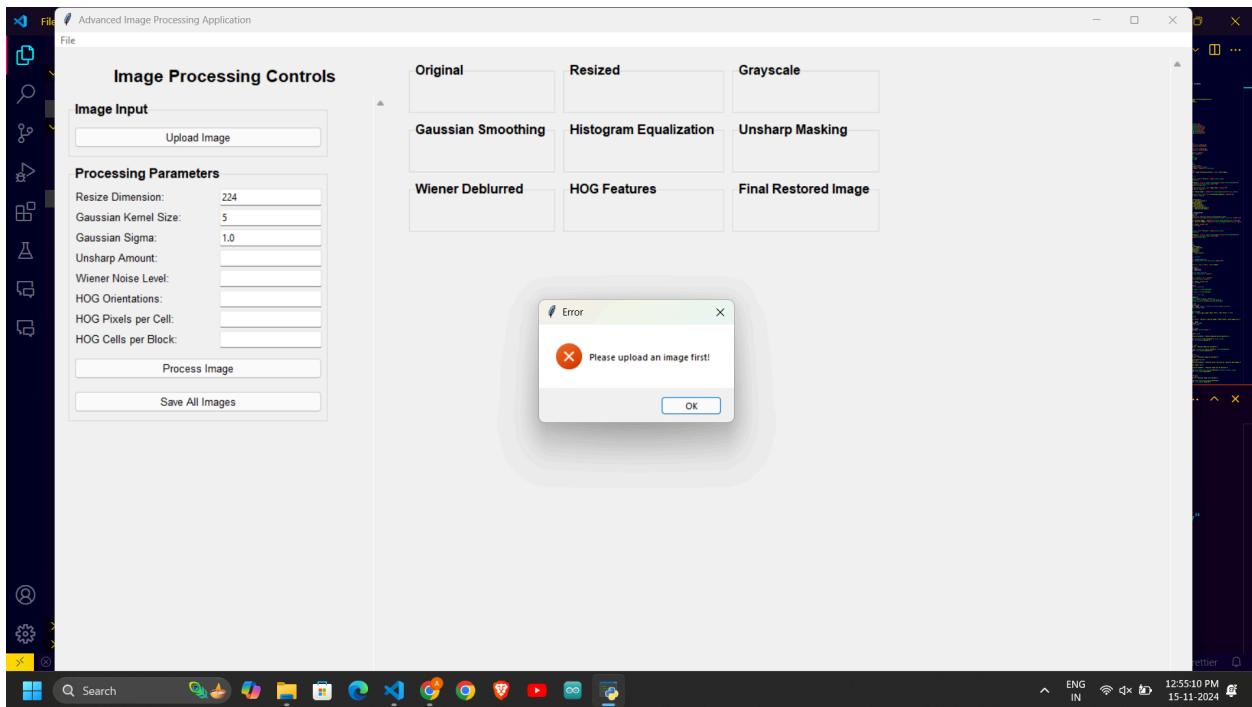


Test Cases Report

By -Gopal

Test Case 1: Test Image Upload

- **Objective:** Ensure that an image can be uploaded correctly and the original image is displayed.
- **Steps:**
 1. Trigger the `upload_image` method.
 2. Choose a valid image file.
 3. Ensure that the image is loaded and displayed in the 'Original' label.
 4. Verify that the other processed images (resized, grayscale, etc.) are empty.
- **Pass:** We are getting an error message as "**Please Upload an image first!**".



- You can only select and upload images but not PDFs and other documents from the dialog box.

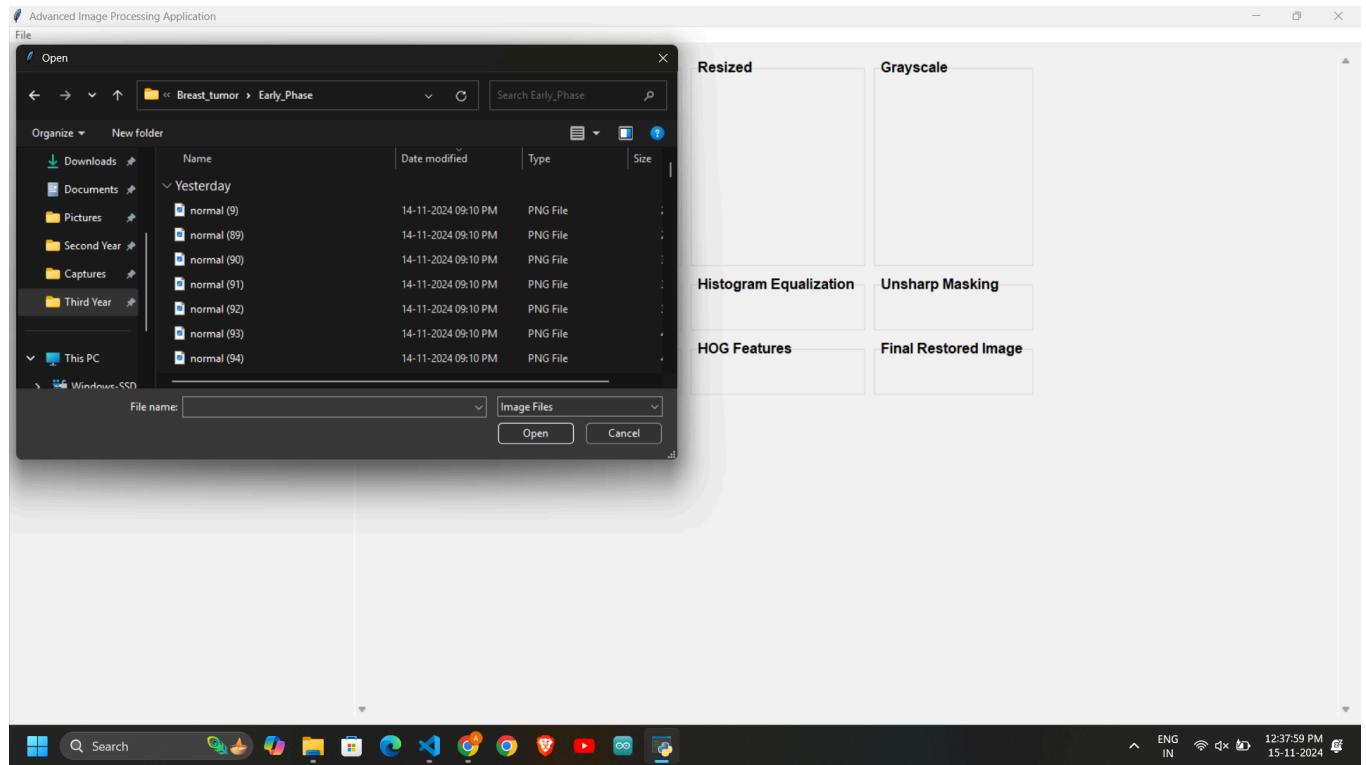
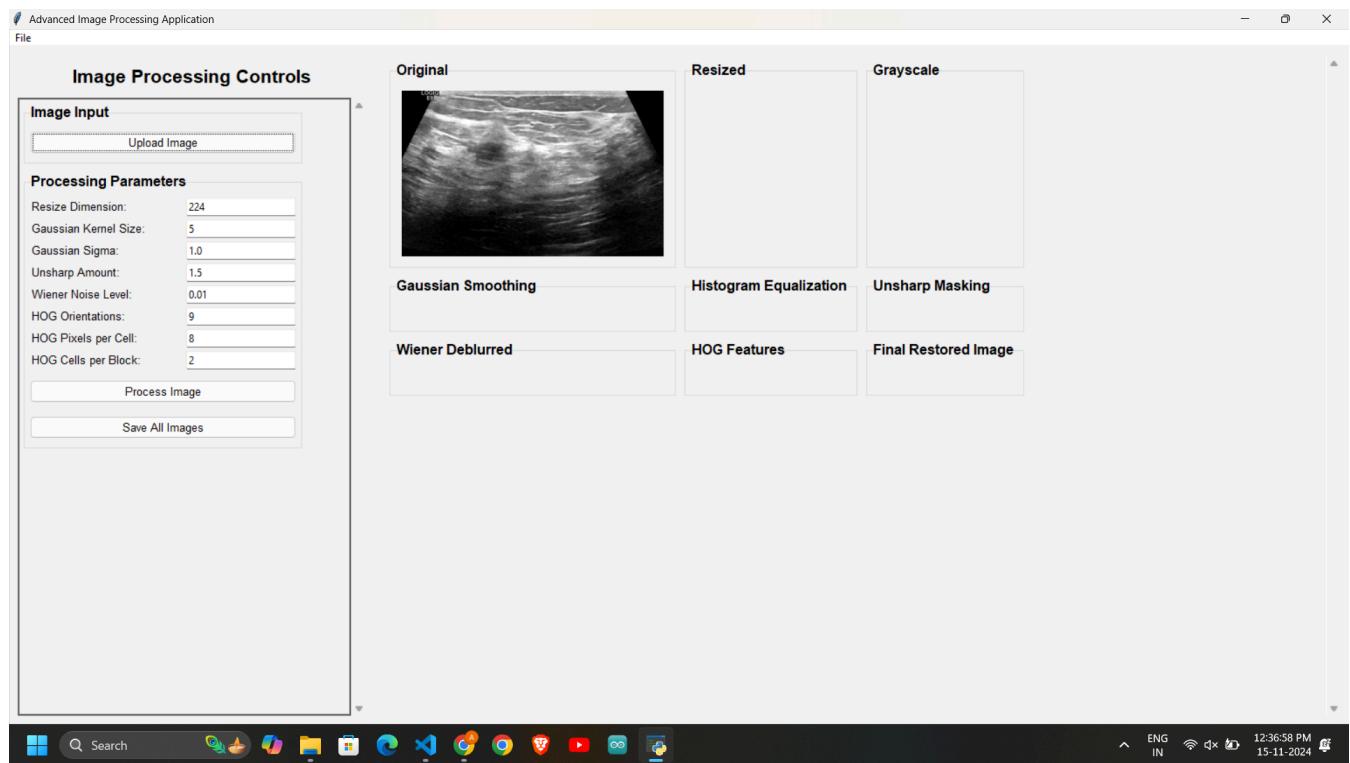


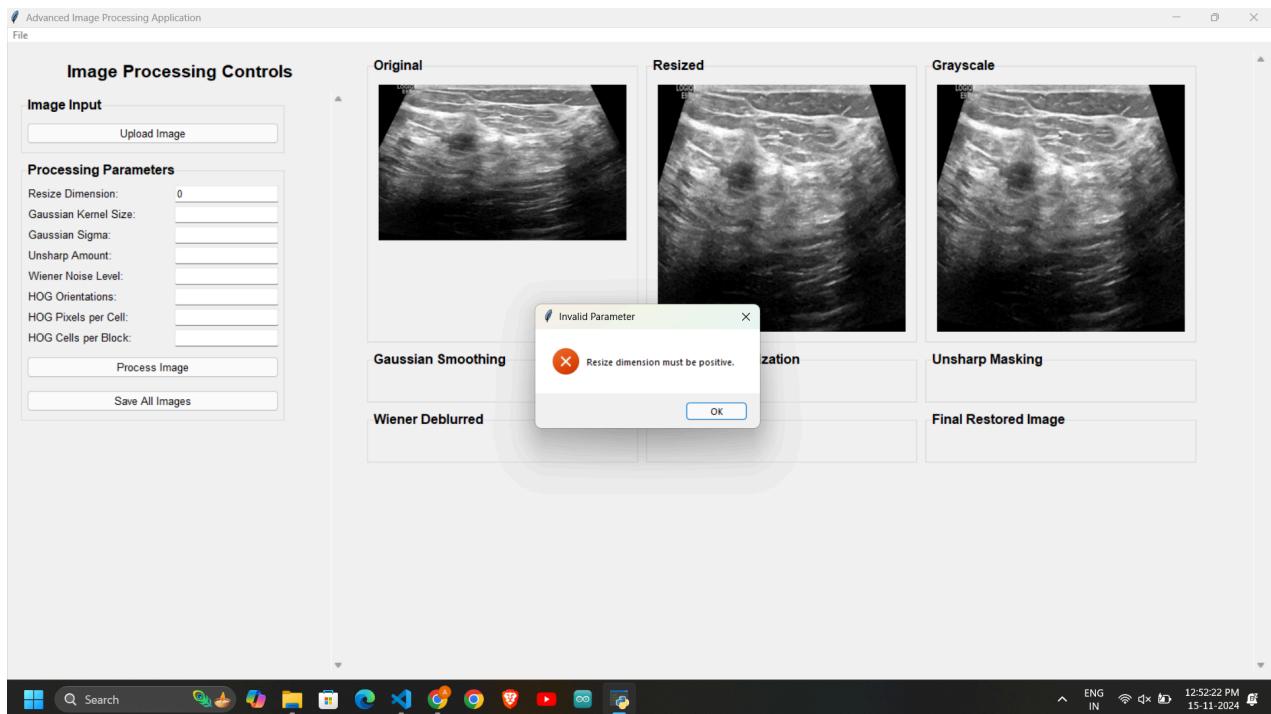
Image Upload Properly



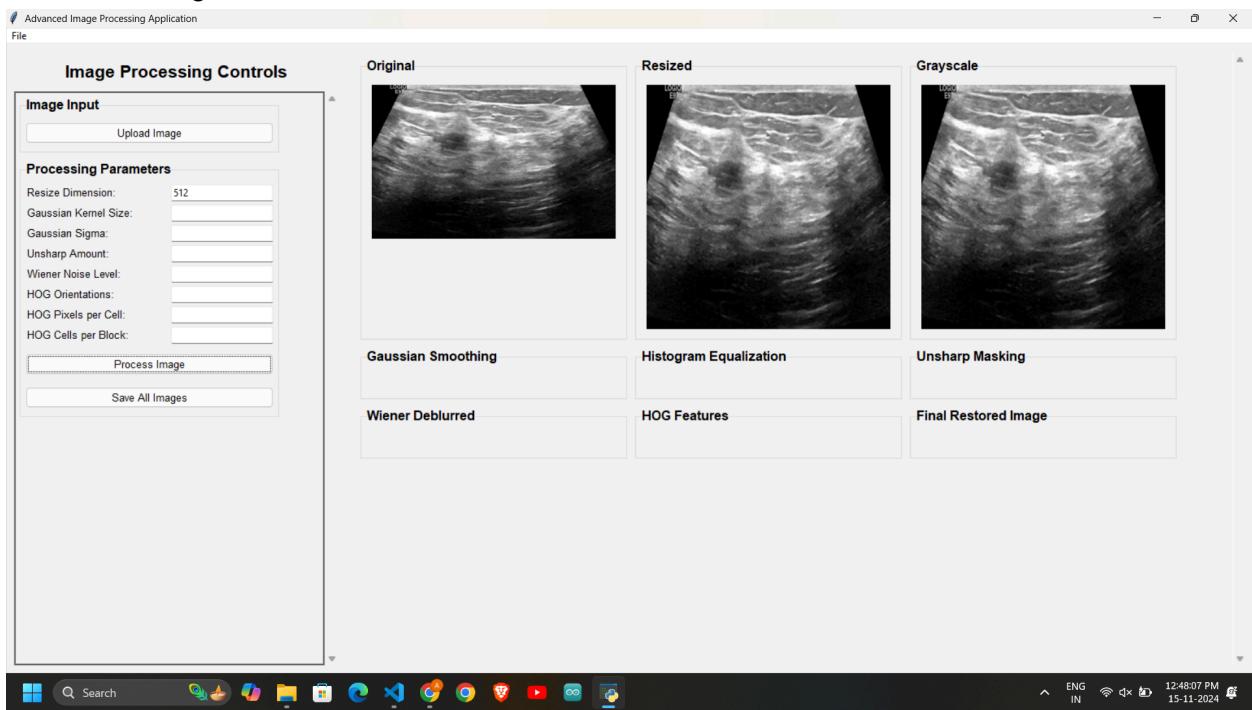
Test Case 2: Test Image Resizing

- **Objective:** Verify that the image can be resized to the specified dimension.
- **Steps:**
 1. Upload a valid image using `upload_image`.
 2. Set the resize dimension parameter to a valid positive integer (e.g., 224).
 3. Trigger the `resize_image` method.
 4. Ensure the image is resized and displayed in the 'Resized' label.

