

## Assignment # 2

Course Title

Digital Image Processing

Due Date: 15/11/2021

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- Every student must do his/her own assignment individually.
  - Zero tolerance for plagiarism.
  - All code must be properly commented. I am expecting detailed comments on each line of code so that a naive reader even should understand the code logic from your comments.
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You are required to write a detailed report on how you implemented the methods for each question and how the output is obtained. You must submit the report in word or pdf format. Original code must be provided. You must zip all the documents in a folder and write the name of the zip in following format

StudentID\_Name\_Batch.ZIP\_OR\_RAR

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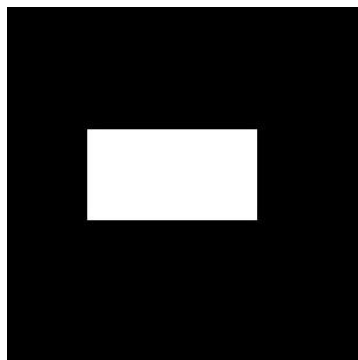
**Question 1.** Find the overlapping area between two objects shown below and display its area (in pixels).



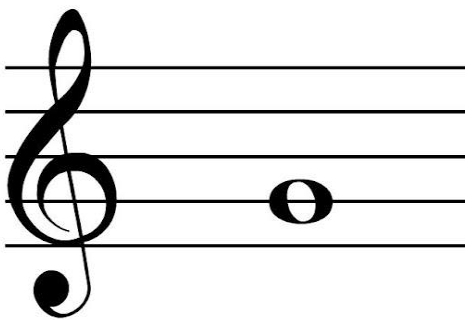
**Question 2.** Find the boundary of hand and display it on original image in green color. Also calculate parameter of hand and display it at the center of hand.



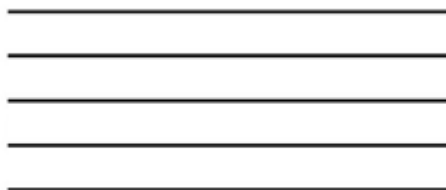
**Question 3.** Using Sobel edge detector and Thresholding find the corners of following shape. Then using corners find the area of the shape and display it.



**Question 4.** From the following figure, detect only horizontal lines and display them. The input and an ideal output is shown below.



Input image



Output Image