Aim:- Count the people.

Approach:-

1. Import necessary libraries

[ Numpy, CV2, argparse, os, dlib, and scpiy for dist ]

1. At the very first we use the argparse to take input and create an output file
2. Then we assign variables for the dataset (coco. names), yolov3 weights, and config files
3. Calculate the height and width
4. Import pre-trained model from darknet (YOLO-V3)
5. Then implemented detection of people,
   1. For this we use person class from coco model and threshold = 0.3 and create the boundary box using NMSBoxes and for this we find the confidence value and we assume that min confidence is ‘0.3’.
   2. After that we find the centroid
6. Then in the tracking part we used the detected centroid position and using disappeared and distance value we try to update the centroid position and according to that we do register and deregister the person into the list.
7. In the counting part we try to track the person which goes upward and downward direction. And we create the line at position “Height/2 - Height/9”. And try to update the list of in and out count and then do ‘IN-OUT’. As well as try to give IDs to each detected person and store them in the list.
8. As well as we use the elapsed frame = 0 and skipped frame = 10