Task 2.

a)

Part ”setup”, where the main options are determined such as frame size, webcam object, image-pyramid scale and PointTracker instance.

Within while-loop all manipulation with a frame are done before detecting a face. When face is found interest points are extracted from ROI and transformed into image coordinates

Function step(pointTracker, img\_gray) that runs pointTracker instance with parameter img\_gray for calculating optical flow and detects “good-points-to-track”. Theese points are preserved for the next iteration.

b) if moving very rapidly most # of points are gone. That is classified as “motion is large (larger than a pixel). It can be overcame by: coarse-to-fine estimation, iterative refinement, exhaustive neighborhood search.

Some points doesn’t move like their neighbours. For example some points are stuck on corners of background. This problem can be dropped by motion segmentation.