**Home Work 3**

Question 7:

Matlab Code:

vidReader = VideoReader('visiontraffic.avi','CurrentTime',11);

opticFlow = opticalFlowHS;

h = figure;

movegui(h);

hViewPanel = uipanel(h,'Position',[0 0 1 1],'Title','Plot of Optical Flow Vectors');

hPlot = axes(hViewPanel);

while hasFrame(vidReader)

frameRGB = readFrame(vidReader);

frameGray = im2gray(frameRGB);

flow = estimateFlow(opticFlow,frameGray);

imshow(frameRGB)

hold on

plot(flow,'DecimationFactor',[5 5],'ScaleFactor',60,'Parent',hPlot);

hold off

pause(10^-3)

end

Output:

Graphical user interface, application

Description automatically generated

Question 8: