ASSIGNMENT 6

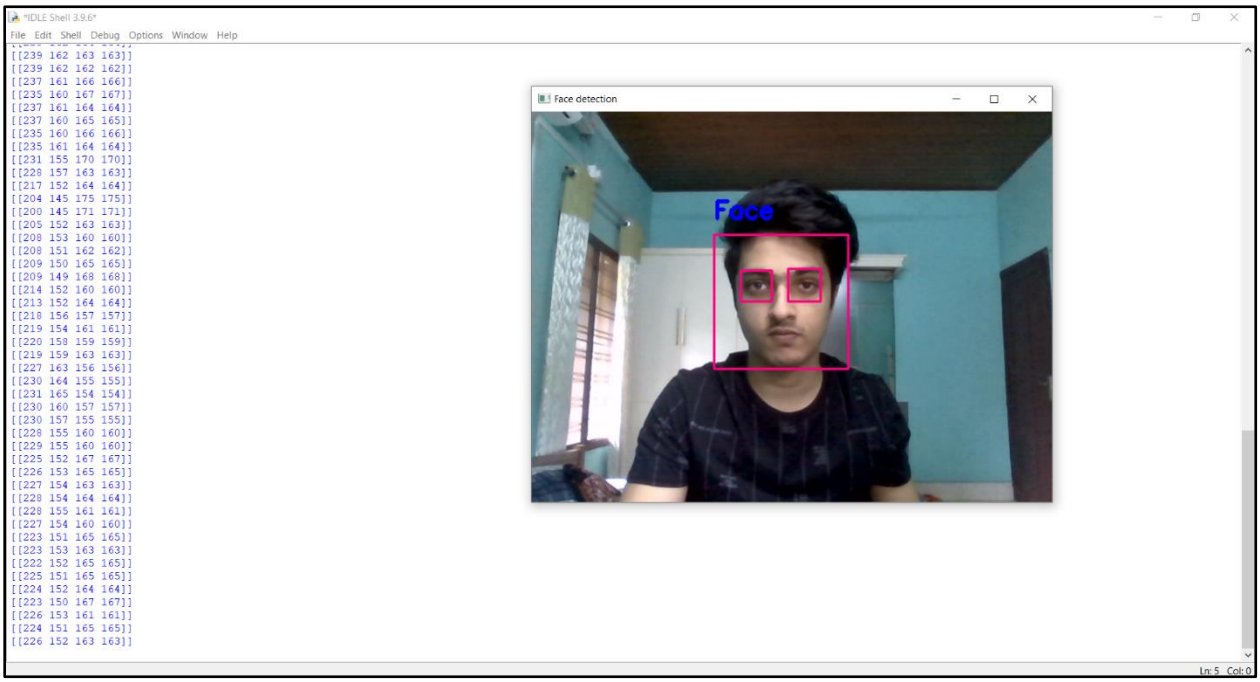
- Develop a python code to detect any object using Haar cascade classifier.

Python code

```
import cv2
import datetime

face_classifier=cv2.CascadeClassifier("haarcascade_frontalface_defau
lt.xml")
eye_classifier=cv2.CascadeClassifier("haarcascade_eye.xml")
#It will read the first frame/image of the video
video=cv2.VideoCapture(0)

while True:
    #capture the first frame
    check,frame=video.read()
    gray=cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY)
    cv2.imshow('abcd',gray)



    #detect the faces from the video using detectMultiScale function
    faces=face_classifier.detectMultiScale(gray,1.3,5)
    eyes=eye_classifier.detectMultiScale(gray,1.3,5)

    print(faces)

    #drawing rectangle boundries for the detected face
    for(x,y,w,h) in faces:
        cv2.rectangle(frame, (x,y), (x+w,y+h), (127,0,255), 2)
        cv2.imshow('Face detection', frame)
```

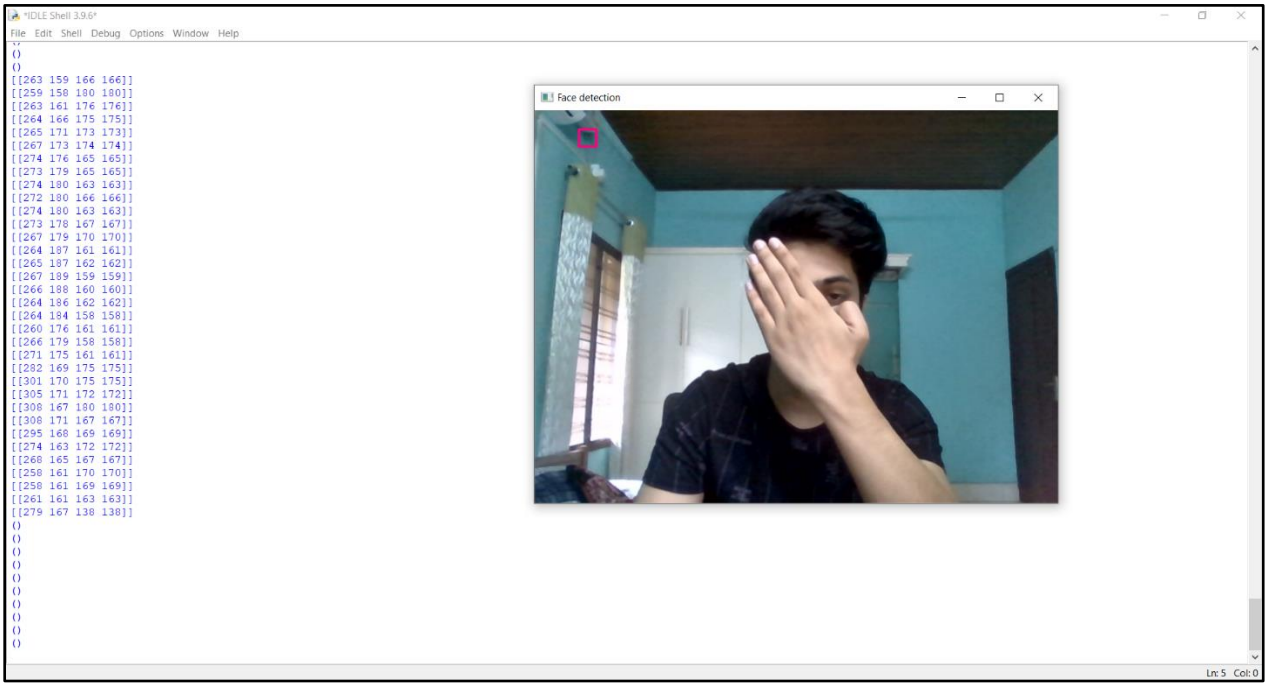
```
        cv2.putText(frame, 'Face', (x,y-20),
cv2.FONT_HERSHEY_SIMPLEX, 1, (255,0,0), 4)
        picname=datetime.datetime.now().strftime("Face_%y-%m-%d-%H-
%M")
        cv2.imwrite(picname+".jpg",frame)

    #drawing rectangle boundries for the detected eyes
    for(ex,ey,ew,eh) in eyes:
        cv2.rectangle(frame, (ex,ey), (ex+ew,ey+eh), (127,0,255), 2)
        cv2.imshow('Face detection', frame)

    #waitKey(1)- for every 1 millisecond new frame will be captured
    Key=cv2.waitKey(1)
    if Key==ord('q'):
        #release the camera
        video.release()
        #destroy all windows
        cv2.destroyAllWindows()
        break
```

When face is detected



Here, face is detected and the image data is printed in the python shell.

When face is not Detected



Here, face is not detected as it is covered and so the image data is null.

JPG file created – (Face_21-07-15-14-20**)**