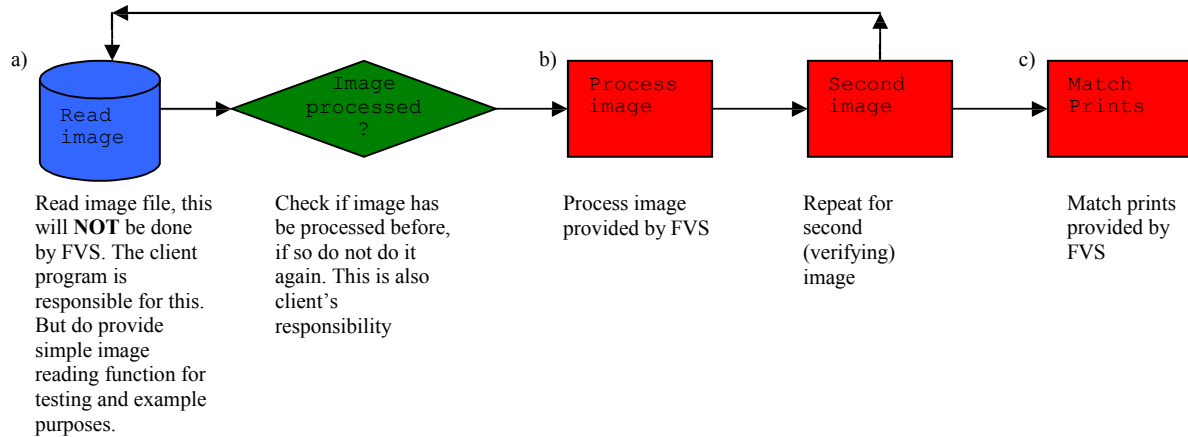


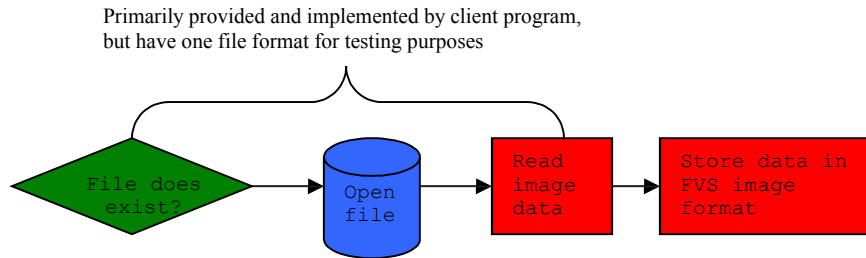
Flowcharts of Fingerprint Verification System (FVS)

Designed by: Shivang Patel

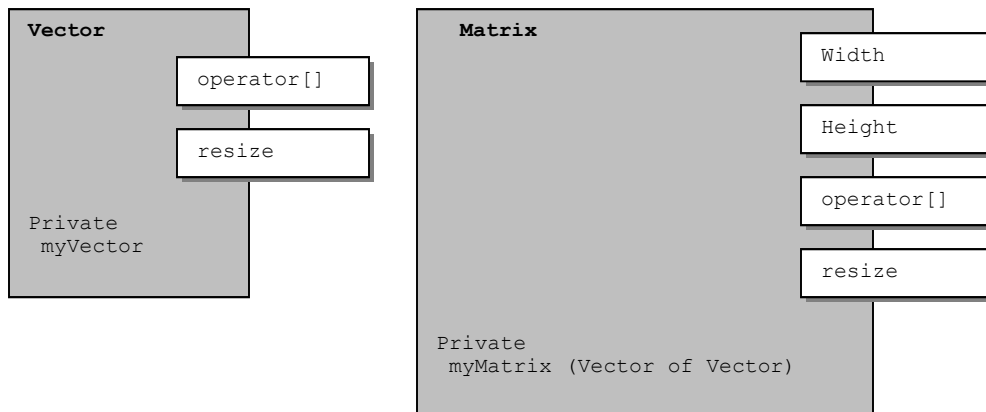
Basic Library Layout



Detailed Flowchart of Image Retrieval (Part A)



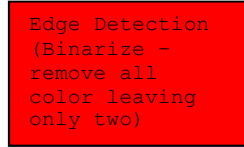
FVS Image format (purposed classes)



Detailed Flowchart of Image Processing (Part B)

Provided that image has not be previously processed:

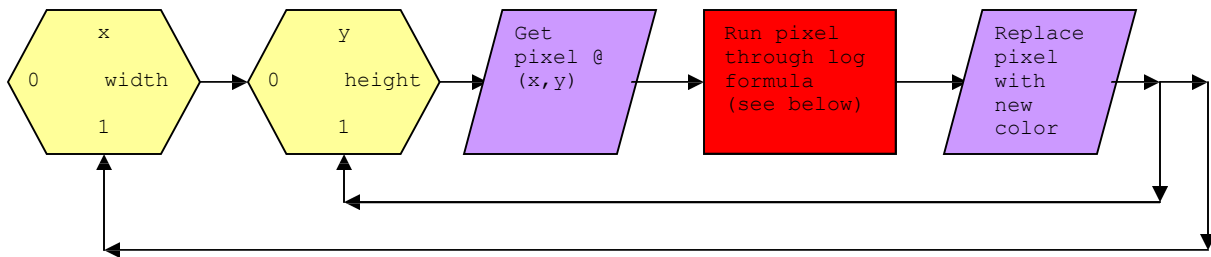
B. a)



B. b)



Detailed Flowchart of Edge Detection (Part B. a)



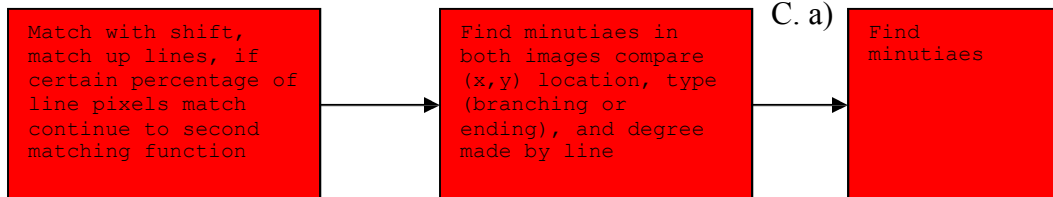
Logarithm formula:

$$\text{New pixel value} = \text{round}(\log((1.0)/((\text{double})(\text{srcpixel}) + 20)) * 70.0) / \log(2) * - 255.0)$$

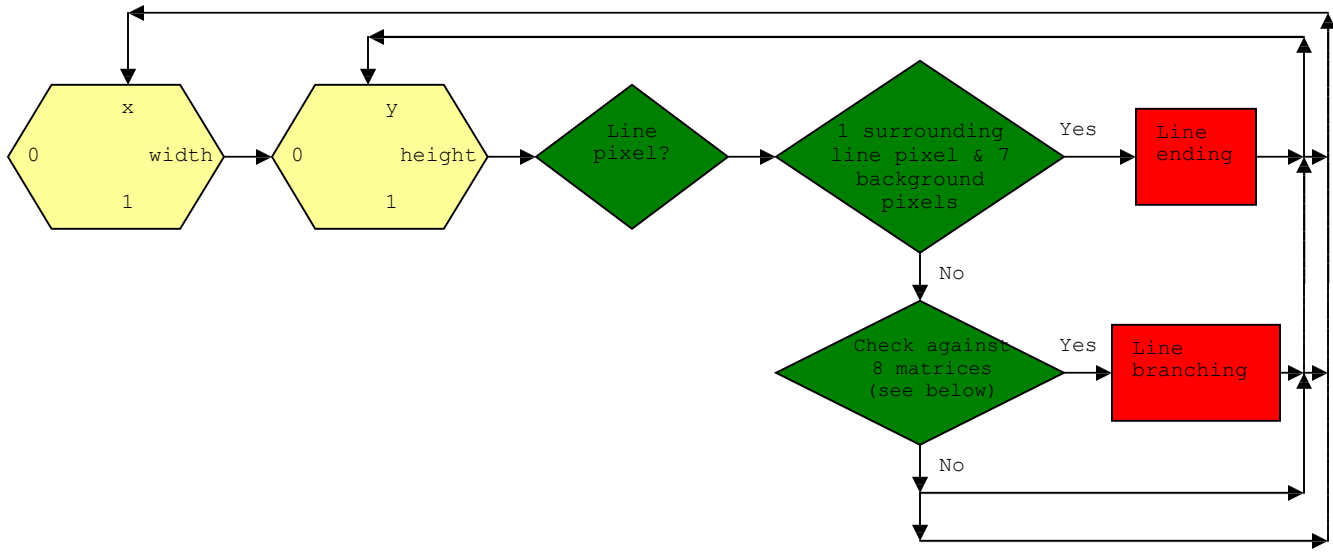
Detailed Flowchart of Thin (Part B. b)

Coming soon

Detailed Flowchart of Matching Prints (Part C)



Detailed Flowchart of Find Minutiaes (Part C. a)



8 matrices of a line branching:

1	0	0	0	0	1	1	0	1	0	1	0	0	1	0	0	0	1	1	0	0
0	x	1	1	x	0	0	x	0	0	x	0	0	x	1	1	x	0	0	x	1
1	0	0	0	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0

1 = Line pixel
 0 = background pixel
 x = current line pixel

Flowchart key:

