**A04 Assignment – Fundamentals of Image Processing**

**Activities:**

* I experimented with histogram equalization, smoothing, and sharpening techniques.
* I used OpenCV and Pillow libraries for practical implementation.

**Results:**

* I enhanced image quality by adjusting contrast, reducing noise, and emphasizing details.
* I applied these techniques to various images, improving their visual clarity.

**Reflection:**

* **Challenges**: One of the difficult tasks was balancing the extent of image processing to avoid artifacts showing up in the image.
* **Solutions**: I practiced non-destructive editing to preserve original image quality.
* **Key Takeaways**: I learned the importance of each technique and their applications in fields like photography and medical imaging.

A close up of a plant

Description automatically generated

B

A

‘A’ shows the original picture (grainy) and ‘B’ shows a modified section (smooth)

A butterfly on a flower

Description automatically generated

Final Picture using Image Processing Techniques