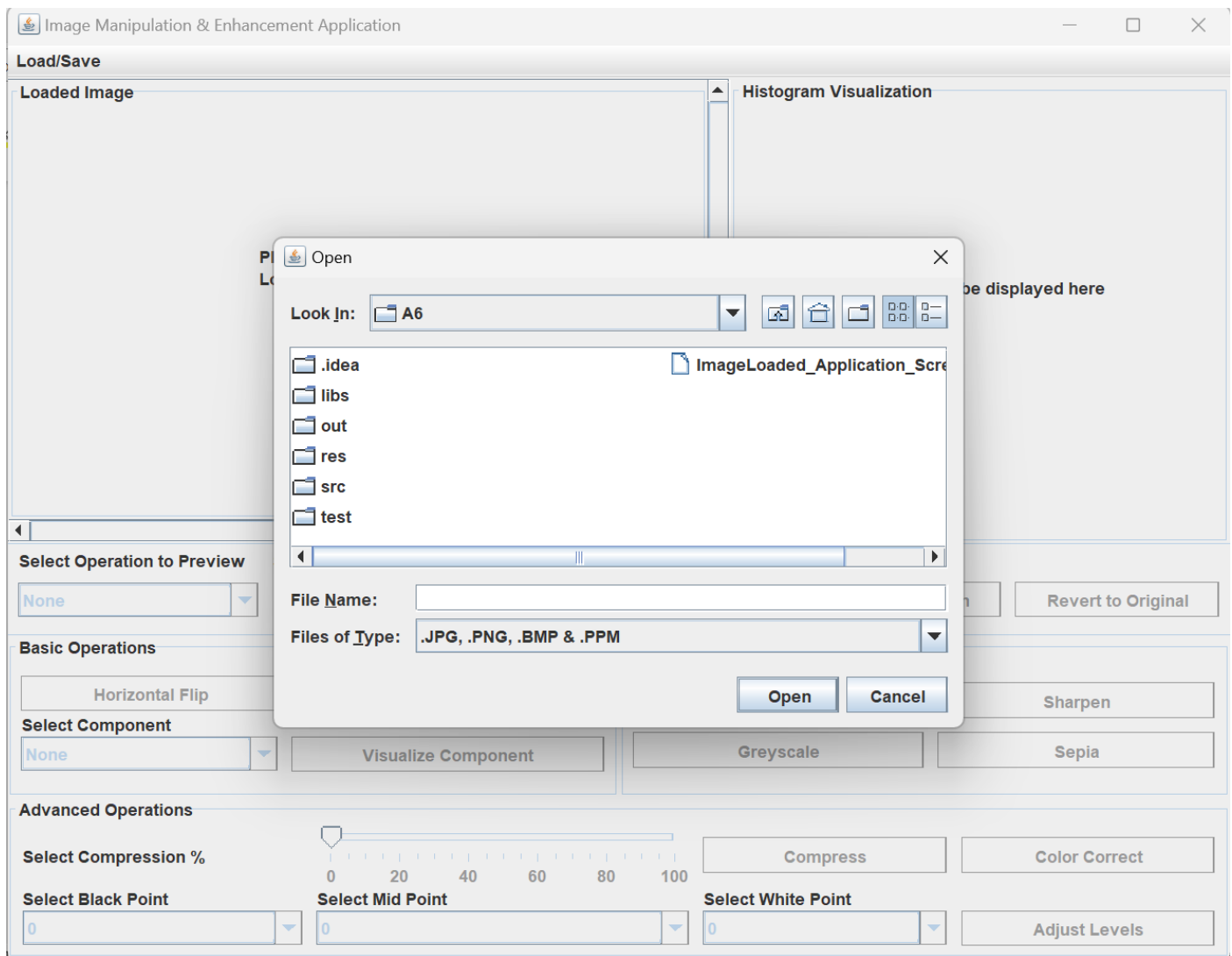
GUI will be opened as below.

Image Operations –

- **Load & save an image.**
  To **load** an image, click on the Load/Save menu option visible at the top left corner of the application.
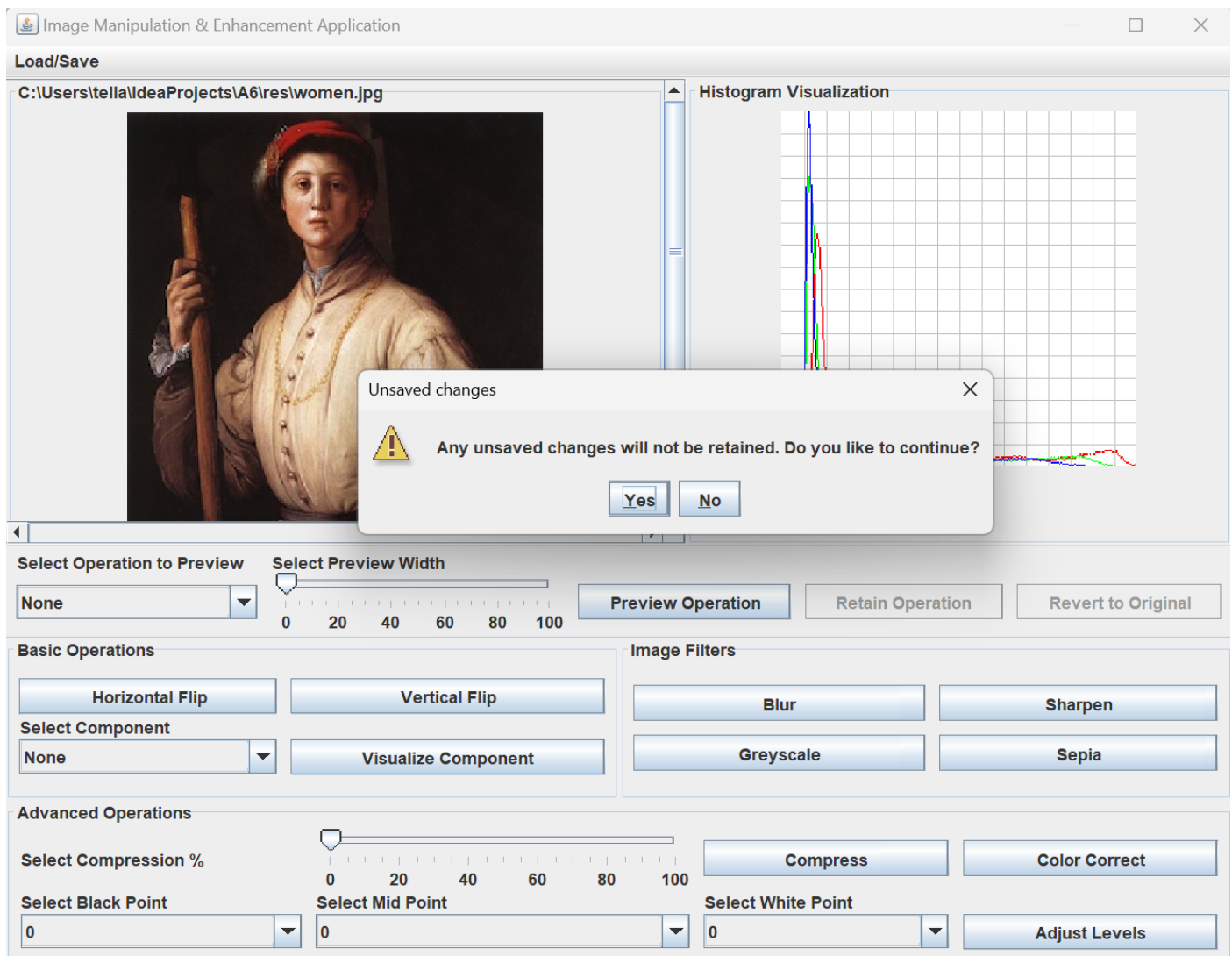
When you click on load, a popup will be opened to allow user to select an image in jpg, png, bmp and ppm formats.

Image Manipulation & Enhancement Application   —   □   ✕

Load/Save

Loaded Image

Histogram Visualization

Pl
Lo
be displayed here

Open   ✕

Look In: ▭ A6   ▼   [icons]

▭ .idea   📄 ImageLoaded_Application_Scre
▭ libs
▭ out
▭ res
▭ src
▭ test

File Name: [   ]
Files of Type: [.JPG, .PNG, .BMP & .PPM   ▼]

                            Open   **Cancel**

Select Operation to Preview

| None | ▼ | n | Revert to Original |

Basic Operations

Horizontal Flip   Sharpen

Select Component

| None | ▼ | Visualize Component | Greyscale | Sepia |

Advanced Operations

Select Compression %   Compress   Color Correct

      0   20   40   60   80   100

Select Black Point   **Select Mid Point**   **Select White Point**

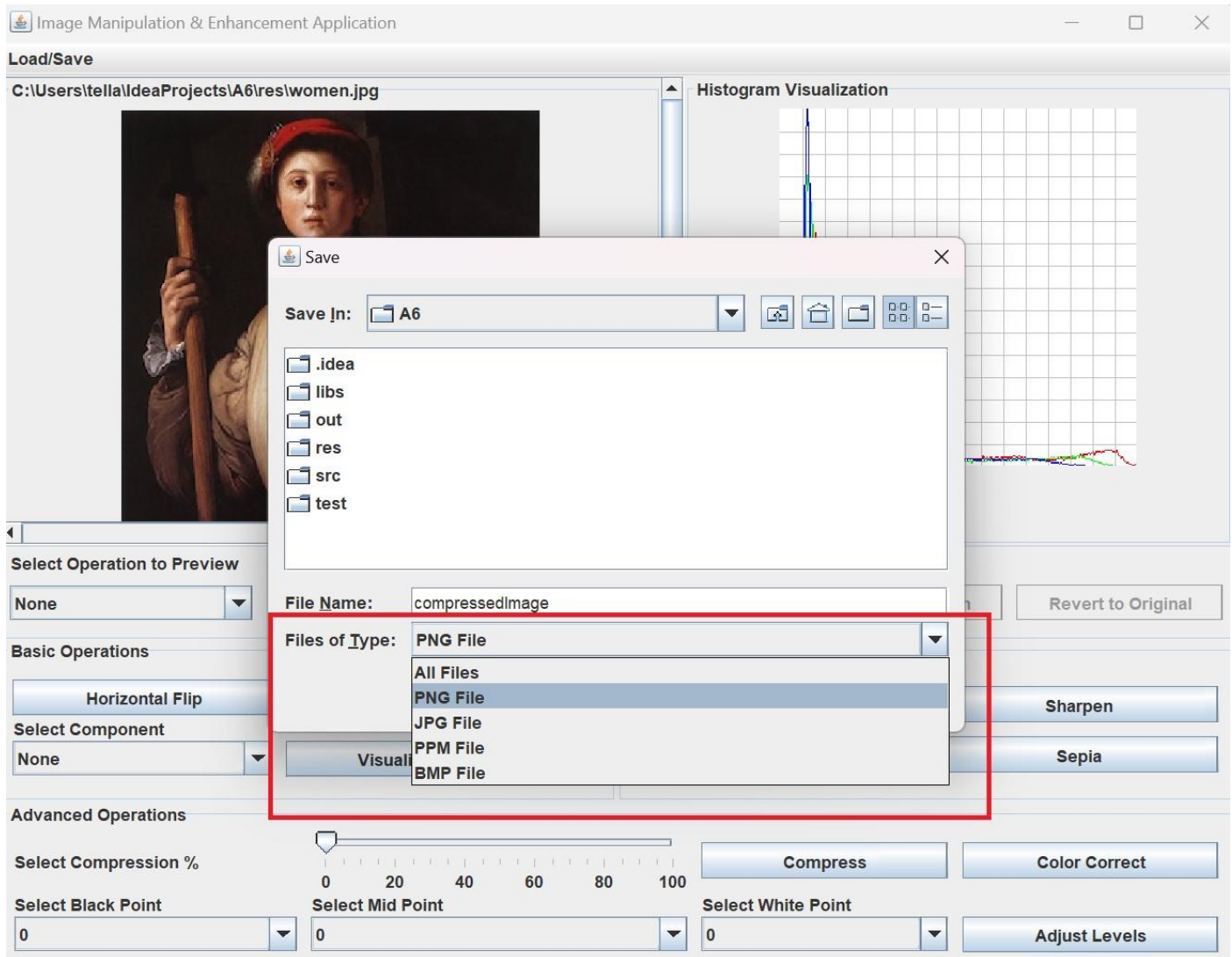| 0 | ▼ | 0 | ▼ | 0 | ▼ | Adjust Levels |

Save option and all other image operations will be disabled, till the image gets loaded successfully.

When the user tries to load an image in the middle of editing the existing image, a prompt will be displayed as below.
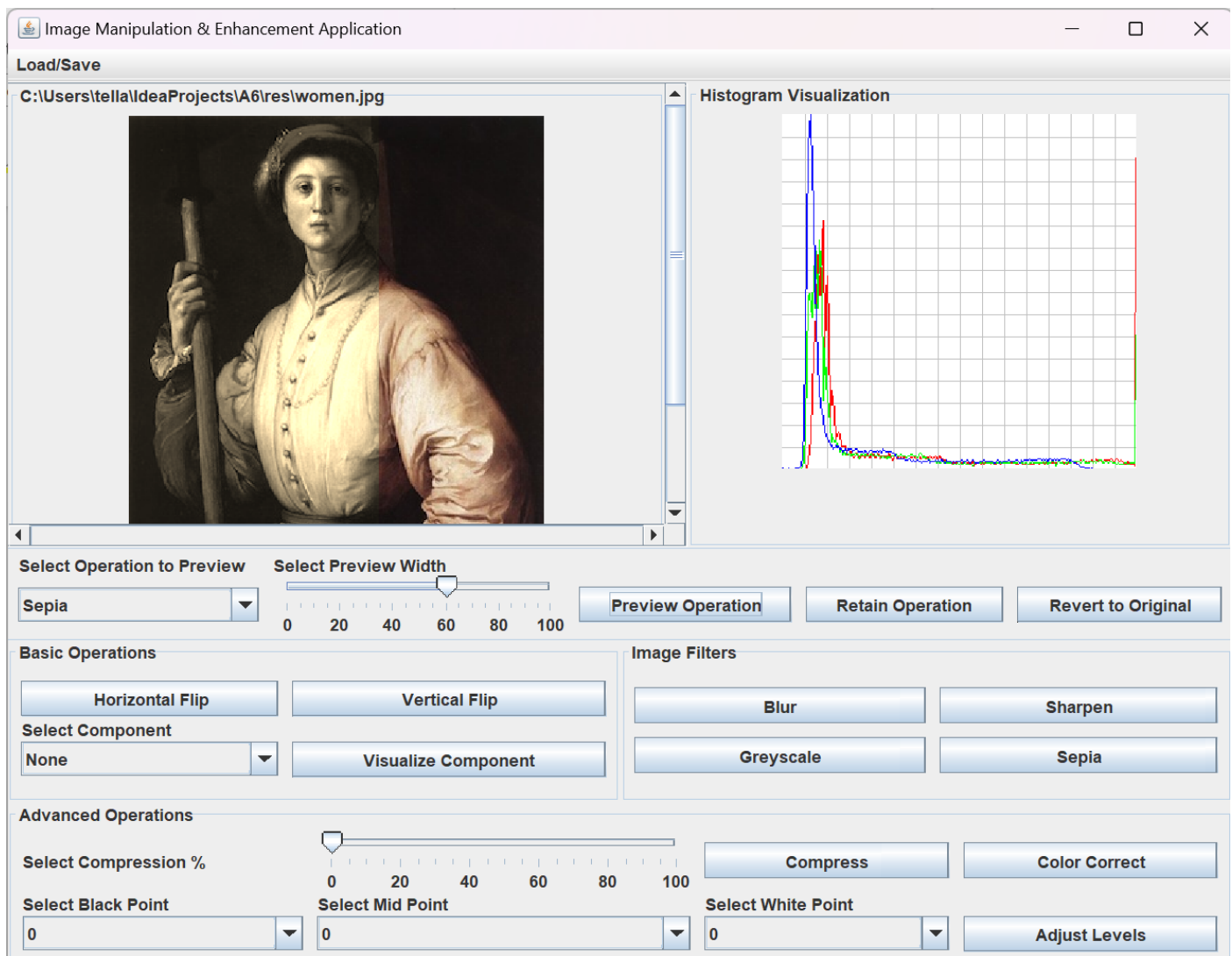
To **save** an image, user can select the save Image menu option from the Load/Save menu, and application allows the user to save the image in jpg, png, bmp and ppm formats.

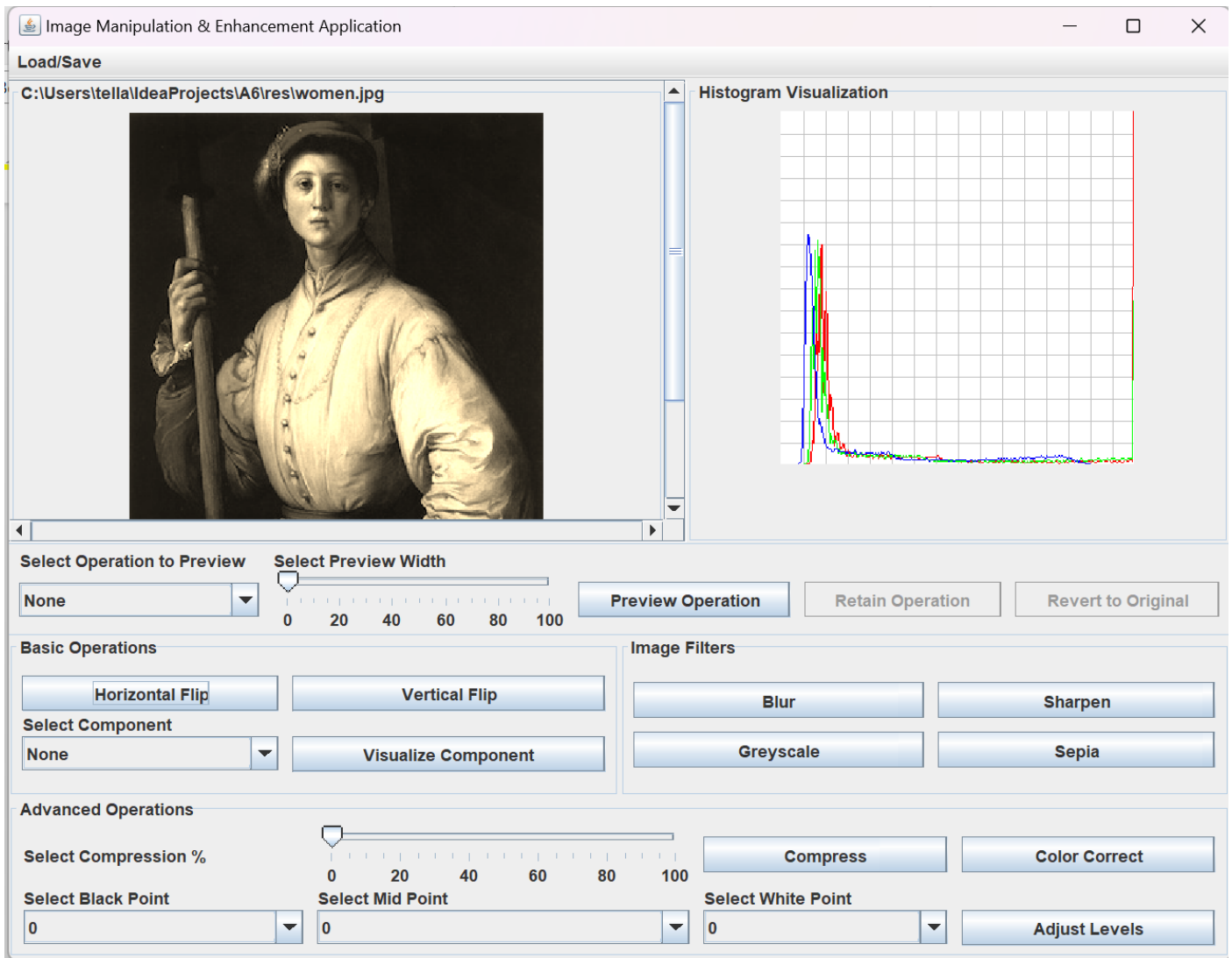And application allows the user to select from the required formats as below.
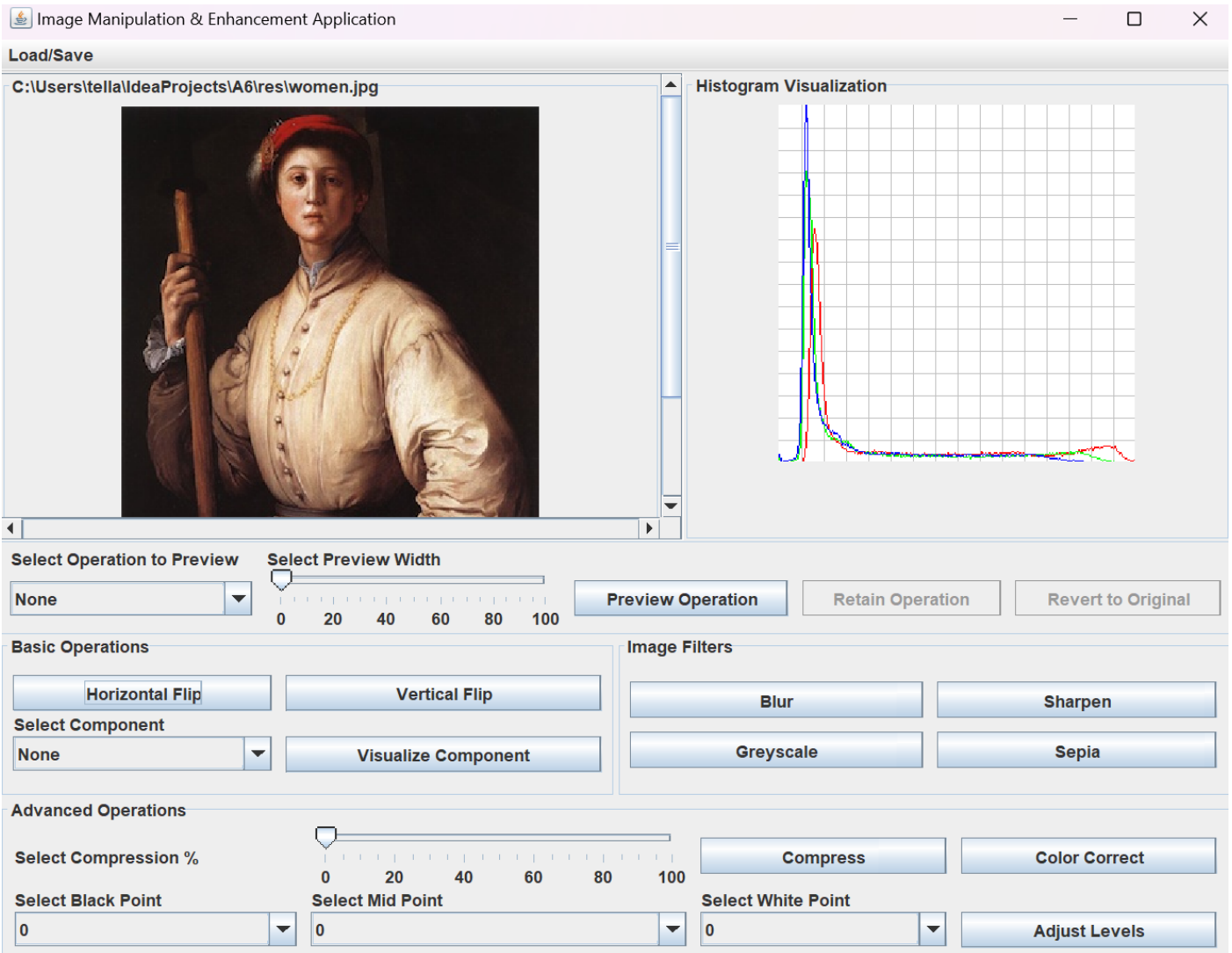
- **Split Preview**
  - **Preview Operation –** To preview any operation that supports the split view, first select the operation from the dropdown, and select the split width percentage using the slider, and then click on the Preview Operation button.
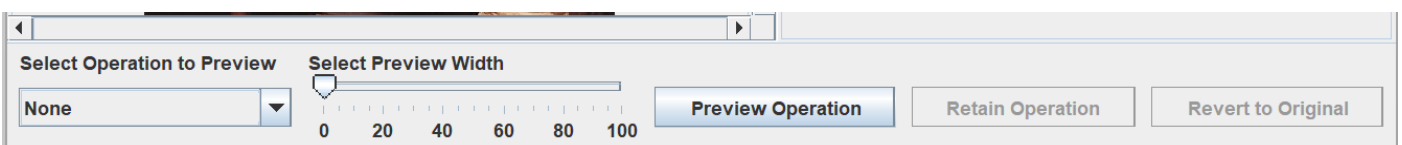 - User previewed sepia for with 60% of width

- ○ **Retain Operation** – If the user likes the preview and wishes to retain the image with the filter previewed, user can click on Retain Operation button.
- ○ User retained the operation by clicking on Retain Operation Button.

- o **Revert to Original -** If the user doesn't like the preview and wishes to go back to the previous image, user can click on Revert to Original button.
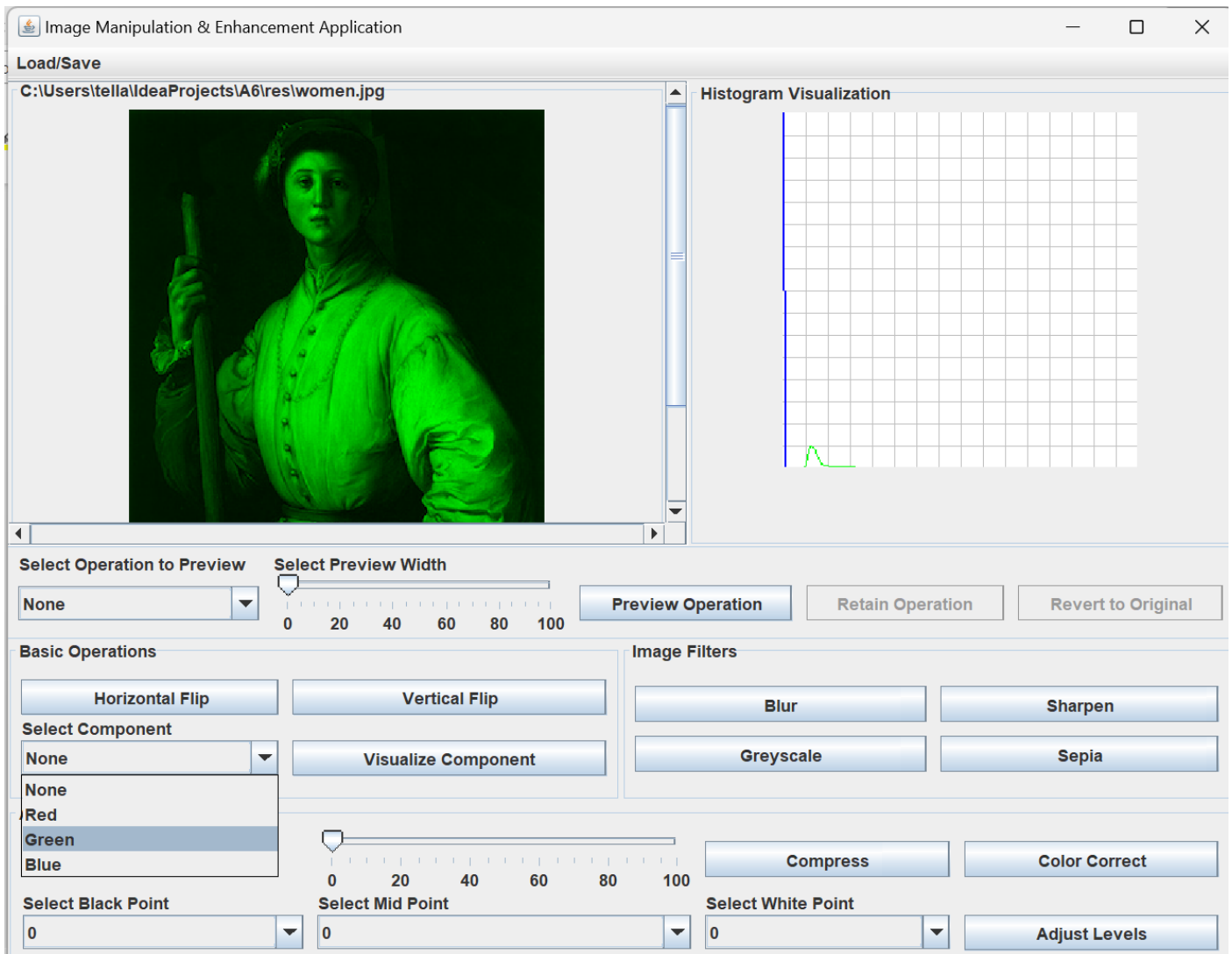- o User reverted back to the original image.

- o **Note** – Retain Operation and Revert to Original Buttons will be enabled only after user previews the image. And also once the user retains or reverts, again the Retain Operation and Revert to Original Buttons will be disabled.
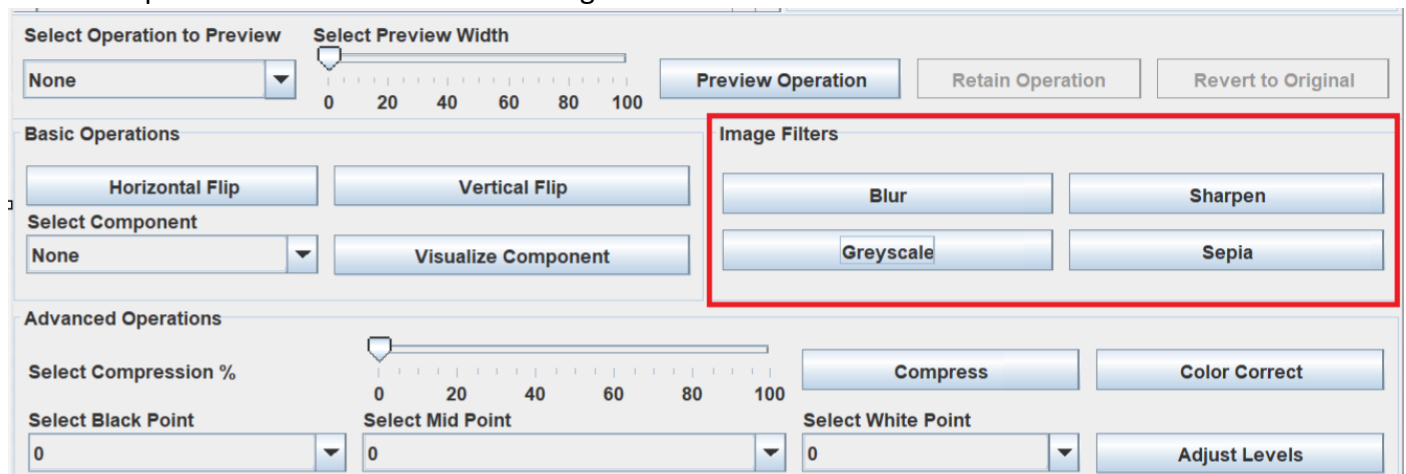

