Digital Image Processing (ELL715)
Assignment 5

1. The signature image is our identity, banks, and other places signatures are used, can you take10 copies of your signature and show that they represent you, we can use morphological operations like thinning, skeleton
   Can we find bends and curves to identify them
   Can we use an envelope to make them more robust

2. Let the regulated dilation of a set A by a set of structuring element B with a strictness of isdefined by:

$$A \overset{s}{\oplus} B \equiv \{x | \#(A \cap (\check{B})_x) \geq s\};$$
$$s \in [1, \min(\#A, \#B)]$$

   where the symbol # denotes the cardinality of a set. And the regulated erosion of A by Bwith a strictness of s is defined by:

$$A \overset{s}{\ominus} B \equiv \{x | \#(A^c \cap (B)_x) < s\}, \quad s \in [1, \#B]$$

   Where it is assumed that #A < inf. Let

$$A' = (A \oplus^s B) \ominus^s B$$

Take an image of a book placed on white background and show the output of this operation, you canreport the result with square, rectangle, circle, diamond, plus sign structuring element