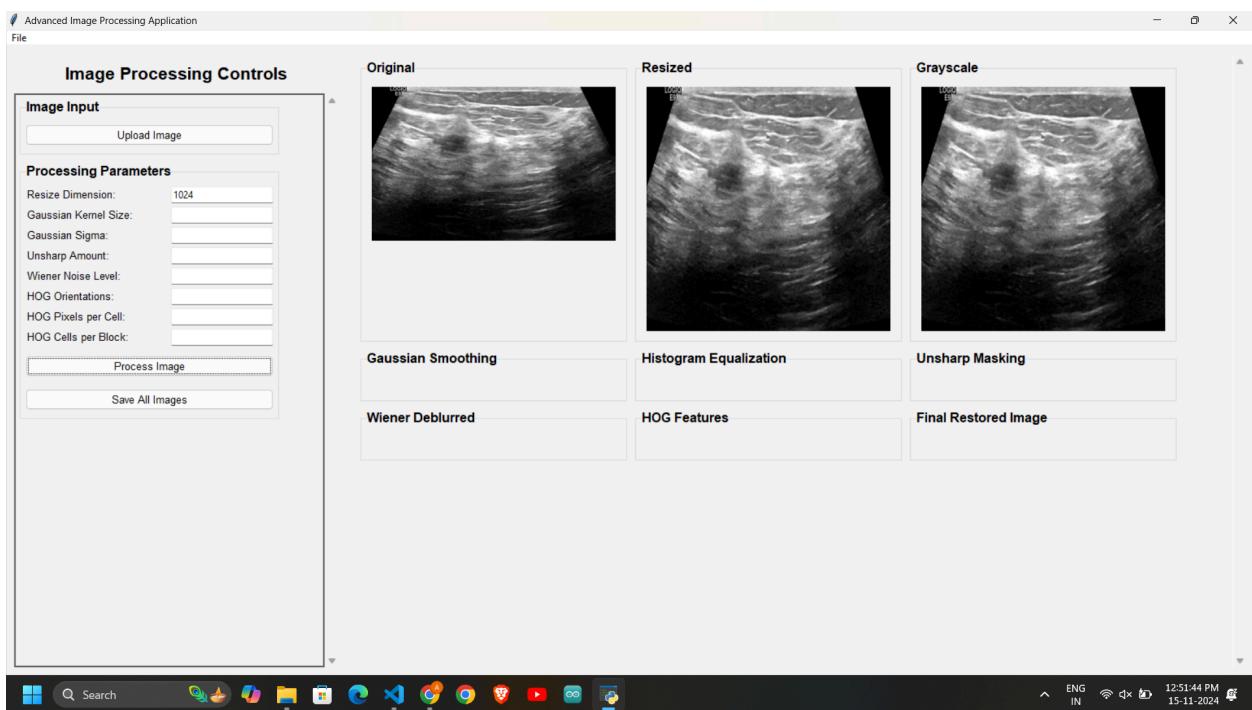
Pass: Resize value is 0



Here we have given the resize value as 512

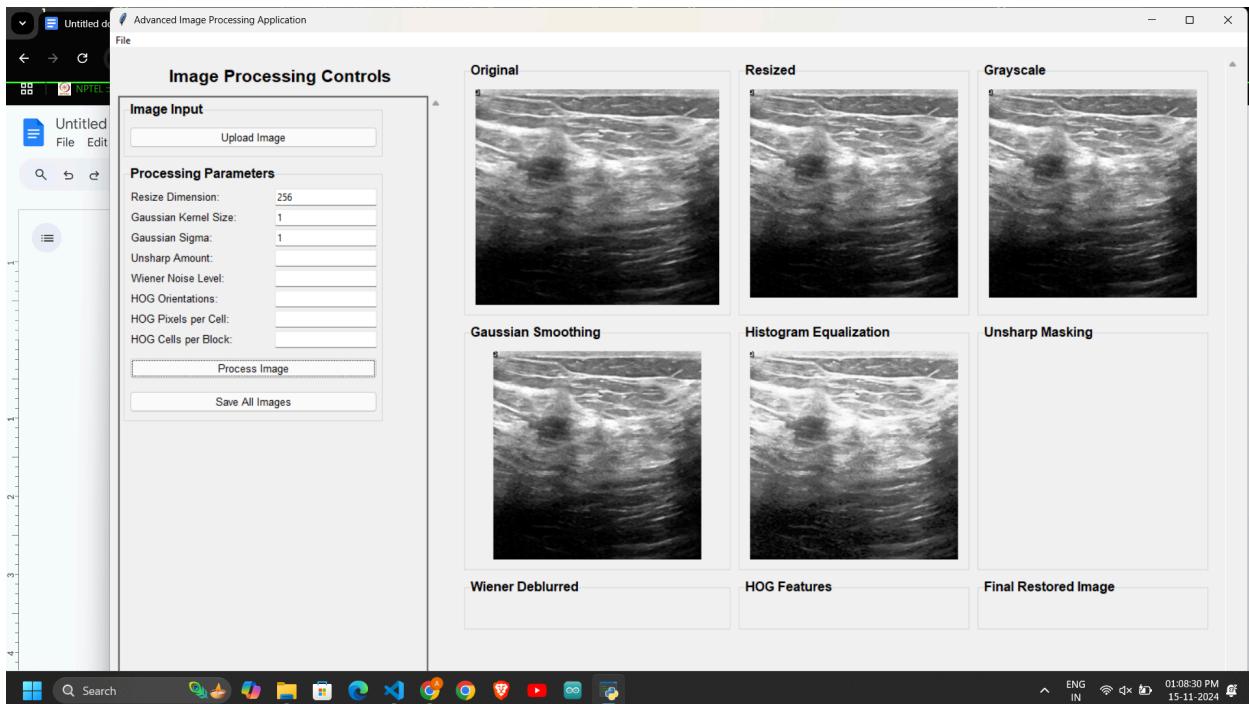


Here resize vale is 1024

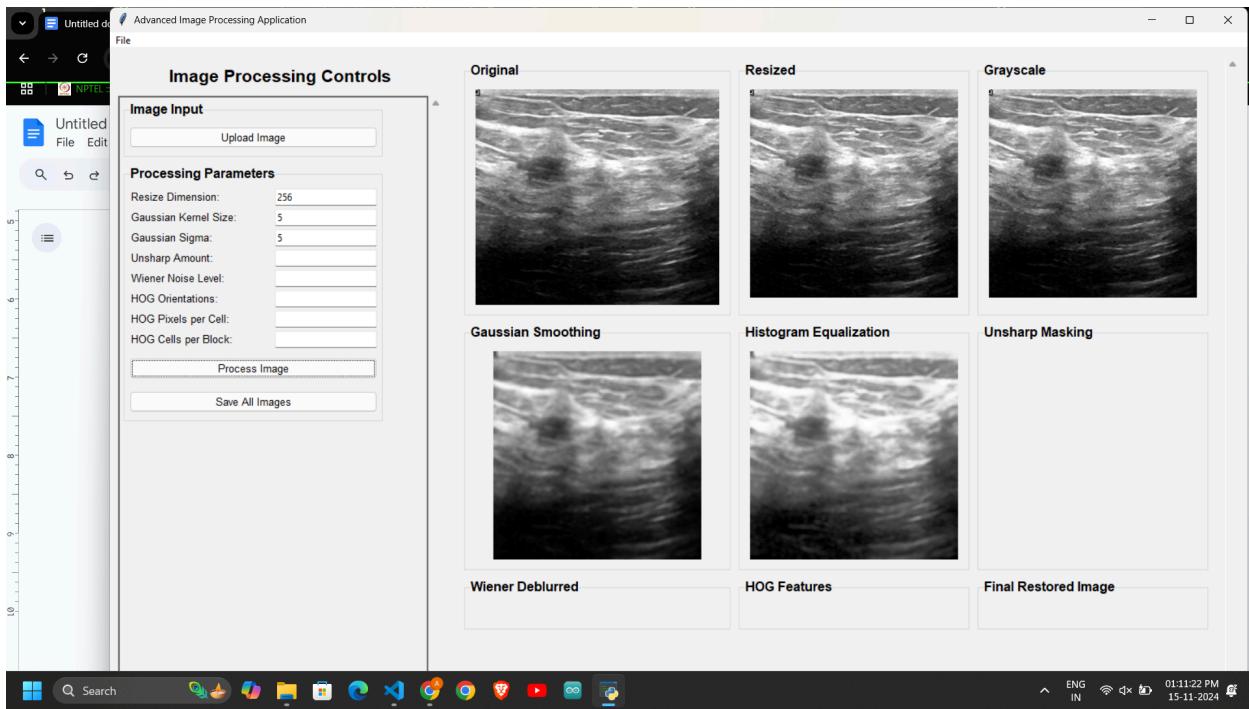


Test Case 3: Test Gaussian Smoothing

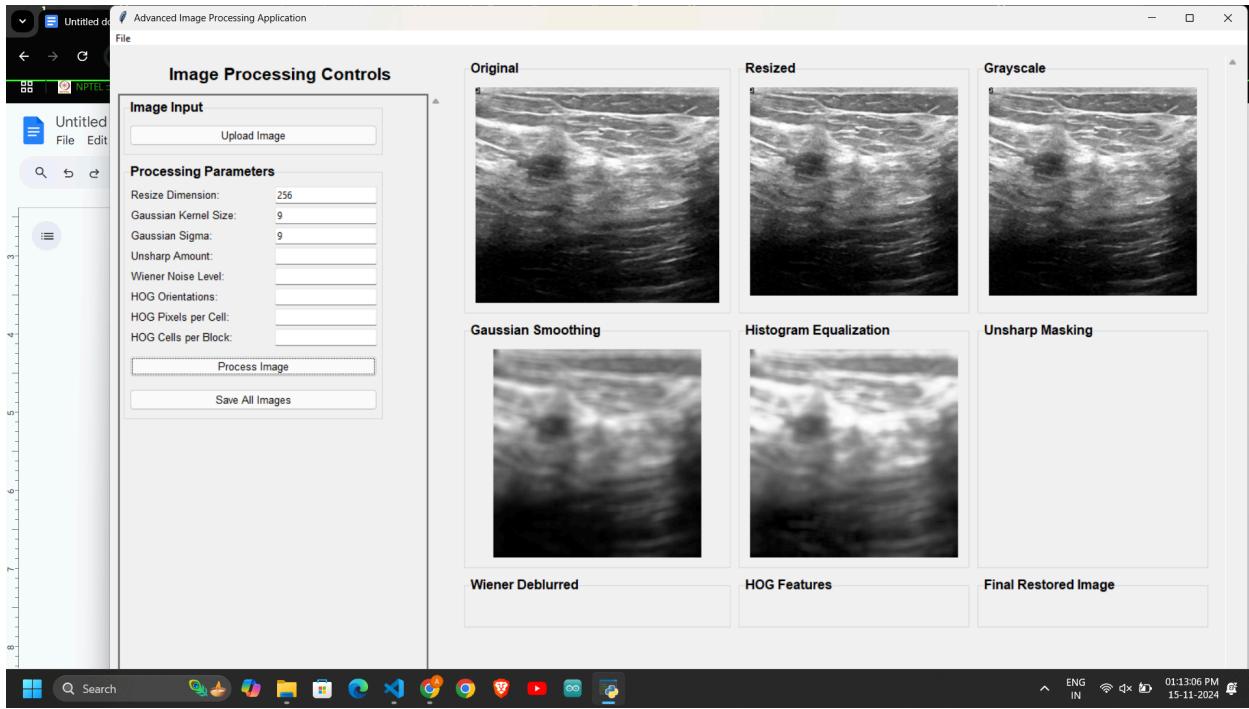
- **Objective:** Ensure that Gaussian smoothing is applied to the grayscale image.
- **Steps:**
 1. Upload a valid image using `upload_image`.
 2. Resize and convert the image to grayscale.
