ASSESMENT-6

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PYTHON-CODE:

```
import cv2
face_classifier=cv2.CascadeClassifier("haarcascade_frontalface_default.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('Video',frame)
  #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, 0.8, (0,255,0),2)
    #picname=datetime.datetime.now().strftime("%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
```

HAARCASCADE FILES USED IN PYTHON:





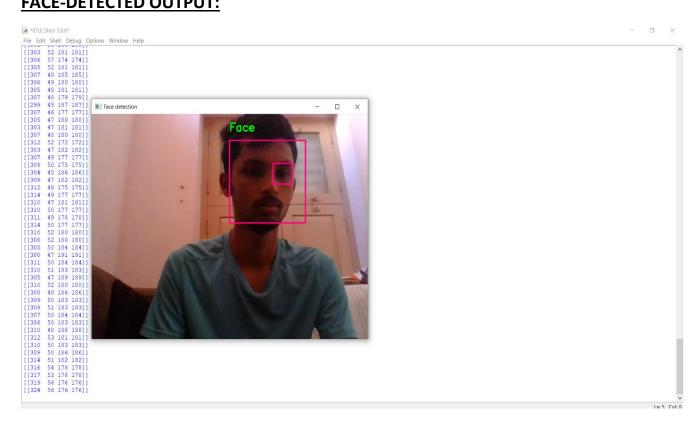
haarcascade_eye.xml haarcascade_frontalf ace_default.xml

CODE:

```
 \fbox{$ \ensuremath{\mathbb{R}}$ new2.py - C:\Users\varun krishna\OneDrive\Desktop\face\_detect\new2.py (3.9.6) } 
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File Edit Format Run Options Window Help
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    cv2.imshow('Face detection', frame)
    cv2.putText(frame, 'Face', (x,y-20),cv2.FONT_HERSHEY_SIMPLEX,0.8,(0,255,0),2)
    #picname=datetime.datetime.now().strftime("%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)
        \prescript{\sharp waitKey(1)-} for every 1 millisecond new frame will be captured \prescript{\tt Key=cv2.waitKey(1)}
        #destroy all windows
cv2.destroyAllWindows()
```

Ln: 12 Col: 28

FACE-DETECTED OUTPUT:



assb	18/07/2021 21:04	Pytnon File	7 KR
21-07-18-21-11	18/07/2021 21:11	JPG File	67 KB
21-07-18-21-12	18/07/2021 21:12	JPG File	68 KB

