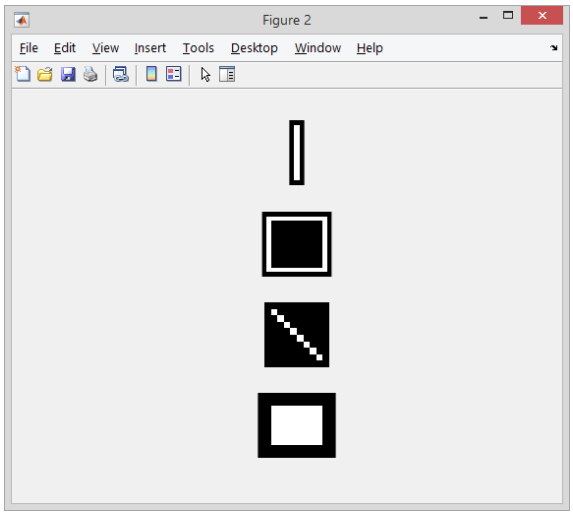
Computer Vision Lab: Region Detector

CSCI 380 Computer Vision

1. Design a region detector based on following specifications:
    a. Input:
        i. Grayscale image containing an unknown number of blobs/regions.
    b. Output:
        i. Command line output:
            1. The number of blobs detected in the image.
            2. For each blob output:
                a. A blob identifier (i.e., 1, 2, etc)
                b. The total area for the blob
            3. Algorithm implemented
        ii. Graphical display (Figure):
            1. Each blob detected (as shown below):



Design Considerations:

1. Choose an algorithm from section 10.1 in the textbook to implement:
    a. Region Labeling by Flood Filling (10.1.1)
    b. Sequential Region Labeling (10.1.2)
2. Clearly indicate in the command line output the algorithm you are implementing.

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Region Detector Grading Rubric:

	Exemplary (3)	Meets expectations (2)	Does not meet expectations (1)
Blob Detection	Each blob in the given image is detected and displayed accurately as shown in the assignment.	Each blob is detected but not properly displayed in the	Incorrect number of blobs detected
Algorithm Implementation	One of the required algorithms is properly implemented using no built-in Matlab commands to circumvent the algorithm implementation	Algorithm implementation is attempted but has minor bugs in it.	Algorithm is not implemented, has major bugs, or built in Matlab commands used for blob detection (i.e., regionprops)
Blackboard Assignment Percentage: 6 points = 100% 5 points = 89% 4 points = 75% 3 points = 62% 2 points = 50% (0% if no assignment turned in)			

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