 3. Set valid parameters for Gaussian smoothing (kernel size, sigma).
 4. Trigger the `apply_gaussian_smoothing` method.
 5. Ensure that the smoothed image is displayed in the 'Gaussian Smoothing' label.
- **Pass:** For gaussian Smoothing using Kernel size and Sigma as 1, 1 it's clear image.



As we are increasing the kernel size and Sigma value (5, 5) the image is getting smoothen and blur.

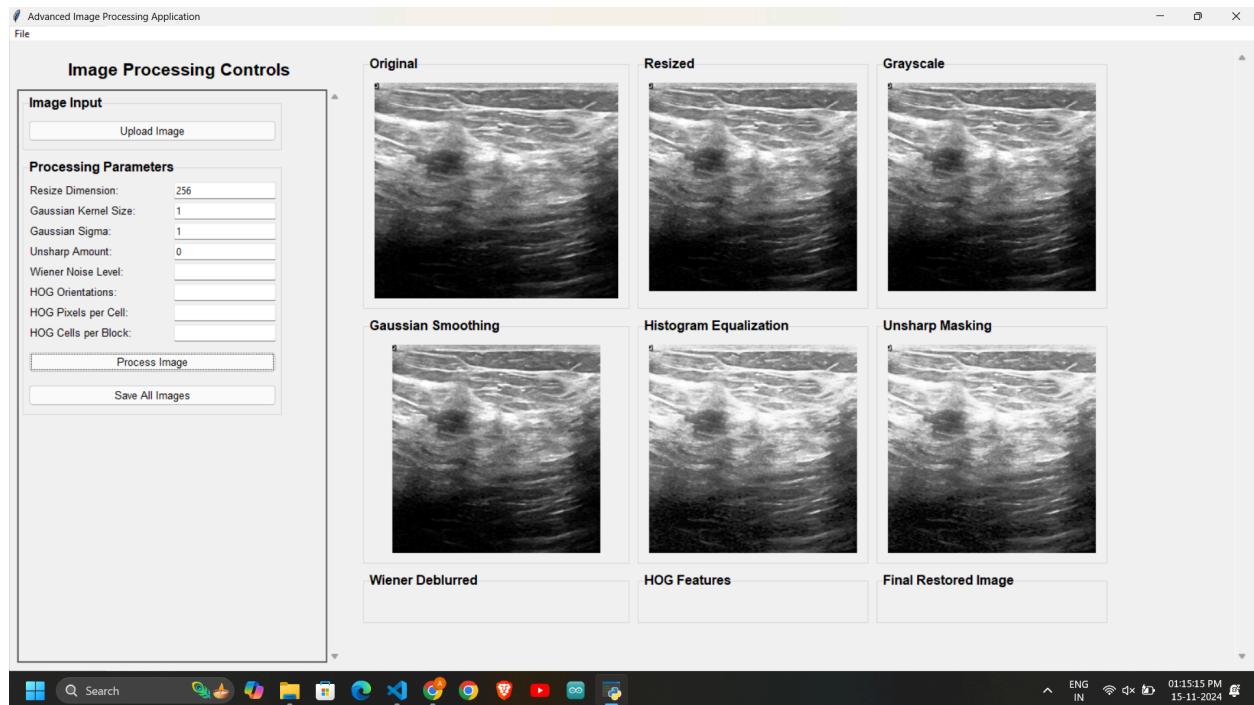


Putting values as 9, 9 getting more blur images with smoothen.

