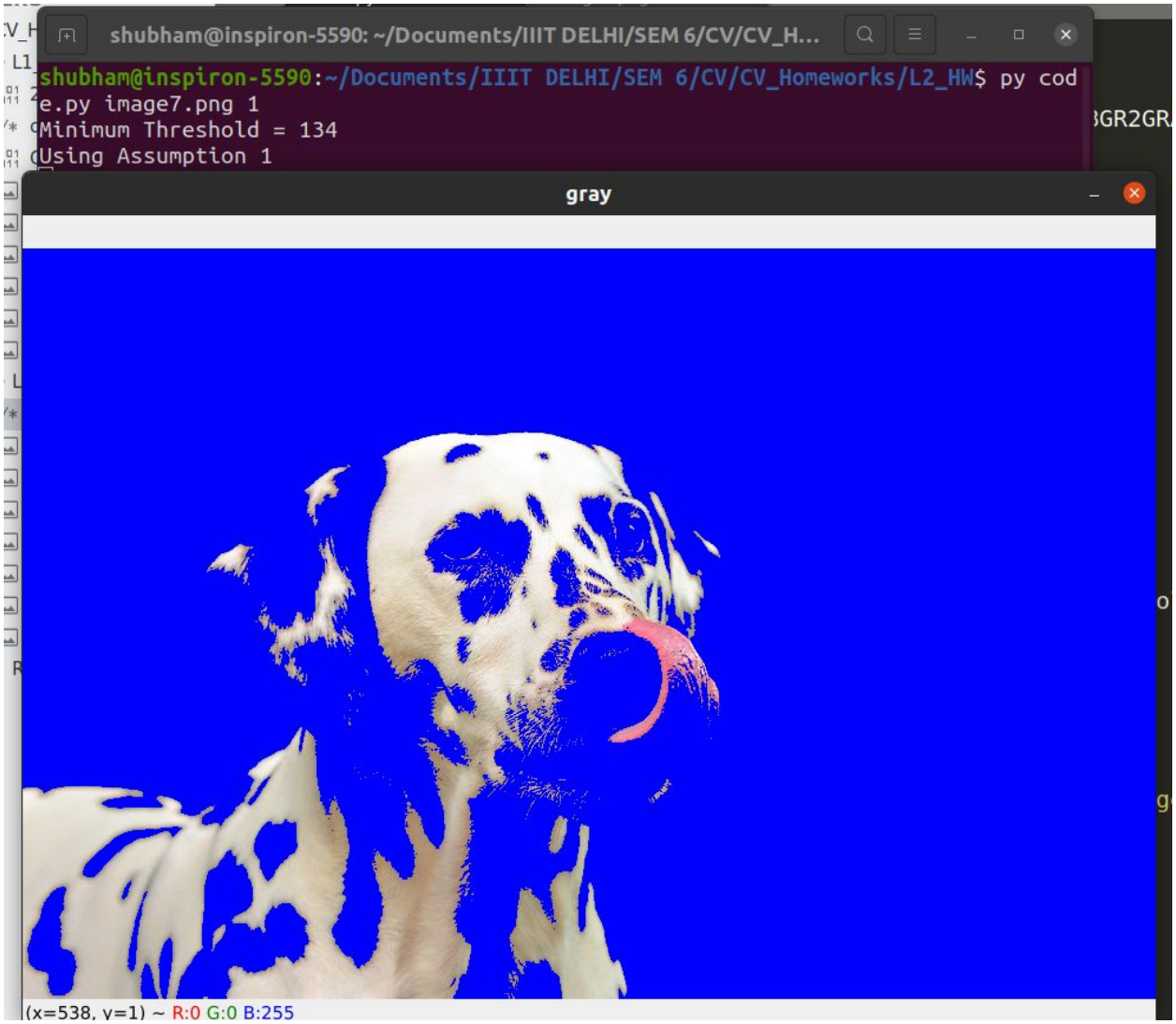
HW-2

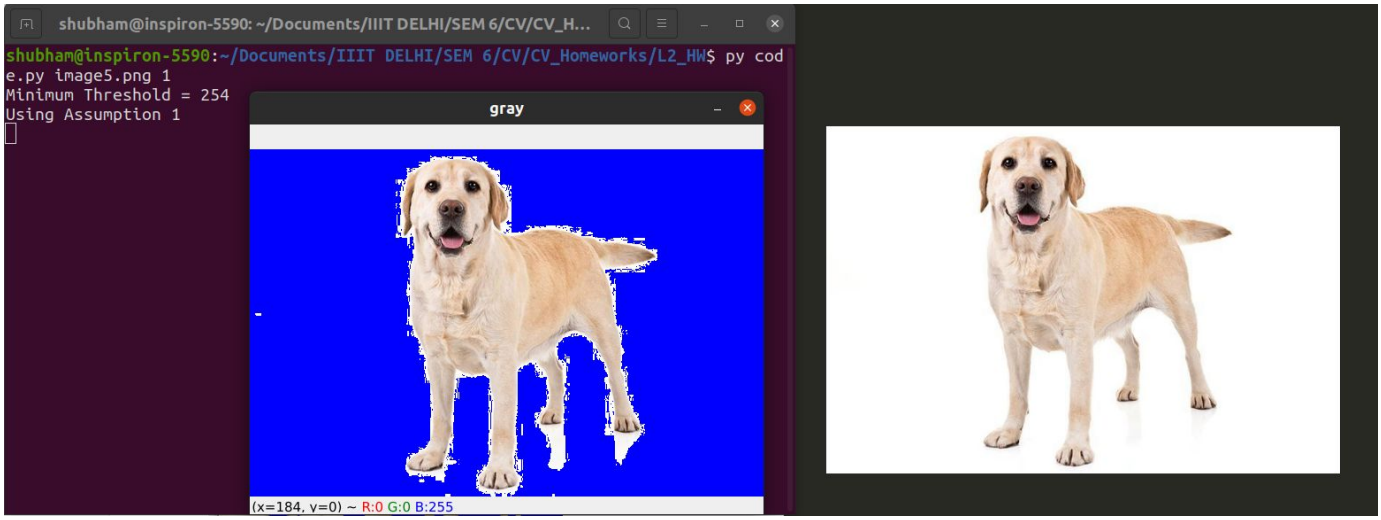
Command to run: **python3 code.py image1.png 1**

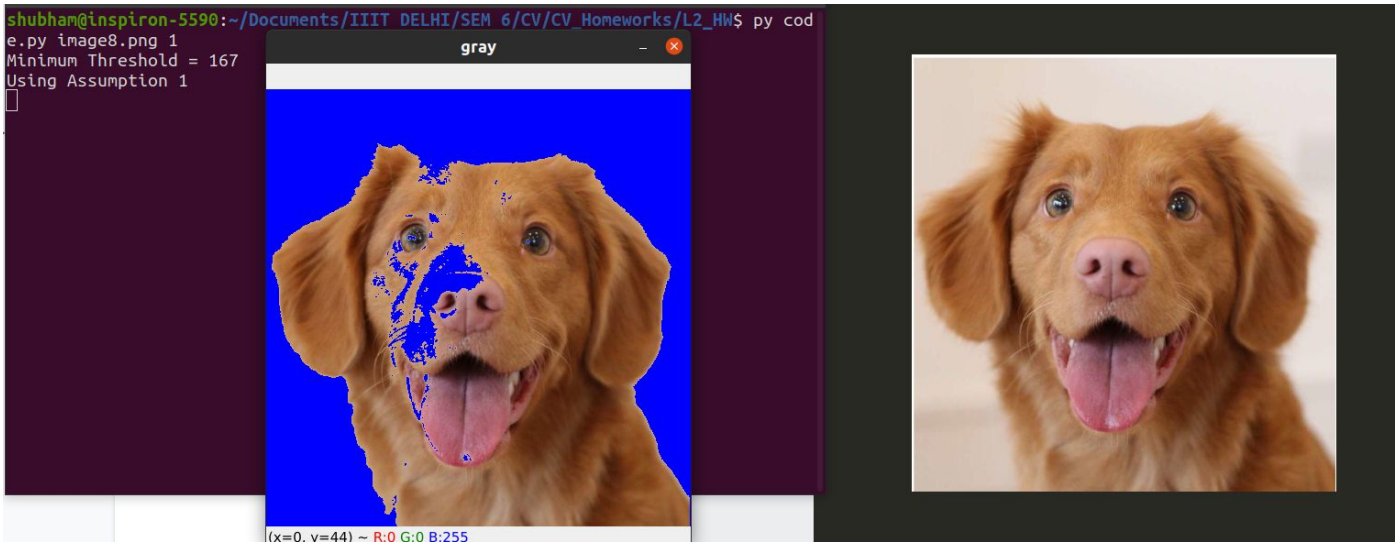
- Let **min_threshold** denotes threshold after applying Otsu's algorithm.

Assumption-1: Object will be present at the center of the image.

- I considered the rectangle whose **length** and **width** are ⅛ of original image dimensions and its center coincides with that of the given image's center.
- Then found the median of the pixels which are present in that rectangle. Let it is denoted by the **median_pixel.**
- If **median_pixel** lies to the left of the **min_threshold** then the left side is foreground otherwise the right side is foreground.

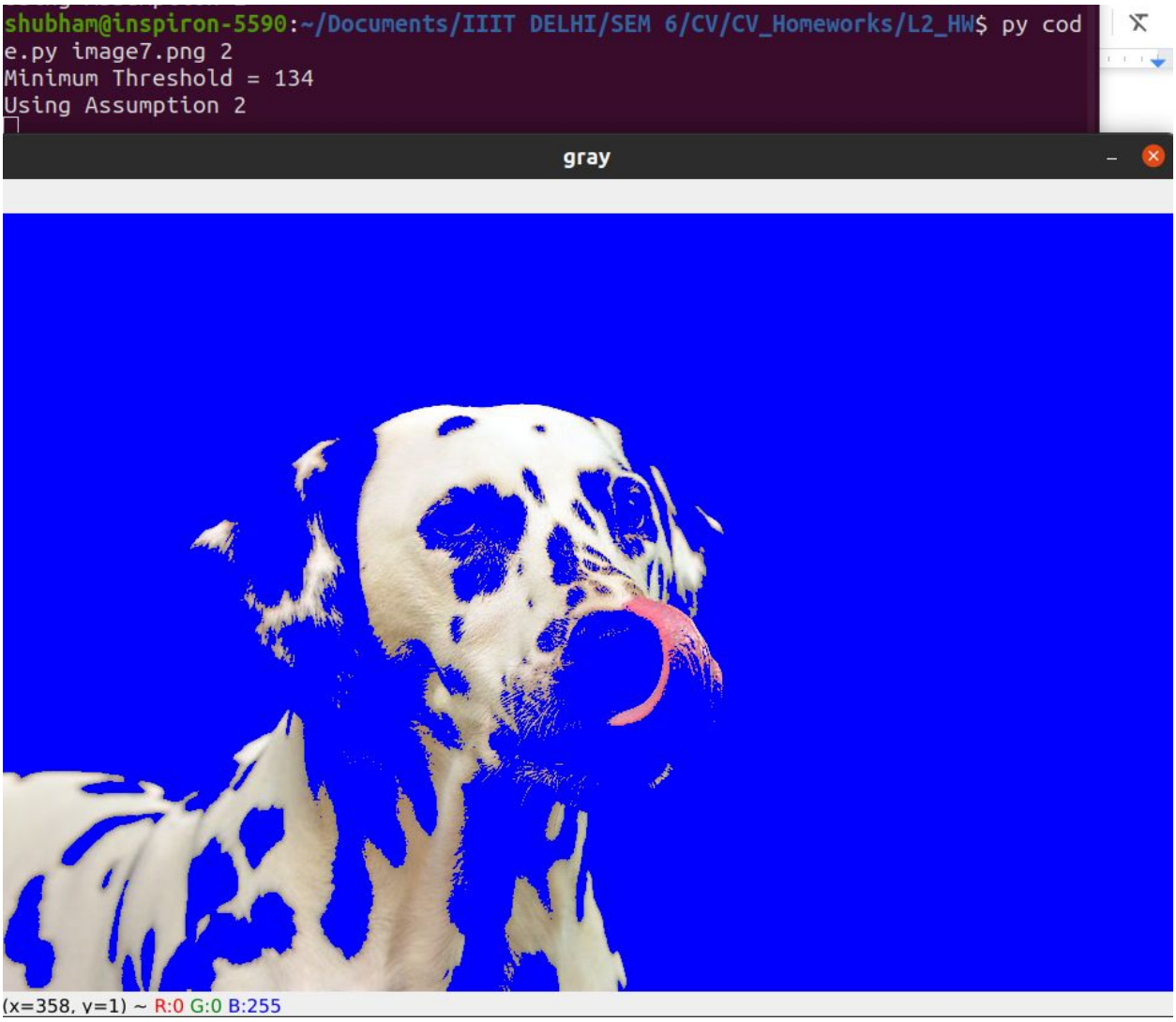


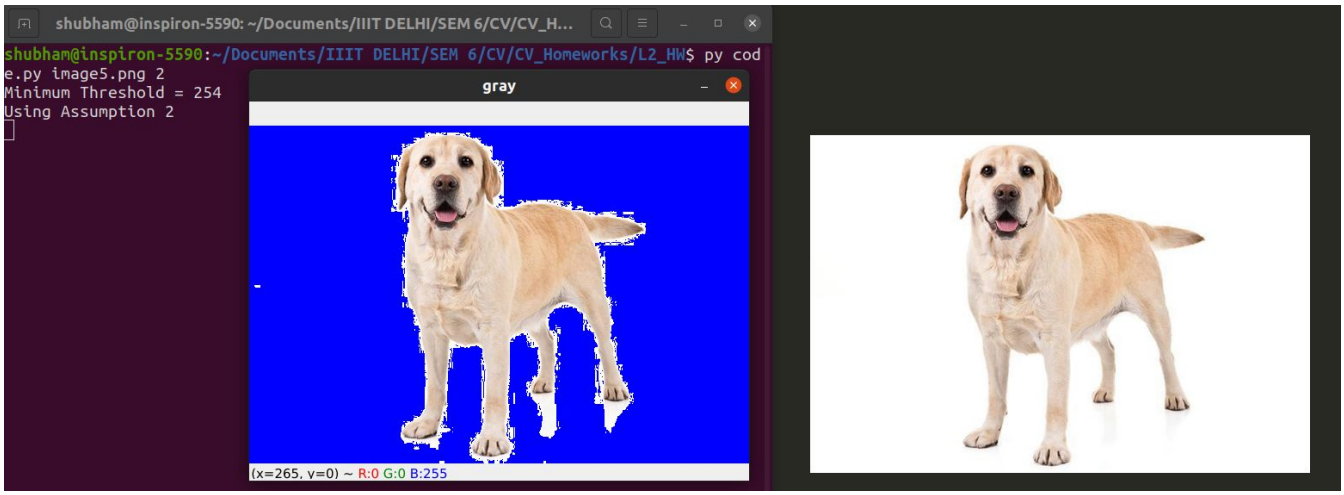

shubham@inspiron-5590: ~/Documents/IIIT DELHI/SEM 6/CV/CV_H...
shubham@inspiron-5590:~/Documents/IIIT DELHI/SEM 6/CV/CV_Homeworks/L2_HW$ py cod
e.py image5.png 1
Minimum Threshold = 254
Using Assumption 1
gray
(x=184, v=0) ~ R:0 G:0 B:255

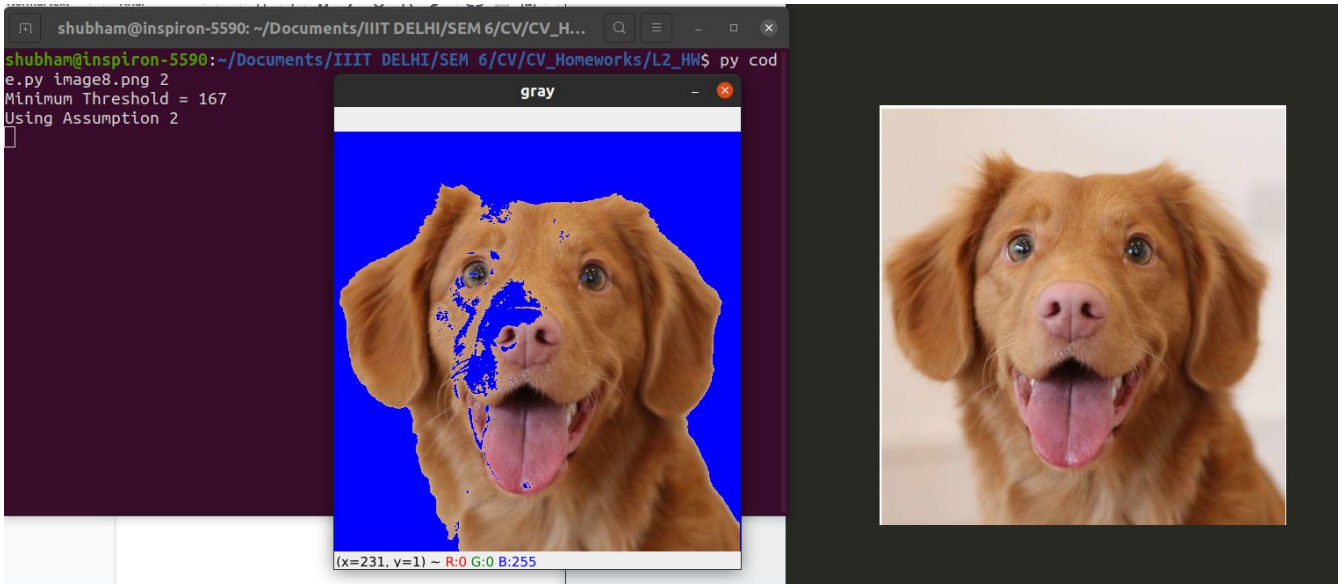

shubham@inspiron-5590:~/Documents/IIIT DELHI/SEM 6/CV/CV_Homeworks/L2_HW$ py cod
e.py image8.png 1
Minimum Threshold = 167
Using Assumption 1
gray
(x=0, v=44) ~ R:0 G:0 B:255

Assumption-2: Boundary pixels are likely to be the background.

- I considered the border around the given image which is **10%** of the length and breadth.
- Then found the median of the pixels which are present in that border. Let it is denoted by the **median_pixel.**
- If **median_pixel** lies to the left of the **min_threshold** then the left side is background otherwise the right side is the background.




shubham@inspiron-5590: ~/Documents/IIIT DELHI/SEM 6/CV/CV_H...
shubham@inspiron-5590:~/Documents/IIIT DELHI/SEM 6/CV/CV_Homeworks/L2_HW$ py cod
e.py image5.png 2
Minimum Threshold = 254
Using Assumption 2
gray
(x=265, v=0) ~ R:0 G:0 B:255


shubham@inspiron-5590: ~/Documents/IIIT DELHI/SEM 6/CV/CV_H...
shubham@inspiron-5590:~/Documents/IIIT DELHI/SEM 6/CV/CV_Homeworks/L2_HW$ py cod
e.py image8.png 2
Minimum Threshold = 167
Using Assumption 2
gray
(x=231, v=1) ~ R:0 G:0 B:255