ASSIGNMENT-6

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PYTHON CODE:

```
import cv2
import datetime
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',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',ArithmeticError(x,y  10),cv2.FONT_HERSHEY_COMPLEX_
SMALL, 1, (255,0,0), 4)
 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
```

assignment6.1.py - C:/Users/14379/AppData/Local/Programs/Python/Python39/assignment6....

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```
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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',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',ArithmeticError(x,y-10),cv2.FONT_HERSHEY_COMPLE
        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
```

video