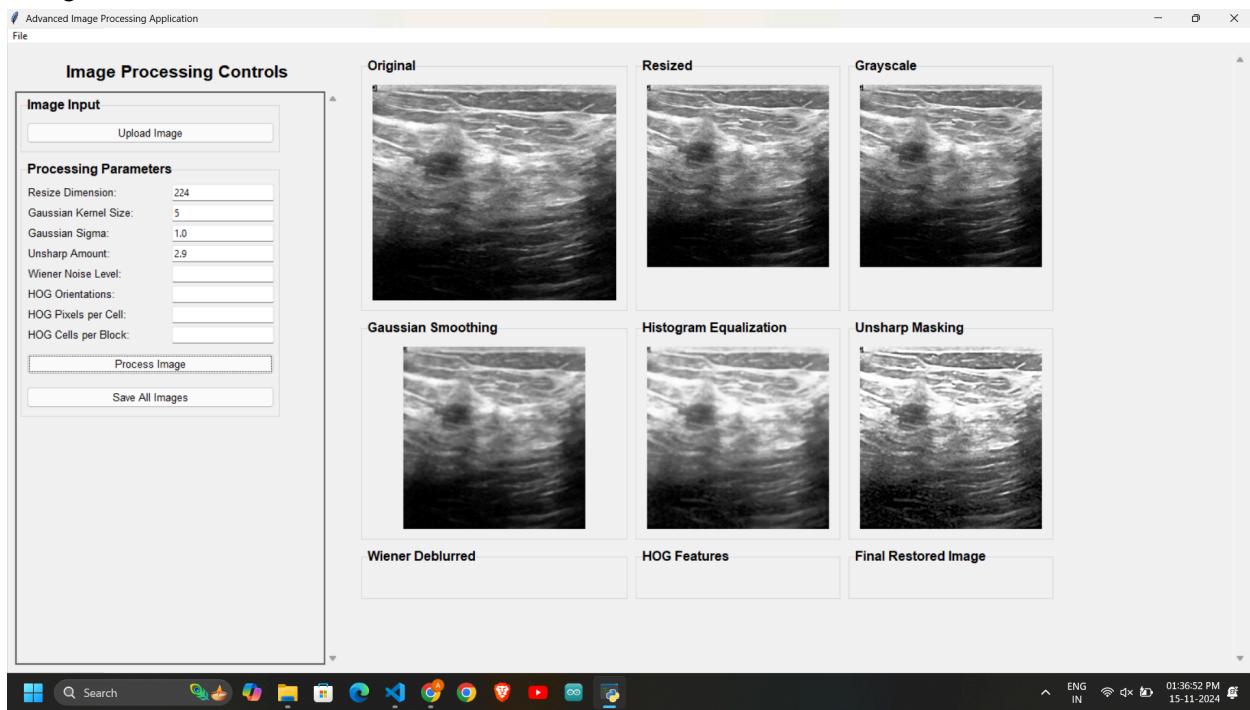


Test Case 4: Test Unsharp Masking

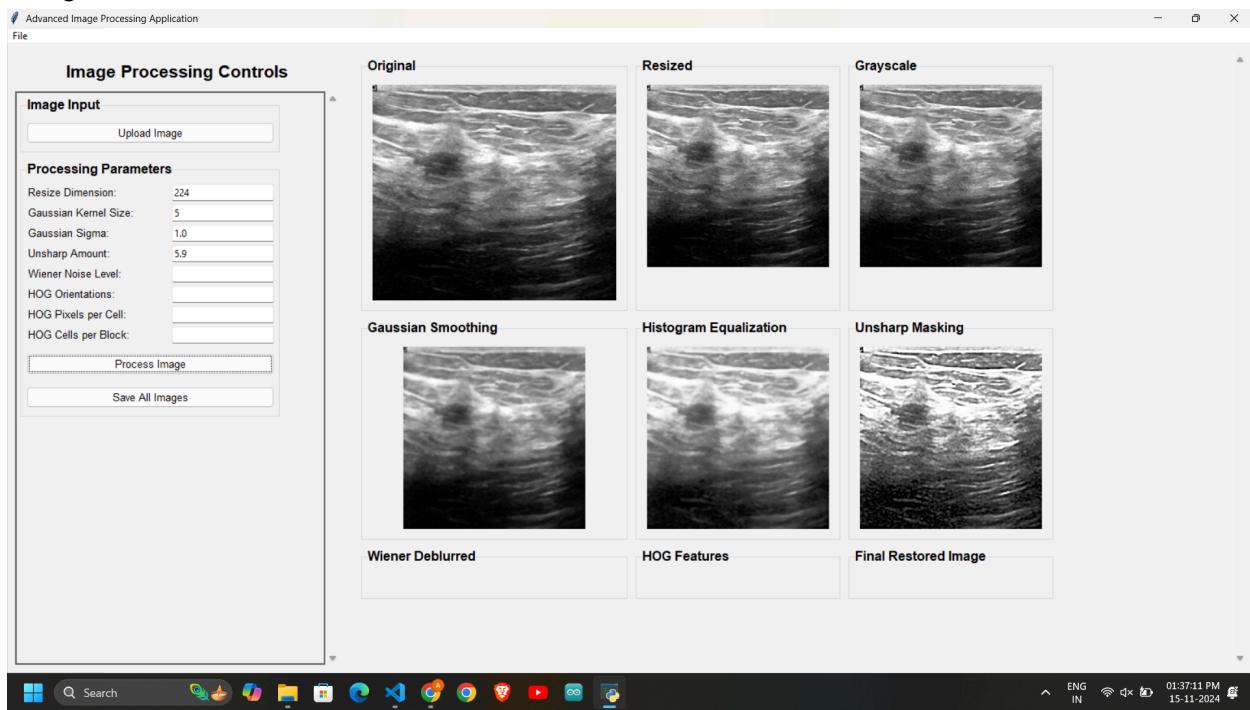
- **Objective:** Ensure that unsharp masking is applied to the enhanced image.
- **Steps:**
 1. Upload a valid image using `upload_image`.
 2. Resize, convert to grayscale, apply Gaussian smoothing, and histogram equalization.
 3. Set valid parameters for unsharp masking (kernel size, unsharp amount).
 4. Trigger the `apply_unsharp_masking` method.
 5. Ensure that the sharpened image is displayed in the 'Unsharp Masking' label.
- **Pass:** when we are putting the unsharp value as 0



