**University of Moratuwa**

**Department of Electronics and Telecommunication**

A picture containing emblem, badge, crest, symbol

Description automatically generated

**EN3160 – Image Processing and Machine Vision**

**Report Activity 01**

**200356A**

**Q1.**

A screen shot of a computer program

Description automatically generatedA person with a half face

Description automatically generated

Figure 2 Code for the given transformation

Figure Image after the intensity transform

**Q2.**

1. A close-up of a brain scan

   Description automatically generatedWhite matter enhanced

A close-up of a brain scan

Description automatically generated

Figure 3 Original image

Figure 4 White matter enhanced image

A graph with a line

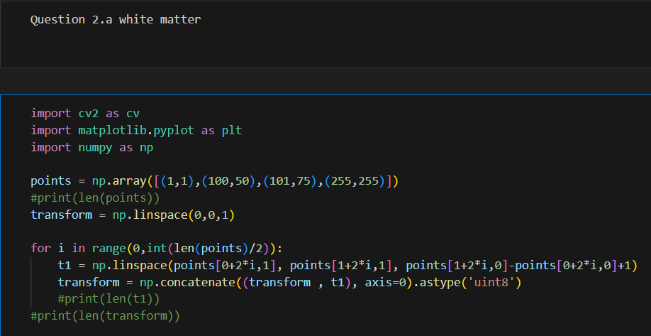
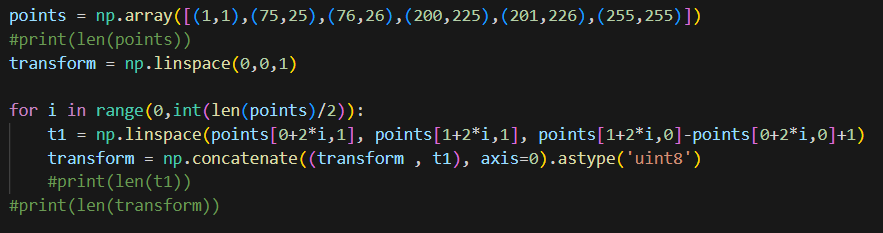
Description automatically generated

Figure 5 White matter enhancing transform

Figure 6 White matter enhancing transform code

1. A close-up of a brain scan

   Description automatically generatedGray matter enhanced

Figure 10 Gray matter enhancing transform code

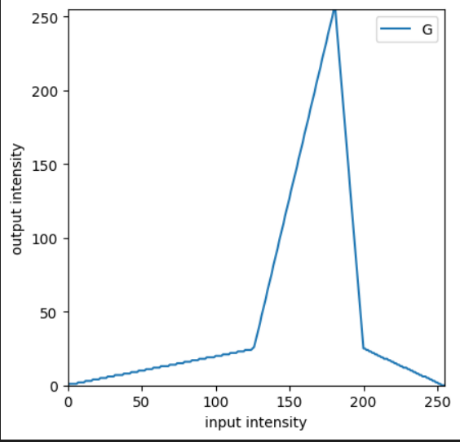


Figure 8 Gray matter enhanced image

Figure 7 Original image

Here, most black parts are not in gray matter.

Therefore, enhancement is done only for the

region where gray matter is.

This intensity transform will enhance the gray

matter area.

Figure 9 Gray matter enhancing transform

**Q3.**

Gamma value used = **0.6**

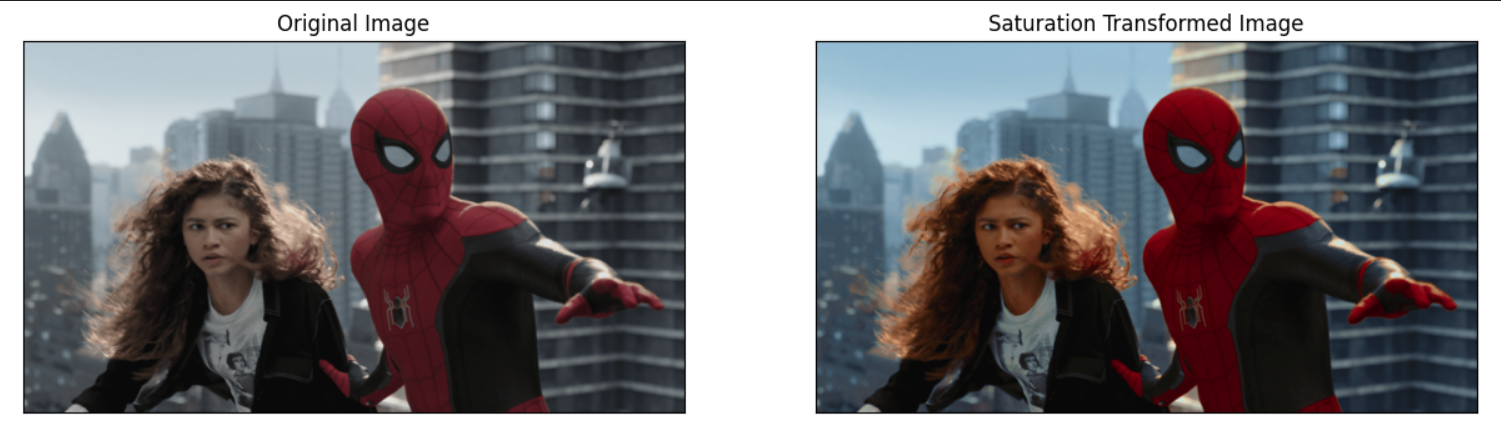
A collage of images of rocks

Description automatically generated

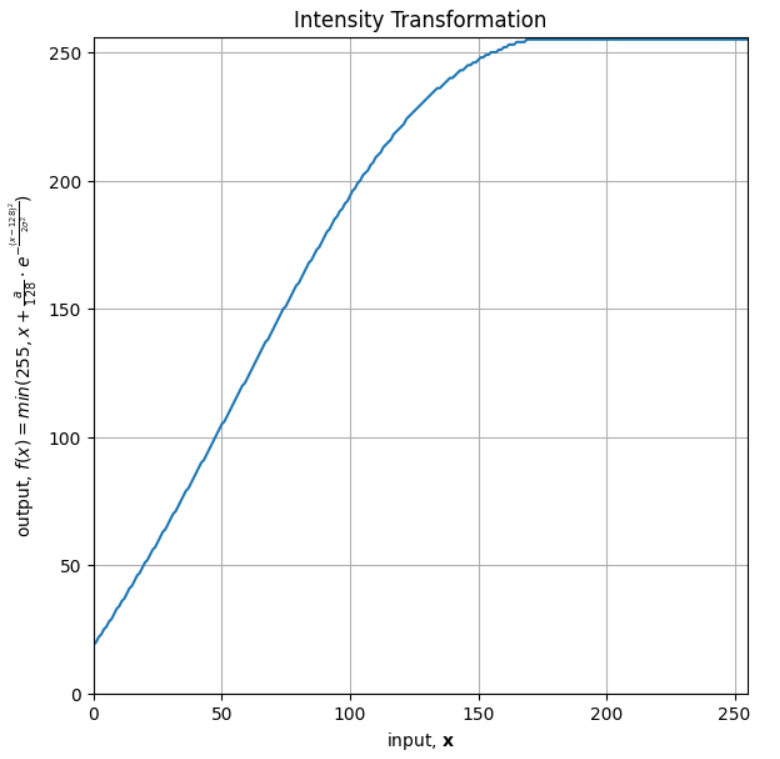
A close-up of a graph

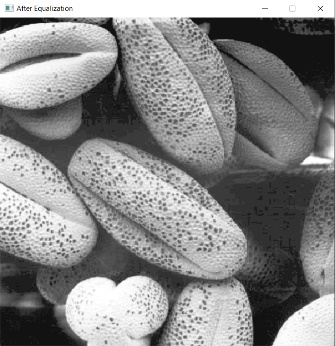
Description automatically generated

Q4.

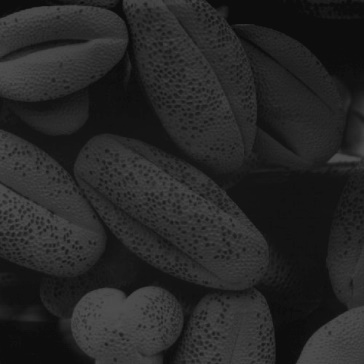


A computer screen with many white text

Description automatically generated

Q5.

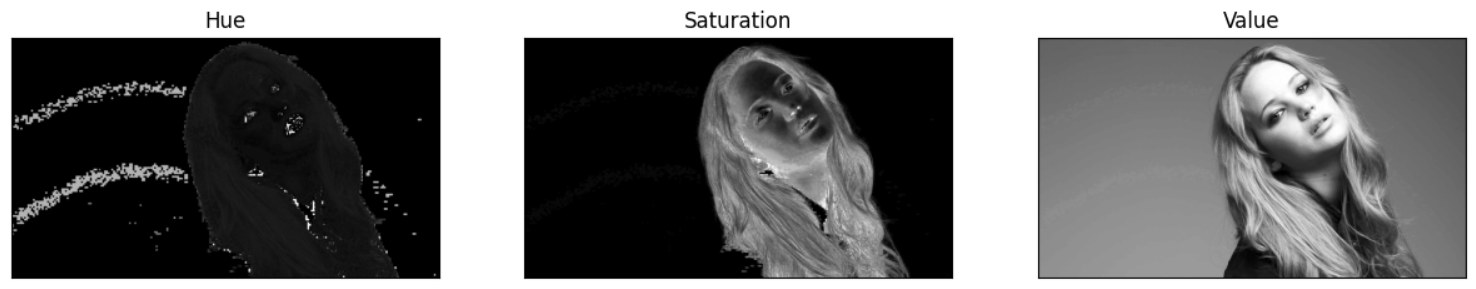
A computer screen shot of a program code

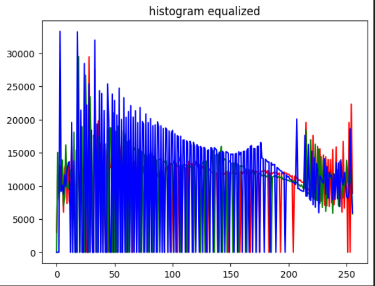
Description automatically generated

A graph of a diagram

Description automatically generated with medium confidence

06.



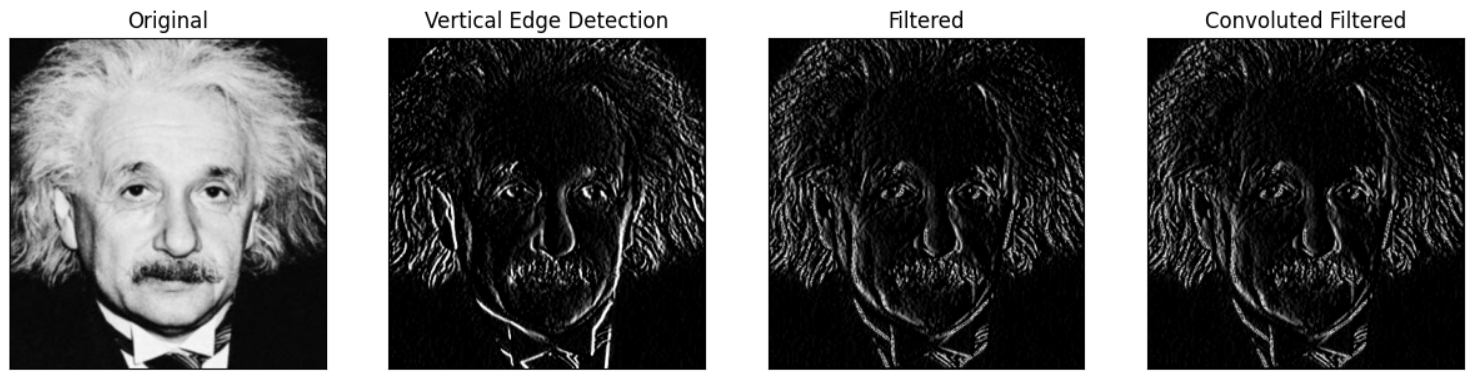
A close-up of a person

Description automatically generated

A collage of a person's face

Description automatically generated

Q7.



A computer screen with text on it

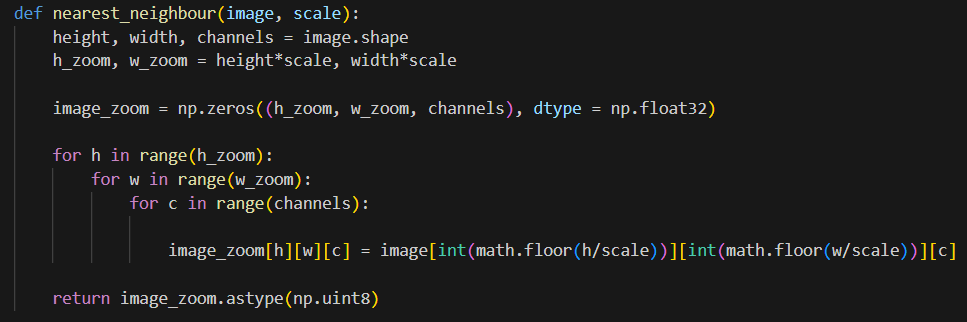
Description automatically generated

A screen shot of a computer code

Description automatically generatedA screen shot of a computer program

Description automatically generated

Q8.



A computer screen shot of text

Description automatically generated

A screen shot of a computer

Description automatically generatedA computer screen shot of text

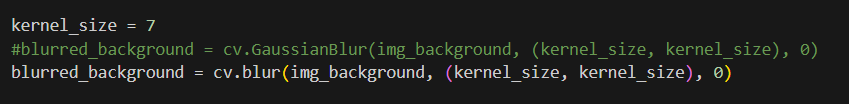
Description automatically generated

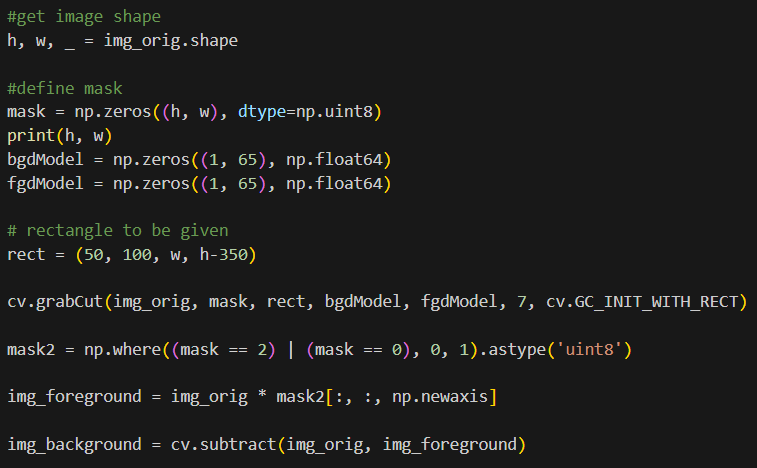
A painting of a person holding a sword

Description automatically generated

09.







Once the background image gets blur, edge near the missing flower gets closer values to 0 as most of the pixels are 0. Therefore, image gets little darker.

**GitHub Link repo :** [**https://github.com/Dulan24/S5\_EN3061\_Image-processing**](https://github.com/Dulan24/S5_EN3061_Image-processing)

**Notebook link :** [**https://github.com/Dulan24/S5\_EN3061\_Image-processing/blob/master/Activity%2001/answers/codes.ipynb**](https://github.com/Dulan24/S5_EN3061_Image-processing/blob/master/Activity%2001/answers/codes.ipynb)