clc

clear all

number\_of\_classes =5;

DBFolder=dir('C:\Users\yaseen\Documents\MATLAB\program\Heart\_Beat\_sound\_signal\_3Periods200files');

DBSize=length(DBFolder);

Features=zeros(1,832);

k=1;

lables=zeros(1, number\_of\_classes);

lables={};

target=[];

for i=3:DBSize

SFolder=dir(strcat('C:\Users\yaseen\Documents\MATLAB\program\Heart\_Beat\_sound\_signal\_3Periods200files\',DBFolder(i).name,'\\*.wav'));

addpath(strcat('C:\Users\yaseen\Documents\MATLAB\program\Heart\_Beat\_sound\_signal\_3Periods200files\',DBFolder(i).name));

SFSize=length(SFolder);

for j=1:SFSize

filename = SFolder(j).name; % file name to be loaded

[y, Fs] = audioread(filename, 'native'); % signal bieng loaded having data in variable y and frequency Fs

cdwt = getmswtfeat(double(y),Fs/2,Fs/8,Fs);

% feat = getmswtfeat(x,winsize,wininc,SF)

cmfc = melcepst(y, Fs\*6 , 16, 16, (0.03 \* Fs));%19, 24

[rr,cc]=size(cdwt);

rr

mm=1;

for m=1:8:rr-(mod(rr,8)+8)

if (m < size(cmfc,1) && mm < rr)

Features(k,1:352)=reshape(cdwt(m:m+7,:),[1 352]);

Features(k,353:832)=reshape(cmfc(mm:mm+29,1:16),[1 480]);

lables{k}=DBFolder(i).name;

mm=mm+30;

Lables(k,i-2)=1;

k=k+1;

end

end

end

end

%converting to table

FeaturesX=array2table(Features);

lablesY=cell2table(lables');

TrainingData=[FeaturesX lablesY];