Using the value as 2.9

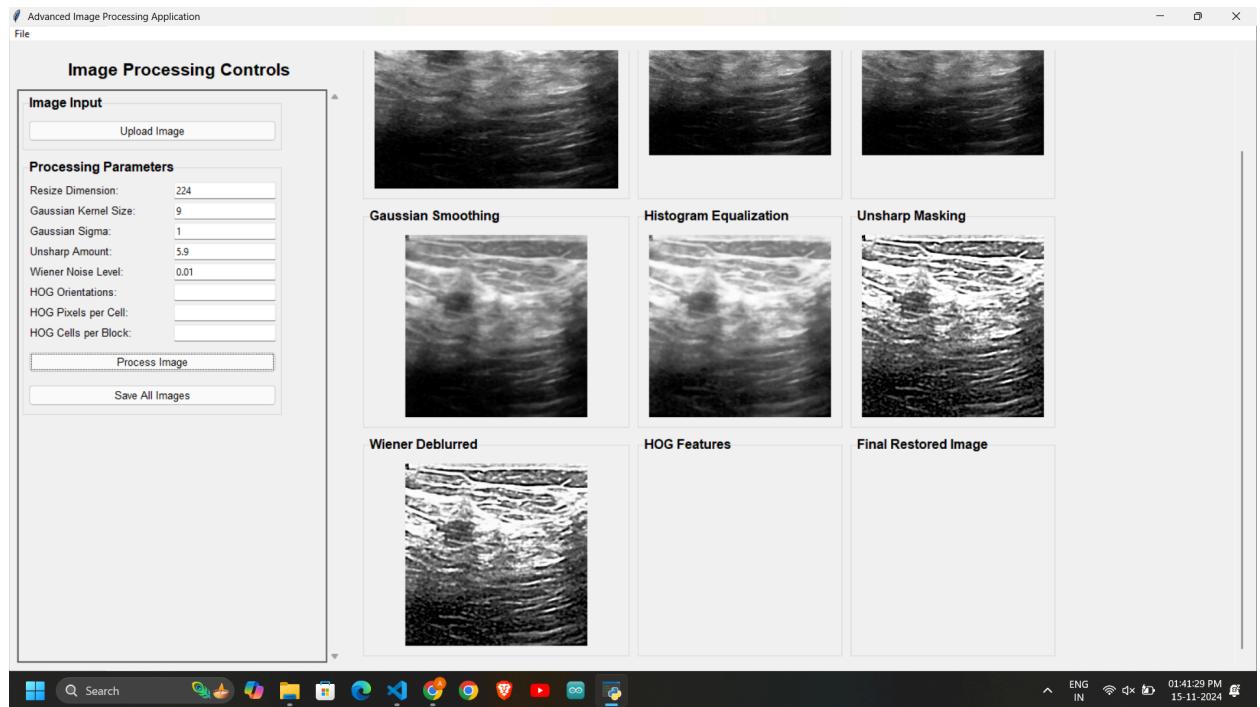


Using the value as 5.9

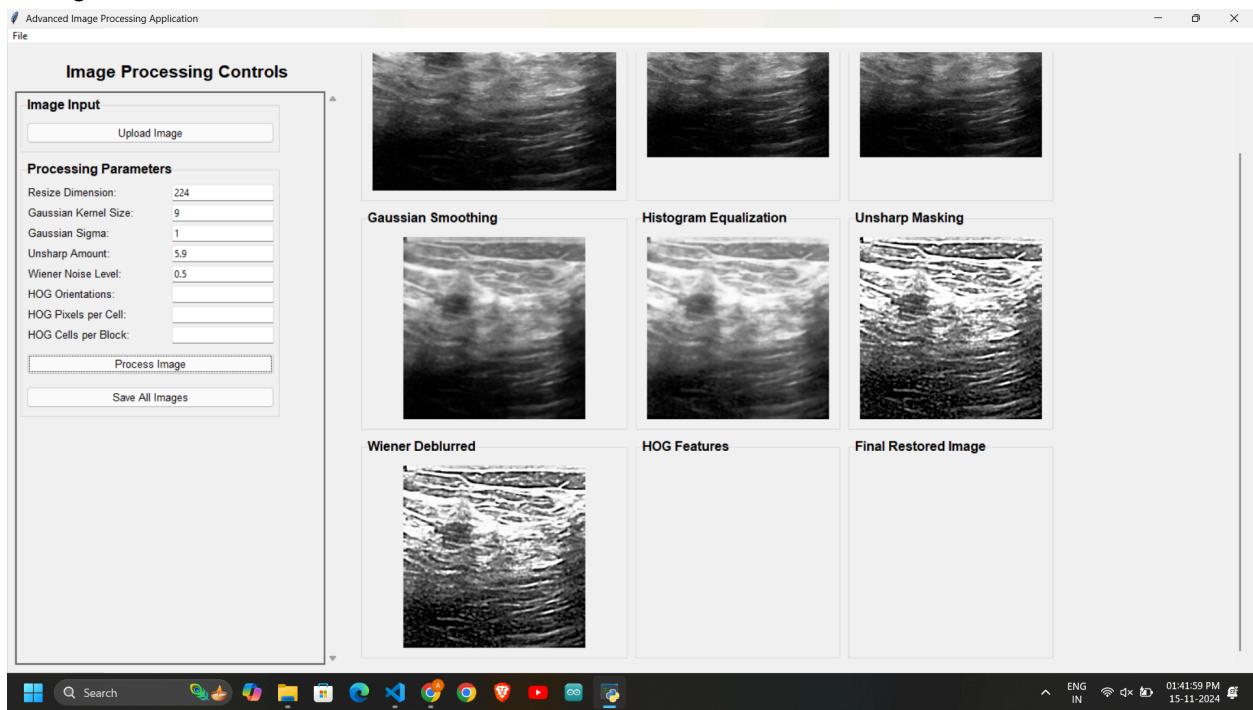


Test Case 5: Test Wiener Deblurring

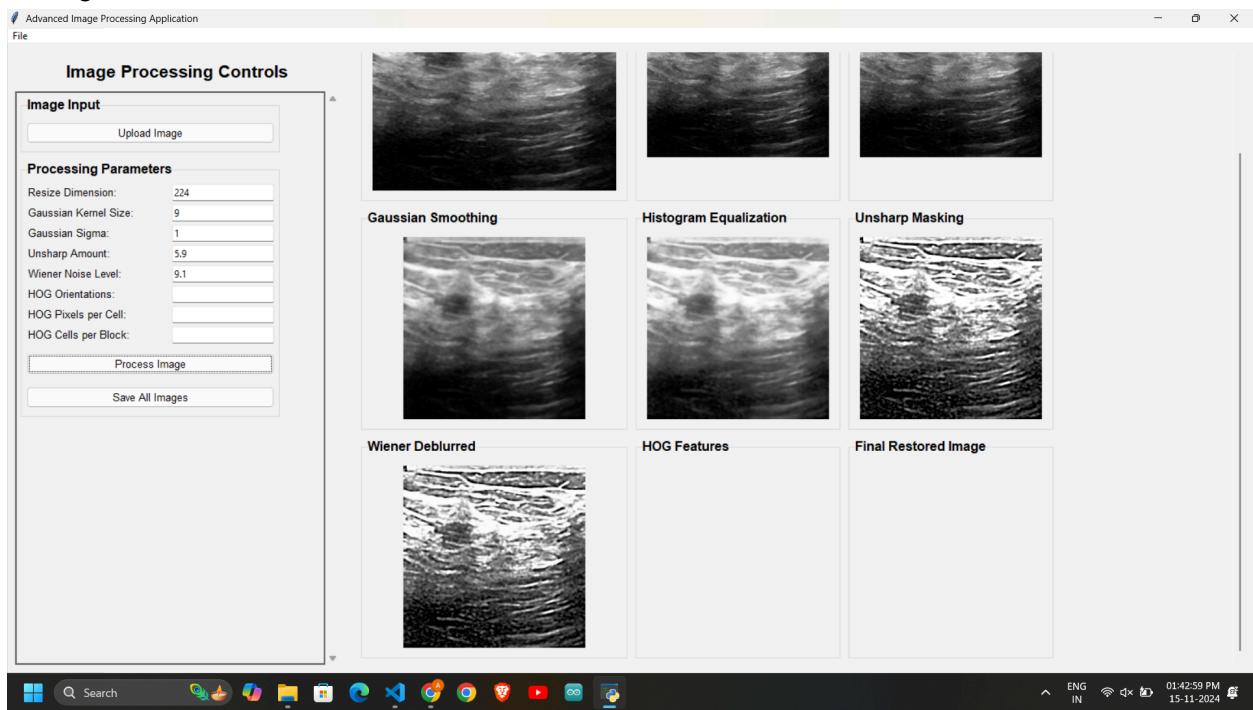
- **Objective:** Verify that Wiener deblurring is applied to the sharpened image.
- **Steps:**
 1. Upload a valid image using `upload_image`.
 2. Resize, convert to grayscale, apply Gaussian smoothing, histogram equalization, and unsharp masking.
 3. Set a valid noise parameter for Wiener deblurring.
 4. Trigger the `apply_wiener_deblurring` method.
 5. Ensure that the deblurred image is displayed in the 'Wiener Deblurred' label.
- Pass: taking value as 0.01



Taking the value as 0.5



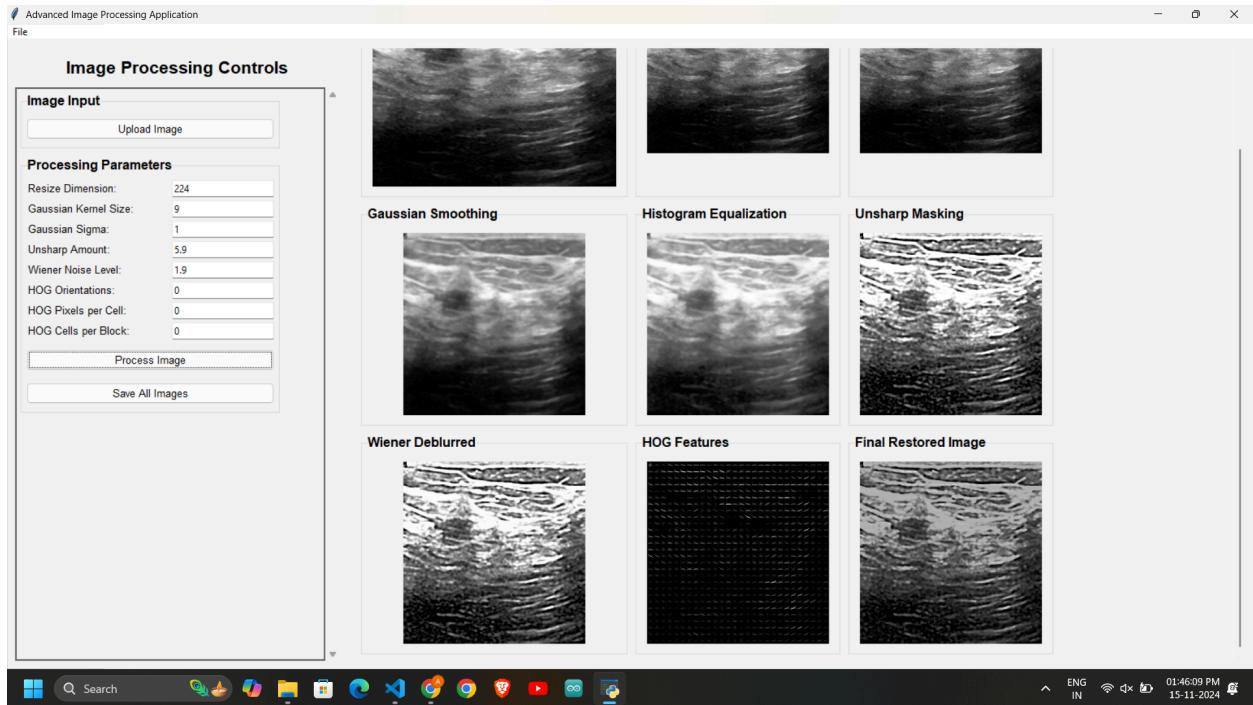
Putting value as 9.1



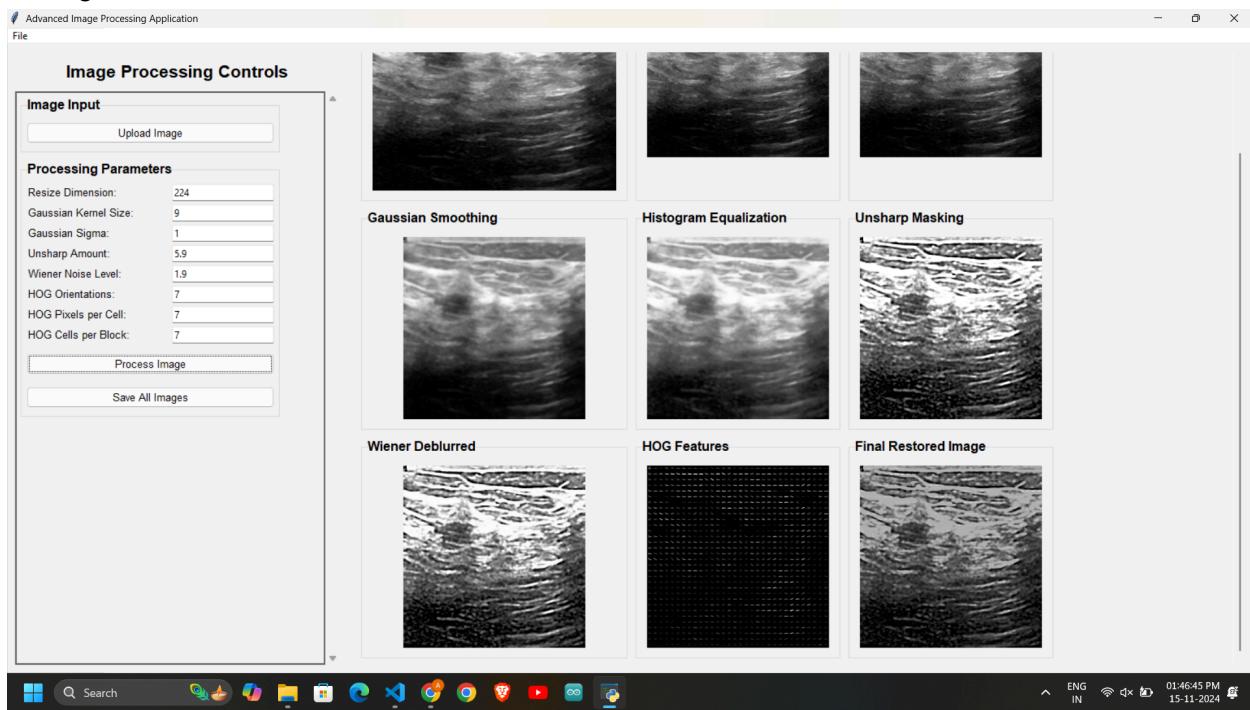
Test Case 6: Test HOG Feature Extraction

- **Objective:** Verify that HOG features are extracted from the deblurred image.
- **Steps:**
 1. Upload a valid image using `upload_image`.
 2. Resize, convert to grayscale, apply Gaussian smoothing, histogram equalization, unsharp masking, and Wiener deblurring.
 3. Set valid parameters for HOG feature extraction.
 4. Trigger the `extract_hog_features` method.
 5. Ensure that the HOG features are displayed in the 'HOG Features' label.

