IT 254 (BSC)- DIGITAL IMAGE PROCESSING

UNIT TEST 02

Date: 16/08/2024	Time: 1.30 p.m.

INSTRUCTIONS:

- ✓ **Time Duration: 1 hours (60 minutes)**
- ✓ **Format: Python files**
- ✓ **Total marks: 50 marks**
- ✓ **Contribution to the final: 15 marks**

1. Compute and plot histograms for all three color channels (RGB) of an image using OpenCV.   **(10 Marks)**
2. Implement image segmentation using region growing or contour detection and display the segmented regions.   **(10 Marks)**
3. Apply bilateral filtering to reduce noise in a color image and display the filtered image.
   (15 Marks)
4. Write a Python script using OpenCV to draw a line, circle, ellipse, and rectangle on an image and display the modified image.   **(15 Marks)**
   (Total 50 Marks)

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