- **Basic Operations**
  - o **Horizontal Flip** – To flip an image horizontally, Horizontal Flip button must be clicked.
  - o **Vertical Flip** – To flip an image vertically, vertical Flip button must be clicked.
  - o **Visualize Component** – To visualize the red, green or blue components of an image, user should select the component from the drop down and then click on the Visualize Component button. If the component is not selected, an error will be displayed asking the user to select the component first.
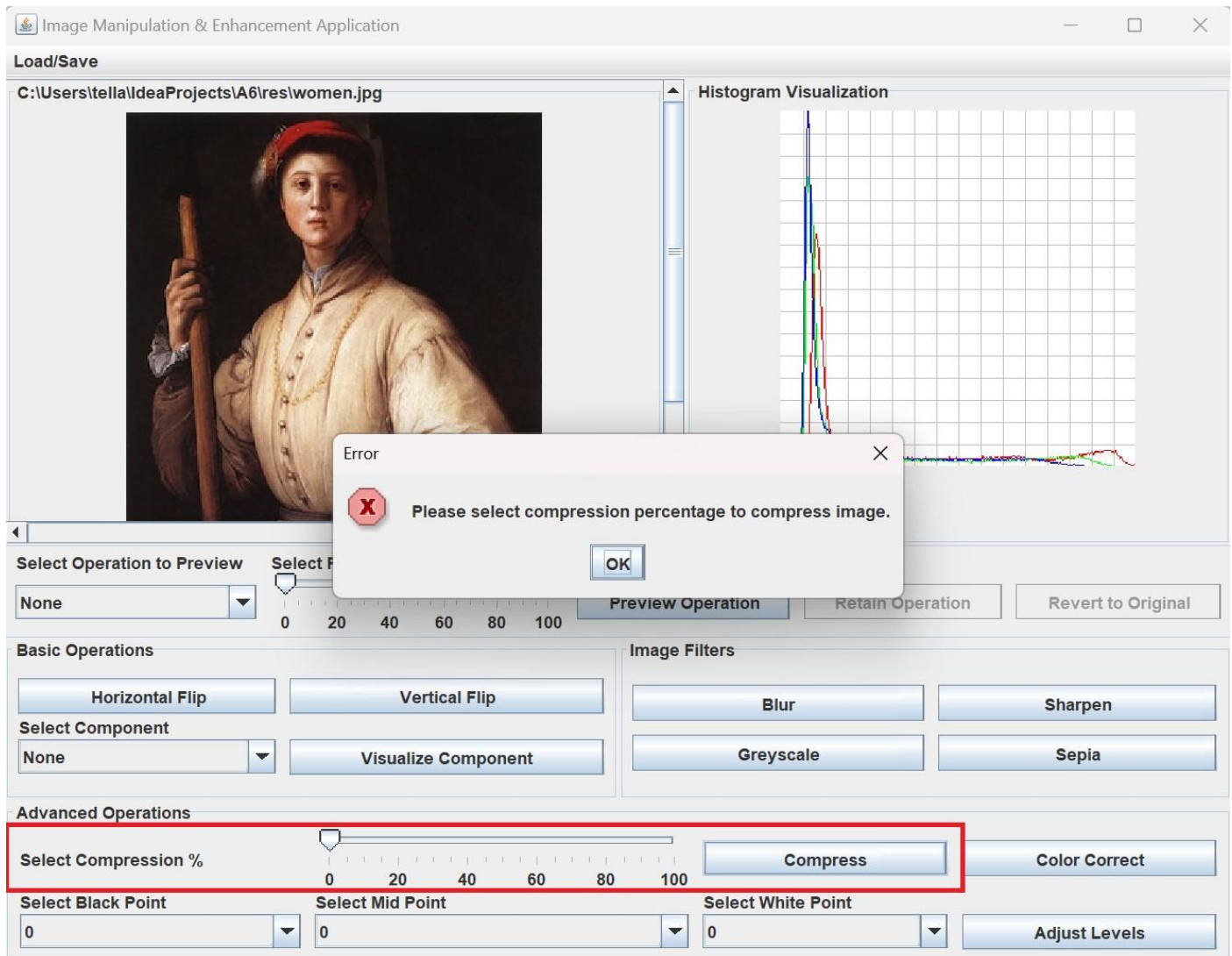
- **Image filters**
  - **Blur –** To apply blur filter to an image, Blur button must be clicked.
  - **Sharpen –** To apply sharpen filter to an image, Sharpen button must be clicked.
  - **Greyscale –** To apply greyscale filter to an image, Greyscale button must be clicked. This by default takes the luma component of an image to apply greyscale filter)
  - **Sepia –** To apply sepia filter to an image, Blur button must be clicked.

  All these operations are available at the Image Filters section of the GUI.
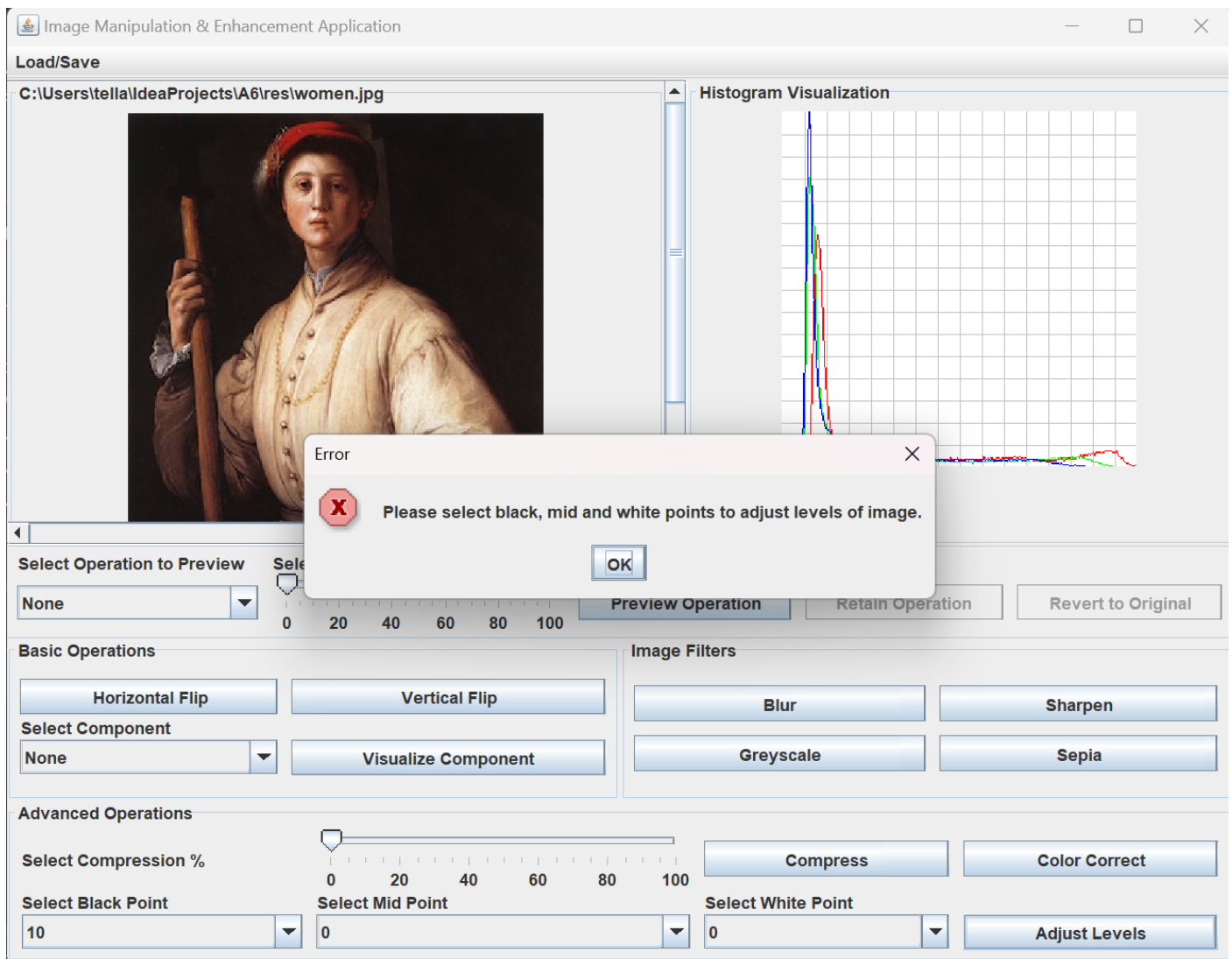
- **Advanced Operations**
  - **Compress –** To perform compress operation on an image, first select the Compression % using the slider, and then click on the compress button. If the user click on compress button without selecting the compression percentage, an error message will be displayed asking the user to select the compression percentage first.

  - **Color Correct -** To perform color correction operation on an image, Color Correct button must be clicked.
  - **Adjust Levels –** To perform levels adjust operation on an image, first select the black, mid and white points and then click on the Adjust levels button. If the user clicks on button without selecting the values, an error message will be displayed asking user to select the values like below.

Note:

- No image will be saved, until the user explicitly tries to save an image.
- All the operations will be performed on the current image that is displayed on the GUI.
- The screen can be resized as per your convenience.
- The histogram of the current image will be always displayed besides the current image.