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* **Face detection:**
* Installations: openCv, python, text editor, numpy library
* Terms :

Opencv- it is a platform on which many libraries are available for free

Numpy- it is python library which is used to deal with matrices, array, algebraic functions

haar-Cascadeclassifier- it is the prebuilt class available on opencv for detecting features of face. It works by dealing with certain positive and negative images.

* Planning:

first import opencv (cv2) and numpy. To detect in real time first we need to write code for capturing the video from web cam. To do this we use cv2.VideoCapture() to capture the video, then a while loop is needed to do this continuously. Then convert the image into grayscale to make it simpler as compared to colour image.(numpy converts the image into 2d array) After this use haar cascade classifier(frontal face) which are trained to detect faces. Now, as mentioned earlier we add a while loop in which we use cap.read() to read the object and cv2.imshow() method to display the frame. We also add cv2.waitkey() to add delay in while loop before going to next frame.then we call the function detectmultiscale which is going to return us the rectangle in which face is detected. It has other parameters which can change the size of image that is to scale it so that it is detected by classifier easily. After getting all possible regions in the image where faces may be there, so now we using cv2.rectangle we can draw rectangle at co-ordinates which we received form detectmultiscale.To exit out of the video we use cap.release() and then to close down video stream we use cv2.destroyAllWindows().