# Assignment 3

**Aditya Mhamunkar**
amhamun1@binghamton.edu
Visual Information Processing – Summer 2017

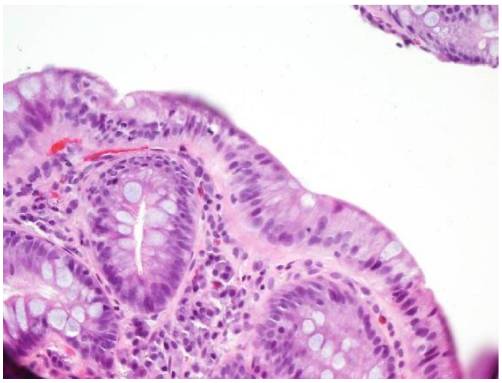
## Purpose

Search and detect area of interest using morphological operations and color information, and count the number of detected areas.

## Part A – Detection of Region of Interest

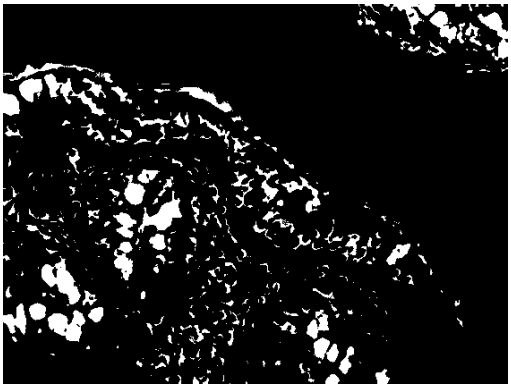
Algorithm with results:

1. Read the input image
   Result:



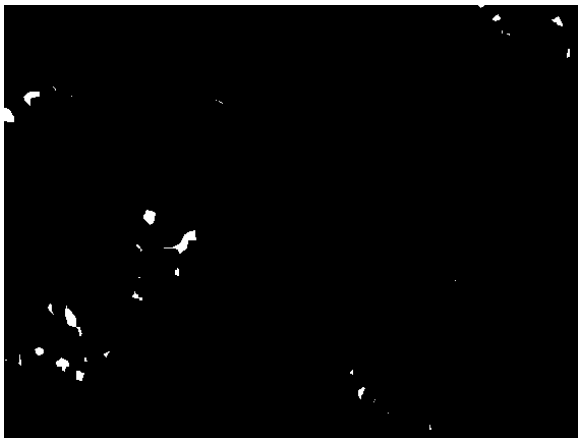
2. Converted the given input image into binary image using the color information.
   a. Threshold value used for blue is 210
   b. Threshold value for Red and Green is always less than Blue.

   Result:

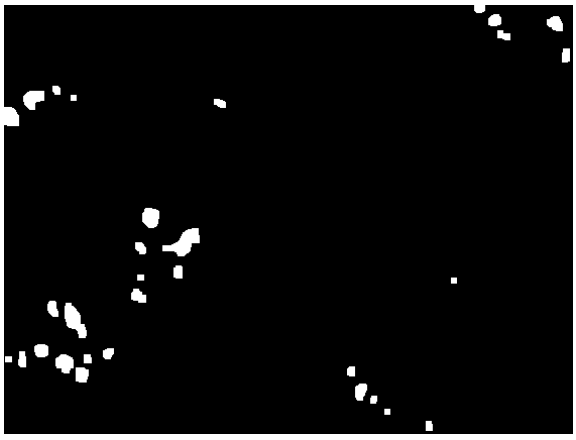


3. Performed the open morphological operation on the input image

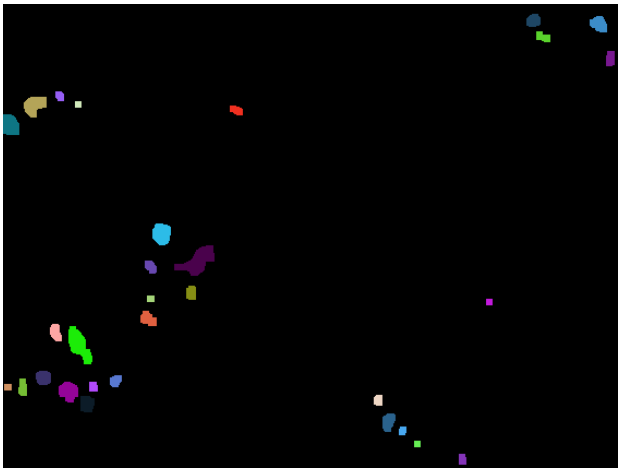
a. Erosion operation: Eroded the binary image using a structural element of 11x11
Result:



b. Dilation operation: Dilated the eroded image using a structural element
Result:

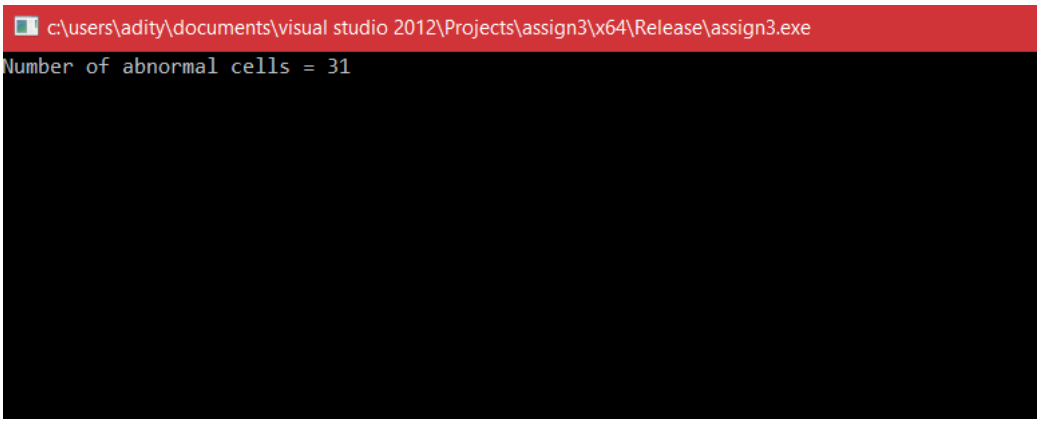


4. Counted the components using 4-connectivity Connected Component algorithm
Result:



5. Displayed the number of abnormal cell count on the console.

Result:




## Part B – Classification of Texture Pattern

### Problems:

I implemented the part B partially. I was not able to obtain accurate results as required.

*NOTES:*

- This program is implemented using OpenCV without using pre-defined functions.
- Please read the README.txt for project setup before executing.