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_frontalface_default.xml

CODE:

new2.py - C:\Users\varun krishna\OneDrive\Desktop\face_detect\new2.py (3.9.6)

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```
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
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while True:
    #capture the first frame
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    faces=face_classifier.detectMultiScale(gray,1.3,5)
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    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
```

Ln: 12 Col: 28

FACE-DETECTED OUTPUT: