**Color Detection from any random image using the given data set**

* Computers understand numbers. In the given task we have a set of 512 images for each if the eleven colors.
* So, I first converted the images to a csv file containing indices as name of colour, the name of color we want to display upon detecting, hex code, R G B values.
* Iteration through all the folders containing labelled image color data to generate the master csv file containing information of al the colors.
* The python file “Generate\_training\_csv.py” does the above-mentioned process.
* The next step is to select an image on which color is to be detected.
* A function “getnbox\_function” is used to get the x, y coordinates where mouse is clicked. Also, the corresponding R G B values obtained using relevant cv2 library function.
* Another function “NametheColor” is used for comparing the obtained R G B values with the master csv file generated using the previous function. The method adopted is by calculating the absolute distance of R G B values from the reference csv.
* After color is detected, for displaying the information cv2 library functions are used draw rectangle, put the text for user to see the detected color name alongwith RGB values.
* For carrying out the above task, a python file called “Detect\_color.py” is used.