PROGRAM-16

AIM:

To do a Python program for Face Detection

ALGORITHM:

1. **Import libraries**: Load OpenCV and Matplotlib.
2. **Load face detector**: Initialize Haar cascade for face detection.
3. **Start webcam**: Open the camera using cv2.VideoCapture(0) and check if it works.
4. **Setup Matplotlib**: Enable interactive mode and prepare a plot to display frames.
5. **Loop to read frames**:

* Capture a frame from the webcam.
* Convert it to grayscale.
* Detect faces in the frame.
* Draw rectangles around detected faces.
* Convert the frame to RGB.
* Display or update the image in the Matplotlib window.

1. **Exit on user stop (Ctrl+C)**.
2. **Cleanup**: Release the webcam and close the plot window.

OUTPUT:

