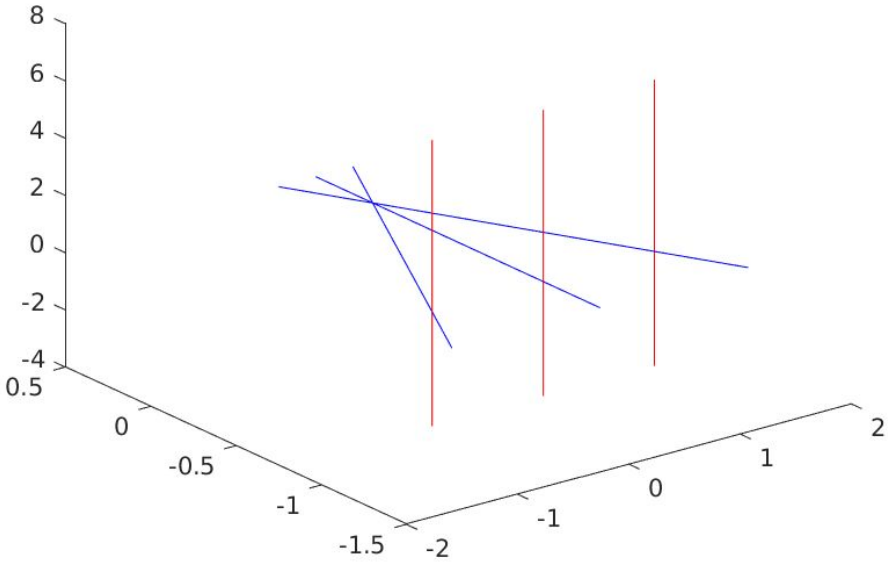
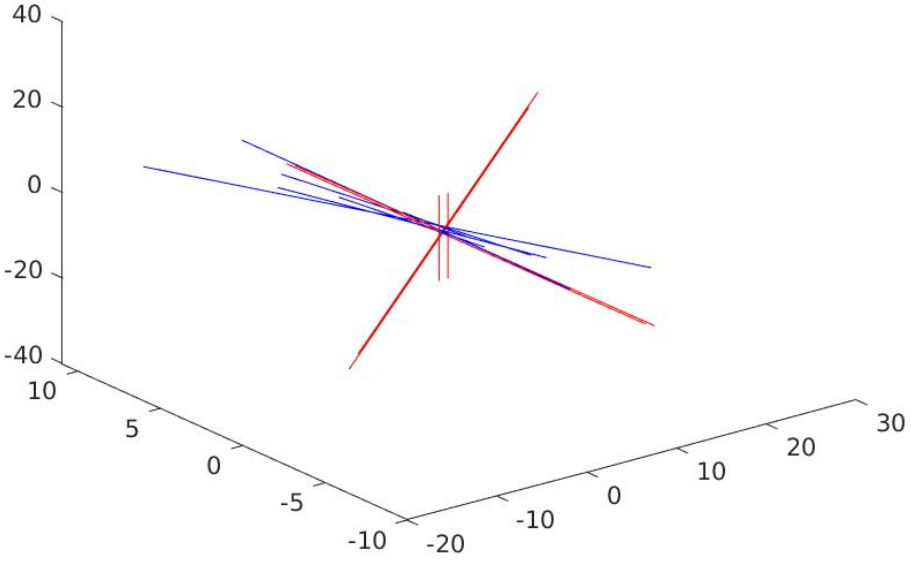
Problem 1

1 (b) find intersection plot for lines L1 & L2



1 (d) Pairwise intersection of parallel lines



Problem 2

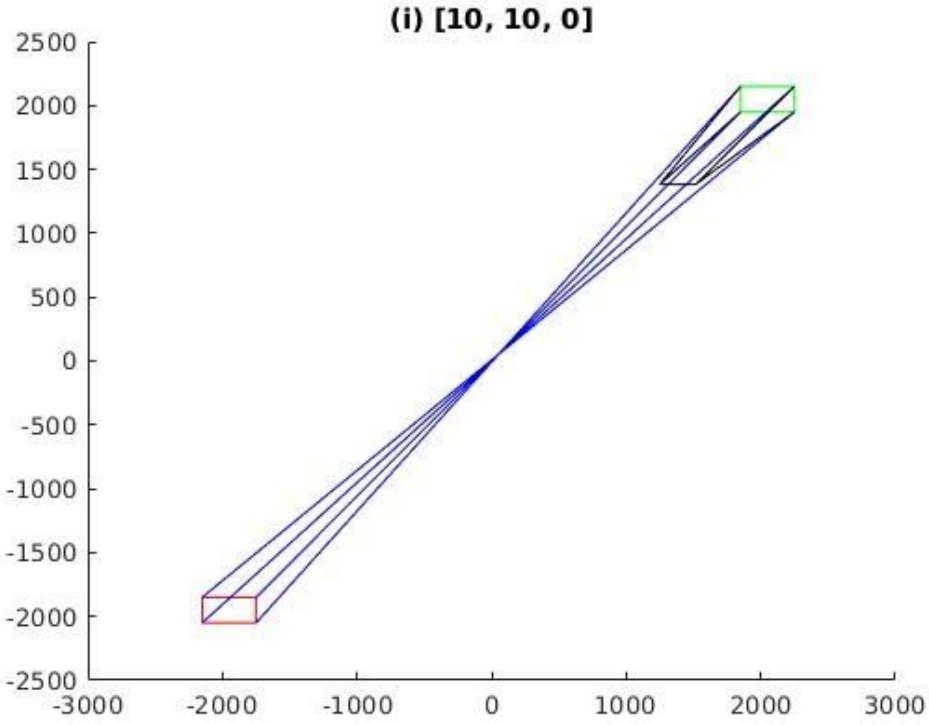
a. Compute homography:
   - To compute homography between two images, I implemented DLT algorithm which takes 4 corresponding points from two images and finds the transformation between them *p=H * p'*

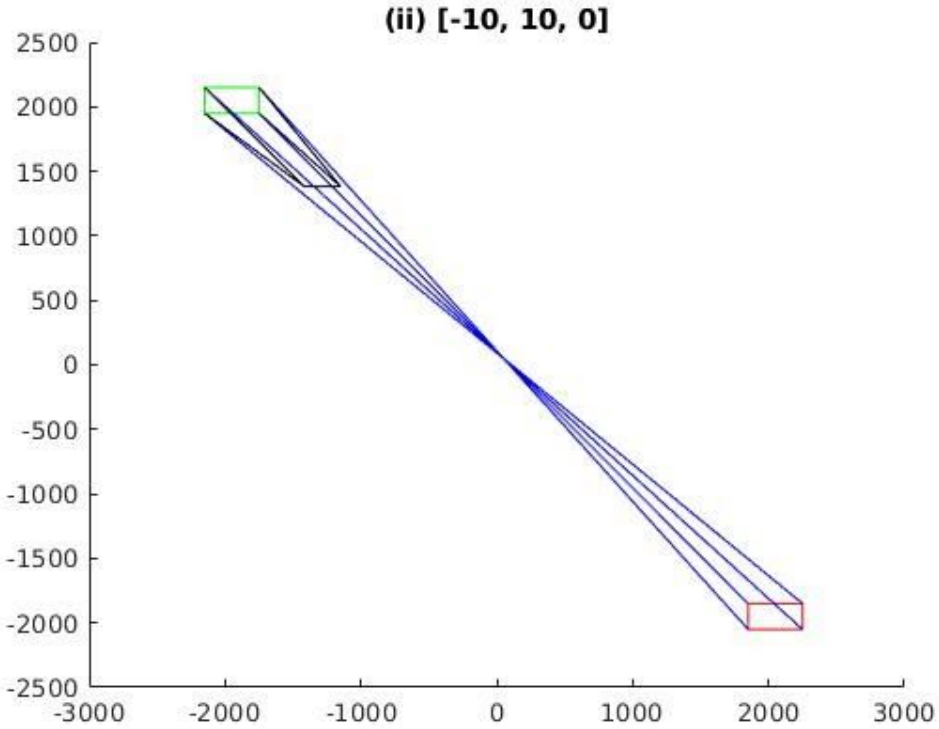
b. Composite panorama:
   - To make a composite panorama of the three provided images, I followed the following steps:
     - Compute homography using the above-created function between the first two images
     - Computer homography for the last two images
     - Expand the middle image (with padding) and add the first image to the left and the last image to the right
     - Use bilinear interpolation to deal with non-integer pixel values

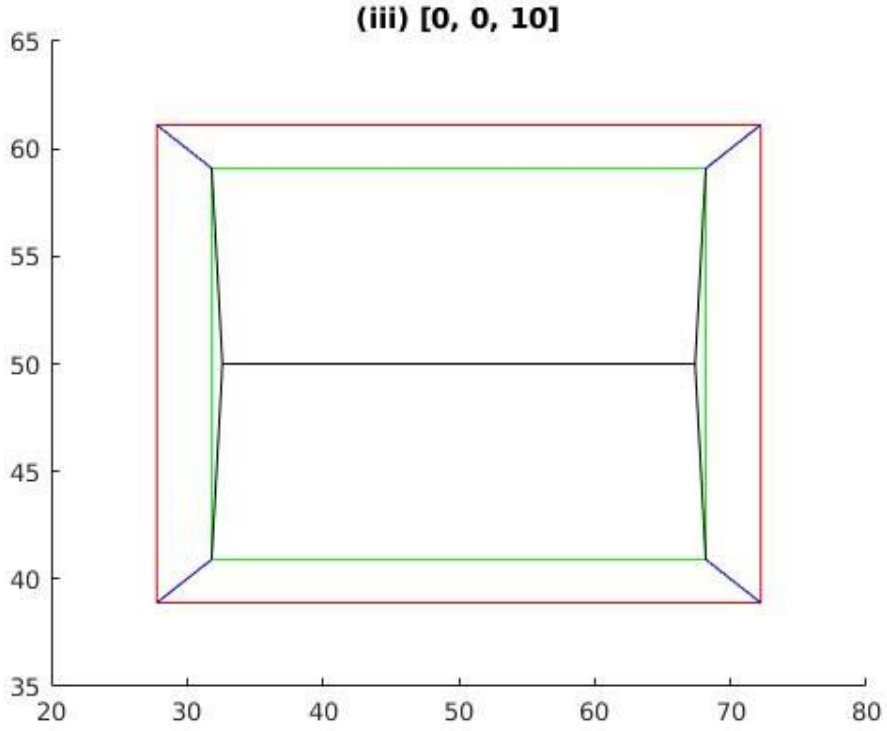
Composite Panaroma Image:

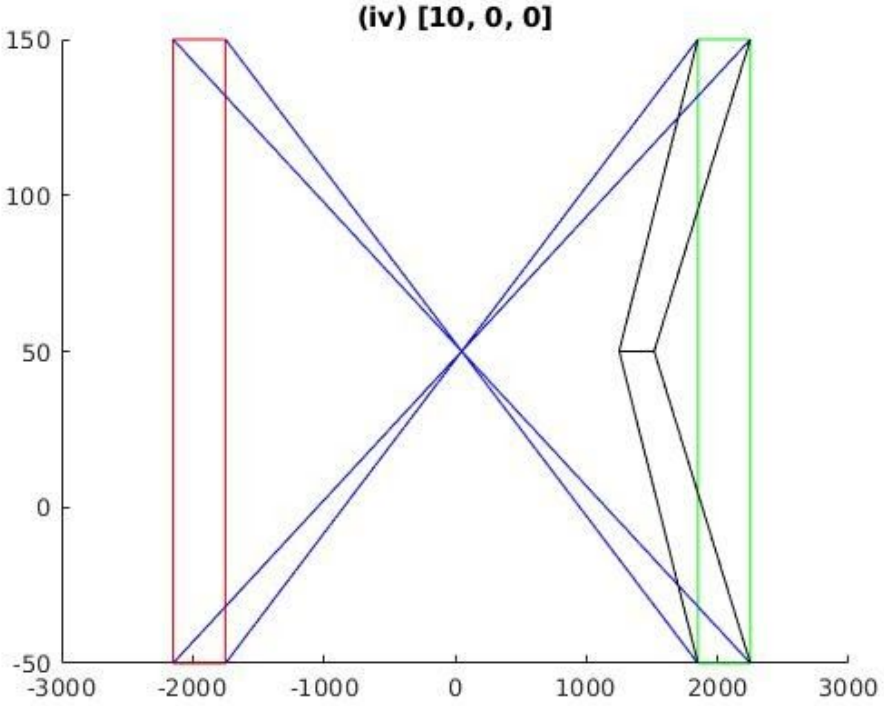
Extra Credit

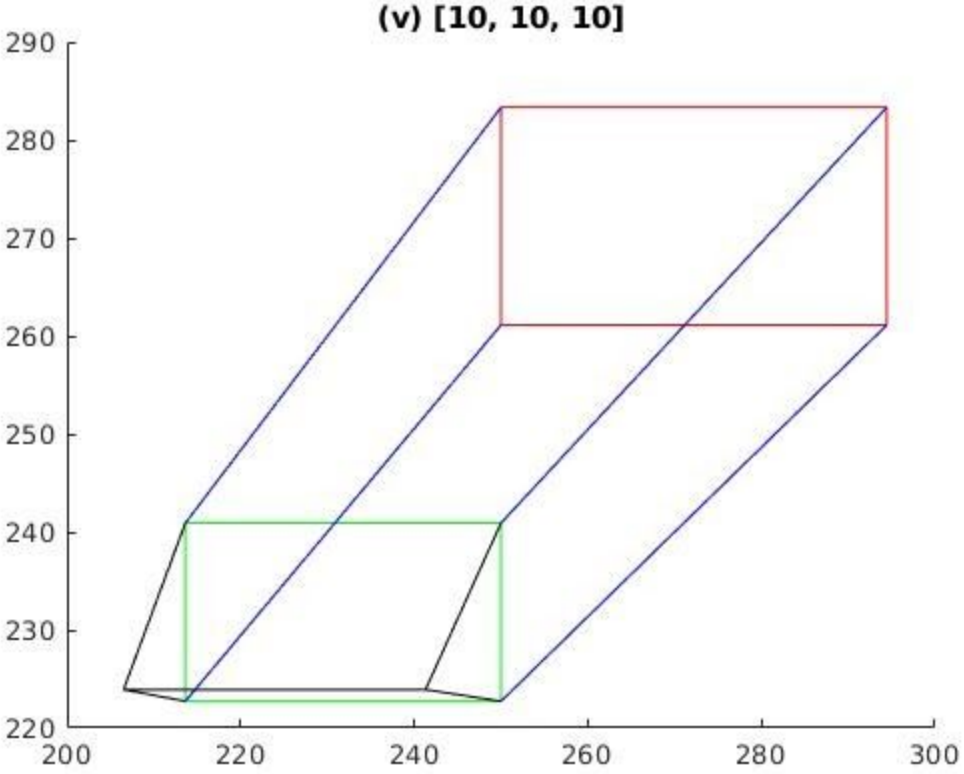
- I have used the rotation matrix as an identity matrix for the computations






(iii) [0, 0, 10]
65
60
55
50
45
40
35
20
30
40
50
60
70
80


(iv) [10, 0, 0]
150
100
50
0
-50
-3000
-2000
-1000
0
1000
2000
3000


(v) [10, 10, 10]
290
280
270
260
250
240
230
220
200
220
240
260
280
300