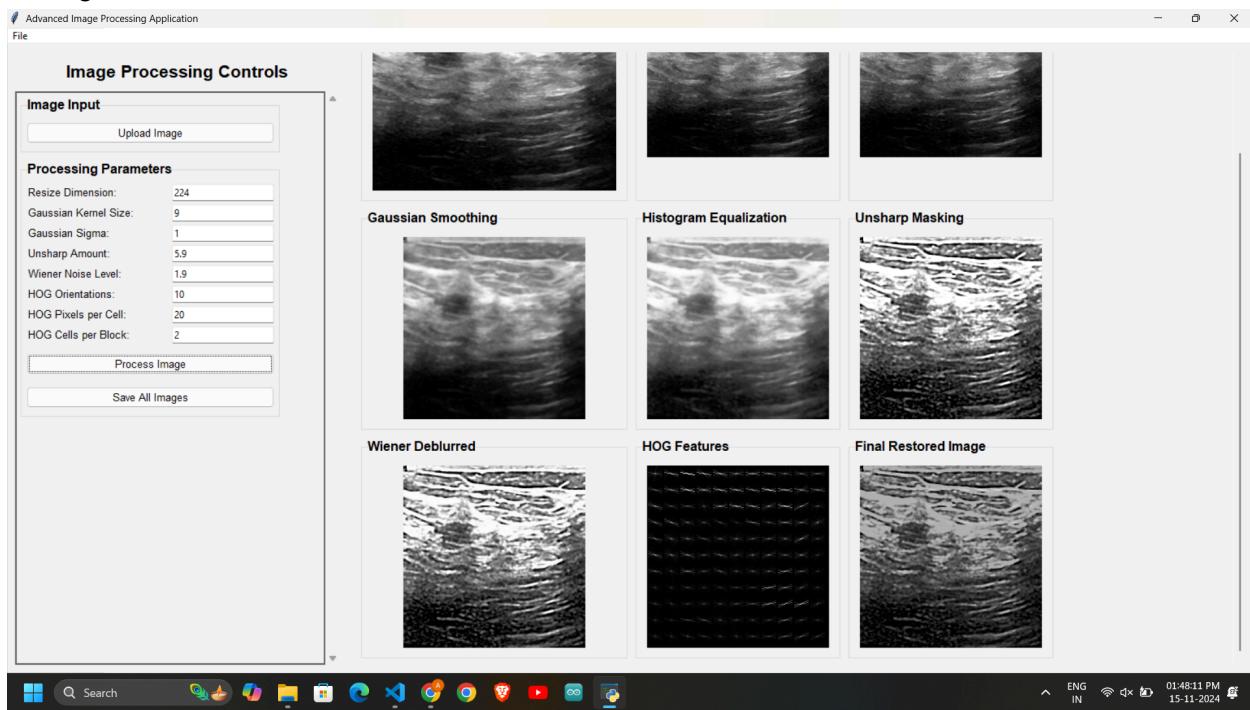
Pass: Putting value as 0,0,0



Putting values as 7,7,7



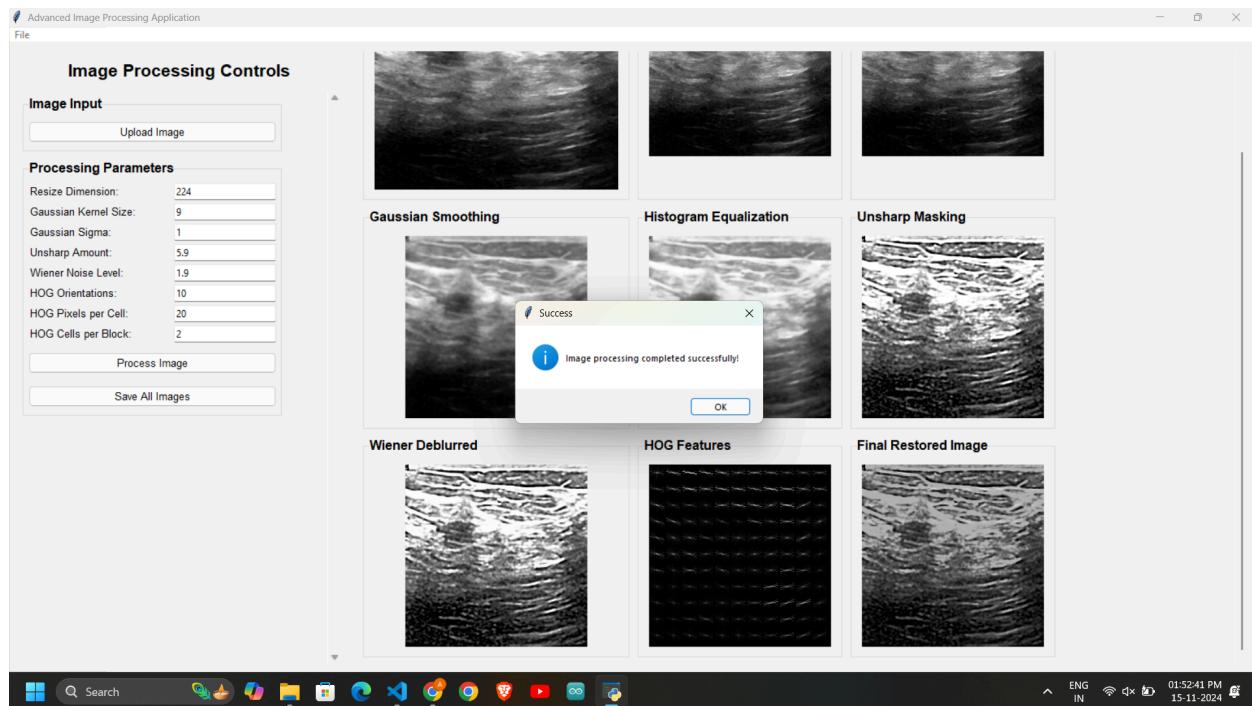
Putting values as 10, 20, 2



Test Case 7: Process Image Button

- **Objective:** It should show Image processed successfully
- **Steps:**
 1. Click on the button

Pass:



Test Case 8: Save Image Button

- **Objective:** It should show Image saved successfully
- **Steps:**
 1. Click on the button
 2. Ask to select a folder
 3. Save the image in that folder by clicking on OK.

Pass: Asking to create the folder.

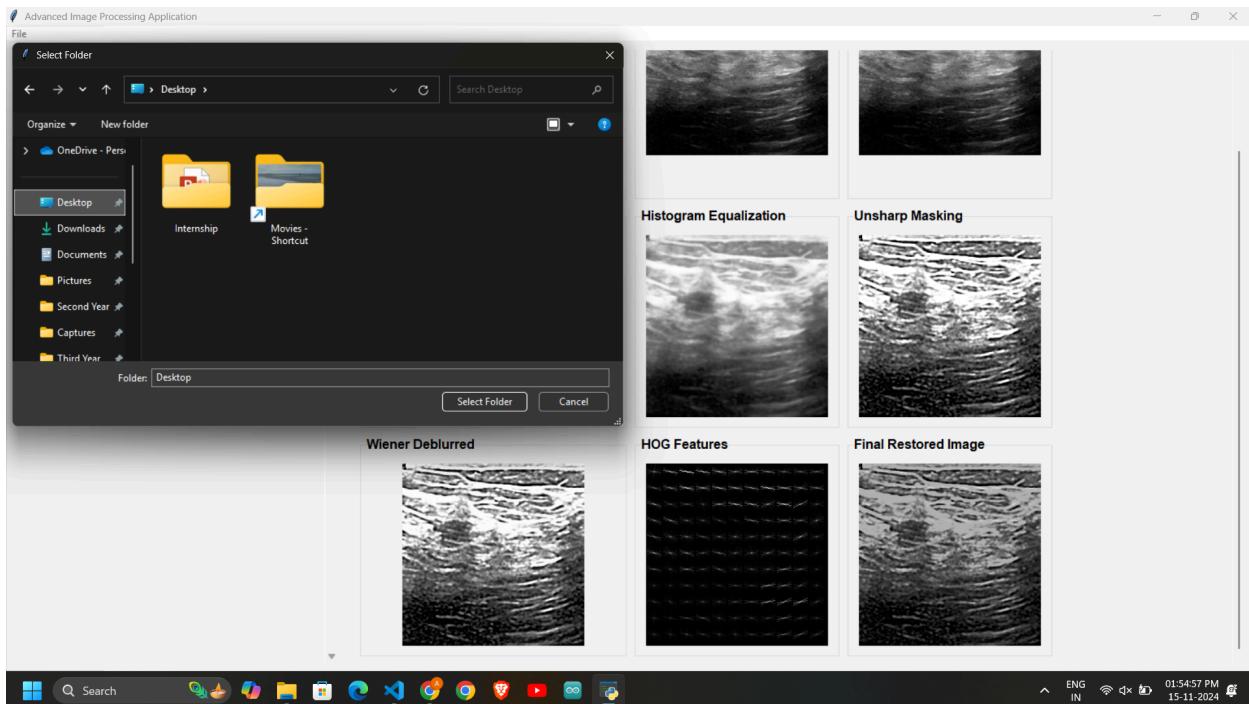
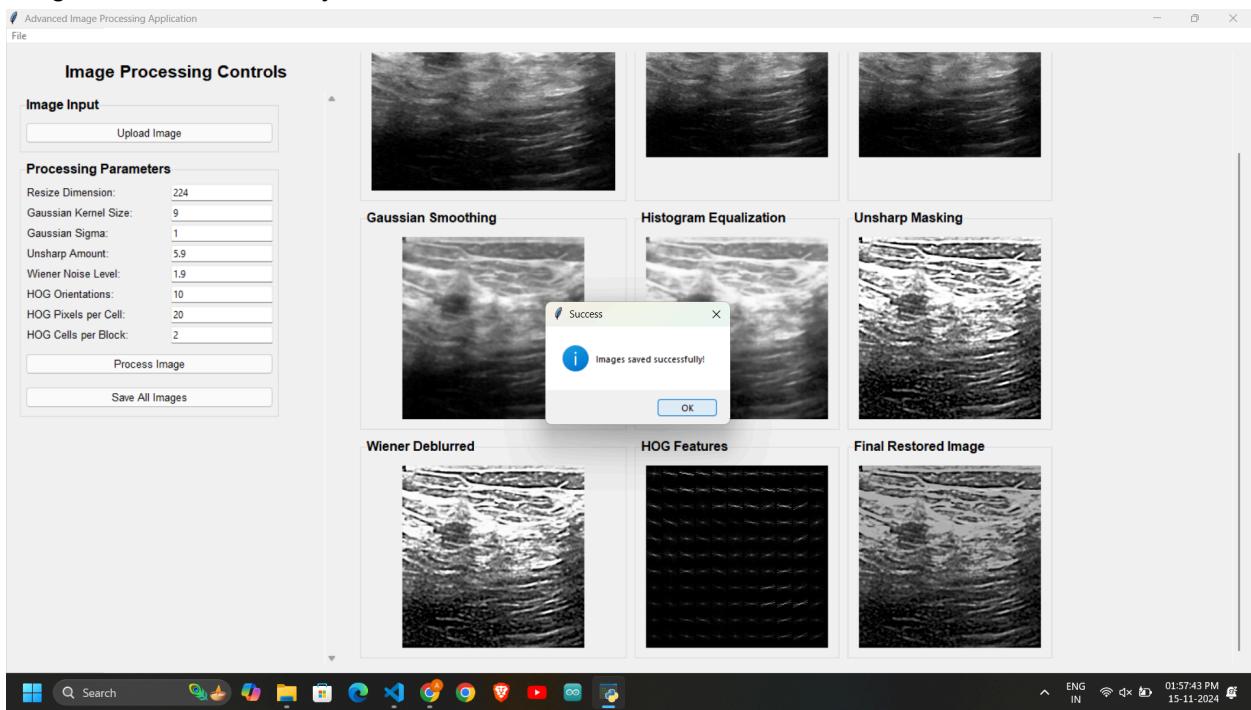


Image saved successfully



Saved Images:

