/\*\*

\*Eden Montserrat Tavera Navarrete

\* Plugin histograma acumulado

\*/

import ij.ImagePlus;

import ij.plugin.filter.PlugInFilter;

import ij.process.ByteProcessor;

import ij.process.ImageProcessor;

public class HistogramaAcumulado\_GLC implements PlugInFilter{

ImagePlus im;

public int setup(String args, ImagePlus im){

this.im = im;

return DOES\_8G + NO\_CHANGES;

}

public void run(ImageProcessor ip){

int[] hist = ip.getHistogram();

int k = hist.length;

int[] hist\_accum = new int[k];

int new\_h = 0;

int max\_p = 0;

int max\_height = 150; //Can be changed. In this case is 150 as the homework suggested

ImageProcessor hip = new ByteProcessor(k, max\_height);

hip.setValue(255);

hip.fill();

//Histogram accumulated

hist\_accum[0] = hist[0];

for(int i = 1; i < k; i++){

hist\_accum[i] = hist[i] + hist\_accum[i-1];

if(hist\_accum[i] > max\_p) max\_p = hist\_accum[i];

}

//Histogram print

for(int u = 0; u < k; u++){

new\_h = (max\_height \* hist\_accum[u]) / max\_p; //Resize histogram (256x150)

//ij.IJ.log("valor: " + new\_h + " h["+u+"]" + hist[u]+ " max\_p: "+ max\_p);

for(int v = max\_height; v > (max\_height-new\_h); v--){

hip.putPixel(u,v,0);

}

}

String imTitle = im.getShortTitle();

String hisTitle = "Histogram of " + imTitle;

ImagePlus him = new ImagePlus(hisTitle, hip);

him.show();

}

}