# Group no. 43

# Drowsiness Detection

## Implementation:

we will decide whether a person Is drowsy or not on basis of eyes(open or close), mouth(yawning),and head lowering

## Steps Involved:

1. Taking a video input from webcam using image aquisition toolbox

2. Dividing the video into frames and detecting the face in the video using computer vision toolbox

3. After obtaining the face we will segment into left eye right eye and mouth then we individually detect each of them

4. Eyes(open or close):we decide whether eyes are open or close by using difference between the black and white pixels in the image

5. Mouth(yawning):we do it by calculating the amount of red component in the image

## Progress :

Till now we have successfully worked to take a video input then use computer vision toolbox to identify face in a given video. We are able to segment the face into 3 different parts which are left eye, right eye and mouth.Through eyes(open or close) we are able to decide whether the person is drowsy or not.

Some results we obtained so far:
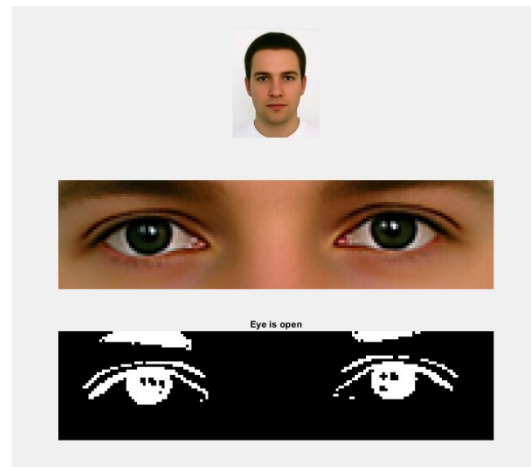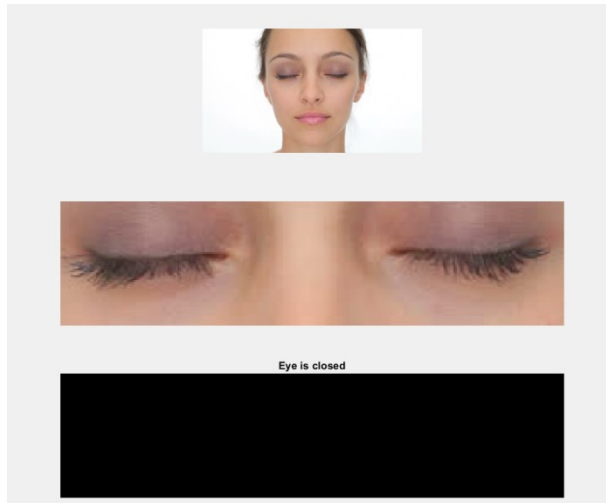
# Things left to do:

We need to identify weather a person is yawning,head lowering .Testing the code for different datasets,increasing accuracy.

# Individual contribution:

◆ A.Raja (S20170010119): detection whether eyes are closed or open

◆ D.Nikhil(S20170010045): Detecting head lowering

◆ K.prem kumar(S20170020212):taking video input and converting into frames,GUI

◆ Sahil(S20170010133):detecting whether person is yawning or not.