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 code commented is used in the drone. Specifically, the on-board image processing system has the video capture facility and the blob detection algorithm used in it to identify the targets and report the possible targets by sending the exact coordinates of the target.

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 were able to 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.