
Console output from Eclipse for Image 9

Binary Image Input:

_____BINARY IMAGE INPUT_____

```
      1111
     111111
    111 111  1
   11   111  11
  111  111   111
 1 11  11     11111
      11111111
 111   1  11 11111
 111     1111
11111   111111
   11111   111
  11111
    11111
      1111
        1111
          1 111
            111111
              1111
                1111
                  1111
                    11111
                      11111
                        1111
```

Result of Binary Image Smoothing using 3x3 filter mask:

BINARY IMAGE AFTER SMOOTHING

```
      1111
     111111
    111 111 1
   11   111 11
  111 111   111
 1 11 11   11111
      11111111
 111   1 11 11111
 111           1111
11111   111111
      11111   111
 11111
      11111
        1111
          1 111
        111111
        1111
        1111
        1111
 11111
    11111
    111
```

Result of 4 Neighbors filling :

_____BINARY IMAGE AFTER 4 NEIGHBORS FILLING_____

```

      1111
    111111
  11111111 1
1111 111 11
  111 111 111
    1111 11 11111
      11111111
111 1 11111111
111 11111111
11111 111111
  111111 111
    111111
      11111
        1111
          111111
            111111
              1111
                11111
                  11111
                    1111111
                    1111111
                    111

```

Result of 8 Neighbors filling :

_____BINARY IMAGE AFTER 8 NEIGHBORS FILLING_____

```

      1111
     111111
    111111111111
   11111111111111
  1111111111111111
 111111111111111111
111  11111111111111
111  111111111111
111  111111111111
11111 1111111111
1111111111111111
 11111111111111
   1111111111
    11111111
     111111
      1111111
       1111111
        111111
         11111
          11111
           1111111
            1111111
             111

```

Result of Size Normalization Binary Image:

Row Size before size normalization : 28
Row Size before size normalization : 38

Normalized Row Size : 13
Normalized Column Size : 18

_____BINARY IMAGE AFTER SIZE NORMALIZATION_____

```

  111
1111111
  11111111
1   11111
111 11111
  111111
    111
    111
    111
  1111
  1111
  11
```

Binary Image's "Center Of Gravity" is at Row Index: 10 Column Index: 15
Center of Gravity pixel denoted by NUMBER '8'

```

    1111
    111111
    111111111111
  11111111111111
    1111111111111111
    111111111111111111
  111  11111111111111
  111  111111111111
  111  181111111111
11111  11111111111
  1111111111111111
    11111111111111
      1111111111
        11111111
          1111111
            111111
              11111
                1111
                  1111
                    1111
                      1111
                        111
```

Size Normalized Binary Image's "Center Of Gravity" is at Row Index: 5
Column Index: 6
Center of Gravity pixel denoted by NUMBER '8'

```
    111
  1111111
 11111111
1   11111
111 81111
  111111
    111
    111
    111
    111
    1111
    11
```

Result of Zhang-Suen Skeletonization Binary Image:

_____BINARY IMAGE AFTER ZHANG-SUEN SKELETONIZATION_____

```
  1111
  1   1
 1   1
11   1
 1111
    1
    1
    1
    1
```
