function [Features] = New\_Feature\_Extractor(image)

%==================== prepare image Data =============================

imgGray = double(rgb2gray(image))/255;

%======================================================================

%================ SVD Singular Value Decomposition Features ===========

Segma =[];

Segma = (double(svds(imgGray,300)))' ;

%======================================================================

% points. Possible values for MAPPINGTYPE are 'u2'uniform LBP

% 'ri'rotation-invariant LBP 'riu2'uniform rotation-invariant LBP.

%======================= CLBP Image Features ==========================

CLBP\_Feature =[];

mapping=getmapping(8,'u2');

[CLBP\_SH,CLBP\_MH]=clbp(image,1,8,mapping,'h');

CLBP\_Feature =[CLBP\_SH CLBP\_MH];

%======================================================================

%======================= Apply Wavelet Transform=======================

%======================= CLBP Wavelet Features ========================

WavletFeature=[];

wname = 'sym4';

[CA,CH,CV,CD] = dwt2(imgGray,wname,'mode','per');

mapping=getmapping(8,'u2');

[CLBP\_SHA,CLBP\_MHA]=clbp(CA,1,8,mapping,'h');

mapping=getmapping(8,'u2');

[CLBP\_SHH,CLBP\_MHH]=clbp(CH,1,8,mapping,'h');

mapping=getmapping(8,'u2');

[CLBP\_SHV,CLBP\_MHV]=clbp(CV,1,8,mapping,'h');

mapping=getmapping(8,'u2');

[CLBP\_SHD,CLBP\_MHD]=clbp(CD,1,8,mapping,'h');

WavletFeature=[CLBP\_SHA CLBP\_MHA CLBP\_SHH CLBP\_MHH CLBP\_SHV

CLBP\_MHV CLBP\_SHD CLBP\_MHD];

%======================================================================

%=============================New GABOR================================

% Create array of Gabor filters, called a \_filter bank\_.

% This filter bank contains two orientations and two wavelengths.

%======================= CLBP Gabor Features ==========================

% Create Gabor Array

%gaborArray = gabor([2 4],[0 15 30 45 60 75 90 105 120 135 150 165]);

%gaborArray = gabor([2 4 6],[0 30 60 90]);

%gaborArray = gabor([2 4 6],[0 30 60 90 120 150]);

gaborArray = gabor([2 4],[0 30 60 90 120 150]);

FGabor=[];

for p = 1:12

theta = gaborArray(p).Orientation;

lambda = gaborArray(p).Wavelength;

[mag,phase] = imgaborfilt(imgGray,lambda,theta);

mapping=getmapping(8,'u2');

[CLBP\_SHGm,CLBP\_Mm]=clbp(mag,1,8,mapping,'h');

mapping=getmapping(8,'u2');

[CLBP\_SHGp,CLBP\_Mp]=clbp(phase,1,8,mapping,'h');

FGabor=[FGabor,CLBP\_SHGp,CLBP\_Mp,CLBP\_SHGm,CLBP\_Mm];

end

GaborFeature= FGabor;

%======================================================================%========== ADD All extracted features in The Feature ARRAY ==========

Features =[GaborFeature WavletFeature Segma CLBP\_Feature];

End %======== The END =========