TASK 2:

For this project, the video capture and blob detection helps to find about its environment in the similar way as a human perceives. Once the video is captured and saved, each image is processed by detecting the blobs on the image. A blob is a group of connected pixels that share a common property. The blobs are represented using dark coloured regions. To identify the blobs, the images are converted to binary images in which all white pixels are grouped together. The centres of the blobs are measured and all the pixels closer to it are merged. The blobs are then filtered using the colour filters. Together the image capture and blob detection helps in identifying and analysing the object around the UAV and helps in the navigation.

TASK 4:

The part of the code in video\_capture is related to the video capture hardware. It initiates the video capture and stores them in the file to be processed at the given frame rate.

The part of the code in blob\_locator is used to process the images / frames stored from the video capture module. This is related to the CPU or the processing hardware which would calculate and identify the blobs in the stored images.

TASK 5:

Have learnt the functionality of the UAV and were able to get extensive knowledge on how the images are captured and identified in a UAV. We could understand the how the images are captured and the procedure of identifying the blobs which in return gave away the position coordinates of the target.