

Source Code :

```
import cv2
import pandas as pd

img_path = 'colorpic.jpg'

#Reading the image with opencv
img = cv2.imread(img_path)

#declaring global variables (are used later on)
clicked = False
r = g = b = xpos = ypos = 0

#Reading csv file with pandas and giving names to each column
index=["color", "color_name", "hex", "R", "G", "B"]
csv = pd.read_csv('colors.csv', names=index, header=None)

#function to calculate minimum distance from all colors and get the most
matching color
def getColorName(R,G,B):
    minimum = 10000
    for i in range(len(csv)):
        d = abs(R- int(csv.loc[i,"R"])) + abs(G- int(csv.loc[i,"G"]))+ abs(B-
int(csv.loc[i,"B"]))
        if(d<=minimum):
            minimum = d
            cname = csv.loc[i,"color_name"]
    return cname

#function to get x,y coordinates of mouse double click
def draw_function(event, x,y,flags,param):
    if event == cv2.EVENT_LBUTTONDBLCLK:
        global b,g,r,xpos,ypos, clicked
        clicked = True
        xpos = x
        ypos = y
        b,g,r = img[y,x]
        b = int(b)
        g = int(g)
        r = int(r)

cv2.namedWindow('image')
cv2.setMouseCallback('image',draw_function)

while(1):
```

```
cv2.imshow("image",img)
if (clicked):
```

```
    #cv2.rectangle(image, startpoint, endpoint, color, thickness)-1 fills entire
rectangle
```

```
    cv2.rectangle(img,(20,20), (750,60), (b,g,r), -1)
```

```
    #Creating text string to display( Color name and RGB values )
```

```
    text = getColorName(r,g,b) + ' R='+ str(r) + ' G='+ str(g) + ' B='+ str(b)
```

```
    #cv2.putText(img,text,start,font(0-7),fontScale,color,thickness,lineType )
```

```
    cv2.putText(img, text,(50,50),2,0.8,(255,255,255),2,cv2.LINE_AA)
```

```
    #For very light colours we will display text in black colour
```

```
    if(r+g+b>=600):
```

```
        cv2.putText(img, text,(50,50),2,0.8,(0,0,0),2,cv2.LINE_AA)
```

```
    clicked=False
```

```
    #Break the loop when user hits 'esc' key
```

```
    if cv2.waitKey(20) & 0xFF ==27:
```

```
        break
```

```
cv2.destroyAllWindows()
```

Output :

