

CODE

```
% Create the face detector object.
faceDetector = vision.CascadeObjectDetector();

% Create the webcam object.
cam = webcam();

% Create the video player object.
videoPlayer = vision.VideoPlayer();

runLoop = true;
frameCount = 0;

while runLoop && frameCount < 400
    % Get the next frame.
    videoFrame = snapshot(cam);
    videoFrameGray = rgb2gray(videoFrame);
    frameCount = frameCount + 1;

    % Detect multiple faces.
    bbox = step(faceDetector, videoFrameGray);

    % Draw bounding boxes around detected faces.
    for i = 1:size(bbox, 1)
        % Draw bounding box around the face.
        videoFrame = insertShape(videoFrame, 'Rectangle', bbox(i, :), 'LineWidth',
3);

        % Recognize faces within each bounding box.
        % Perform face recognition here.

        % Display the annotated video frame using the video player object.
        step(videoPlayer, videoFrame);
    end

    % Check whether the video player window has been closed.
    runLoop = isOpen(videoPlayer);
end

% Clean up.
clear cam;
release(videoPlayer);
release(faceDetector);
```