

## **EXPERIMENT – 7**

### **WAP TO DISPLAY THE IMAGE USING OPENCV IN PYTHON**

**Aim:** - To perform the program to display the image using opencv in python.

**Algorithm:**

Step 1: - Import opencv python library.

Step 2: - Make variable to import the image with colors.

Step 3: - Display an image using matplotlib imshow() function.

**Procedure:**

```
import cv2
```

```
import matplotlib.pyplot as plt
```

```
img = cv2.imread('car.jpg')
```

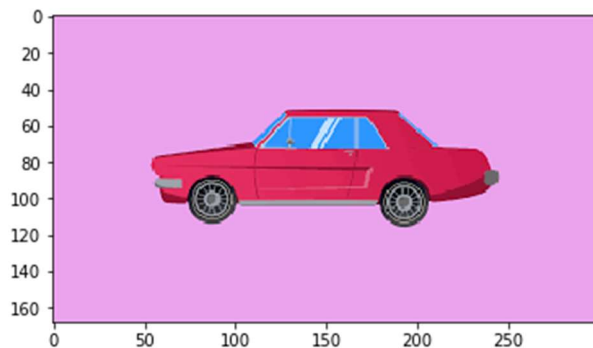
```
img = cv2.cvtColor(img,cv2.COLOR_BGR2RGB)
```

```
plt.imshow(img)
```

**Input:**



**Output:**



**Result:** - We successfully displayed an image.

## **EXPERIMENT – 8**

### **WAP TO MAKE A CIRCLE ON THE OBJECT OF IMAGE USING OPENCV IN PYTHON**

**Aim:** - To perform the program to make a circle on the object of image using opencv in python.

#### **Algorithm:**

Step 1: - Import opencv python library.

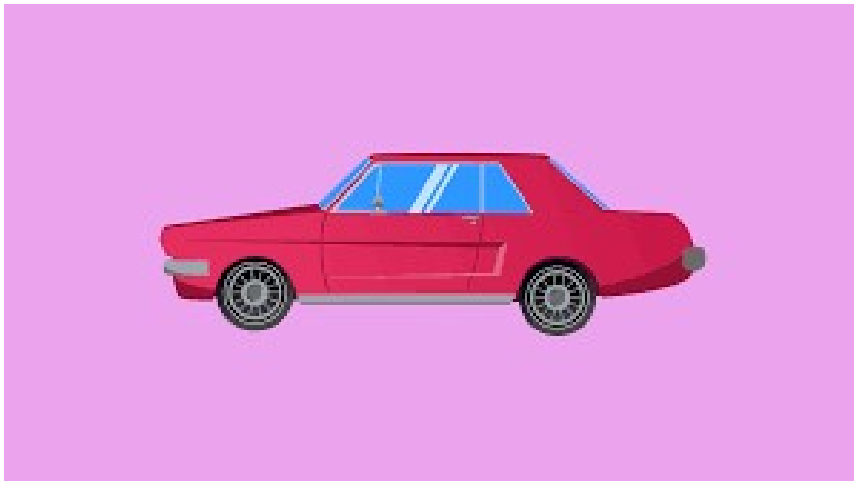
Step 2: - Make variable to import the image with colors.

Step 3: - Use opencv circle function to make a circle and display that image.

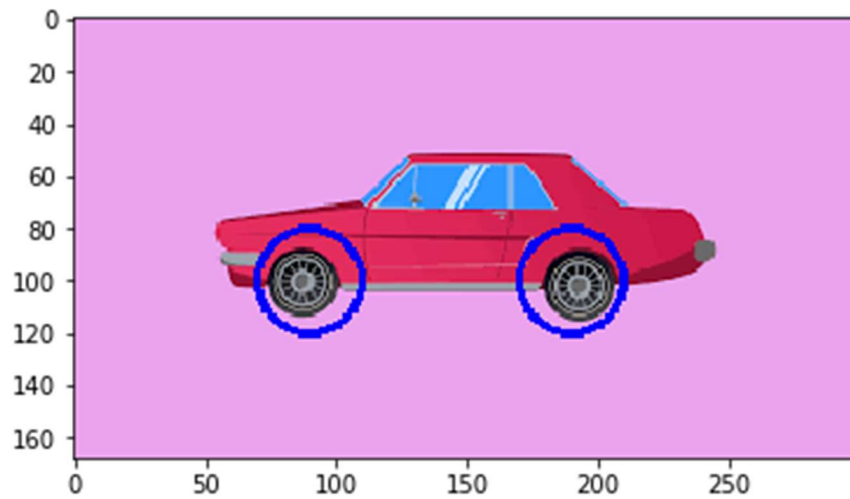
#### **Procedure:**

```
import cv2
import matplotlib.pyplot as plt
img = cv2.imread('car.png')
img = cv2.cvtColor(img,cv2.COLOR_BGR2RGB)
cv2.circle(img,center=(90,100),radius=(20),color=(0,0,255),thickness=2)
cv2.circle(img,center=(190,100),radius=(20),color=(0,0,255),thickness=2)
plt.imshow(img)
```

#### **Input:**



#### **Output:**



**Result:** - We successfully draw a circle on object of the image and displayed an image.

## **EXPERIMENT – 9**

### **WAP TO SPLITTING AND MERGING CHANNELS USING OPENCV IN PYTHON**

**Aim:** - To perform the program for splitting and merging channels using opencv in python.

**Algorithm:** -

Step 1: - Reading the BGR image using imread() function

Step 2: - Splitting the channels first to generate different single

Step 3: - Displaying Blue, Green and Red channel image.

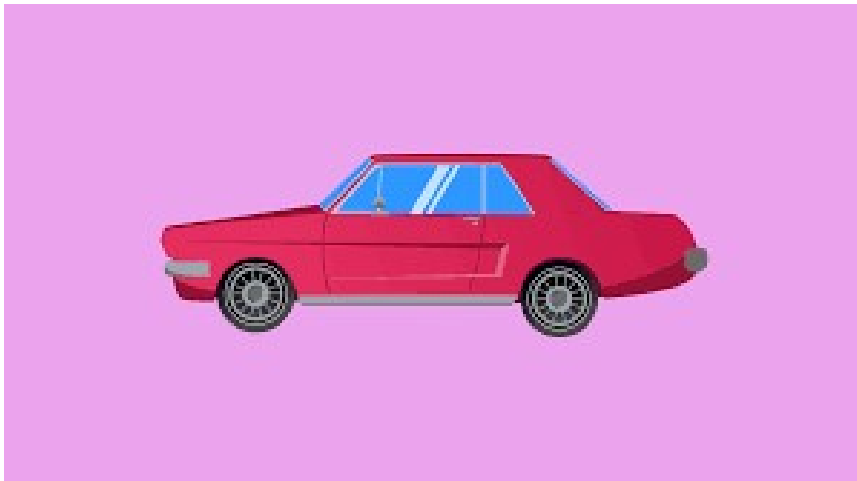
Step 4: - Using cv2.merge() to merge Red, Green, Blue Channels.

Step 5: - Displaying Merged RGB image.

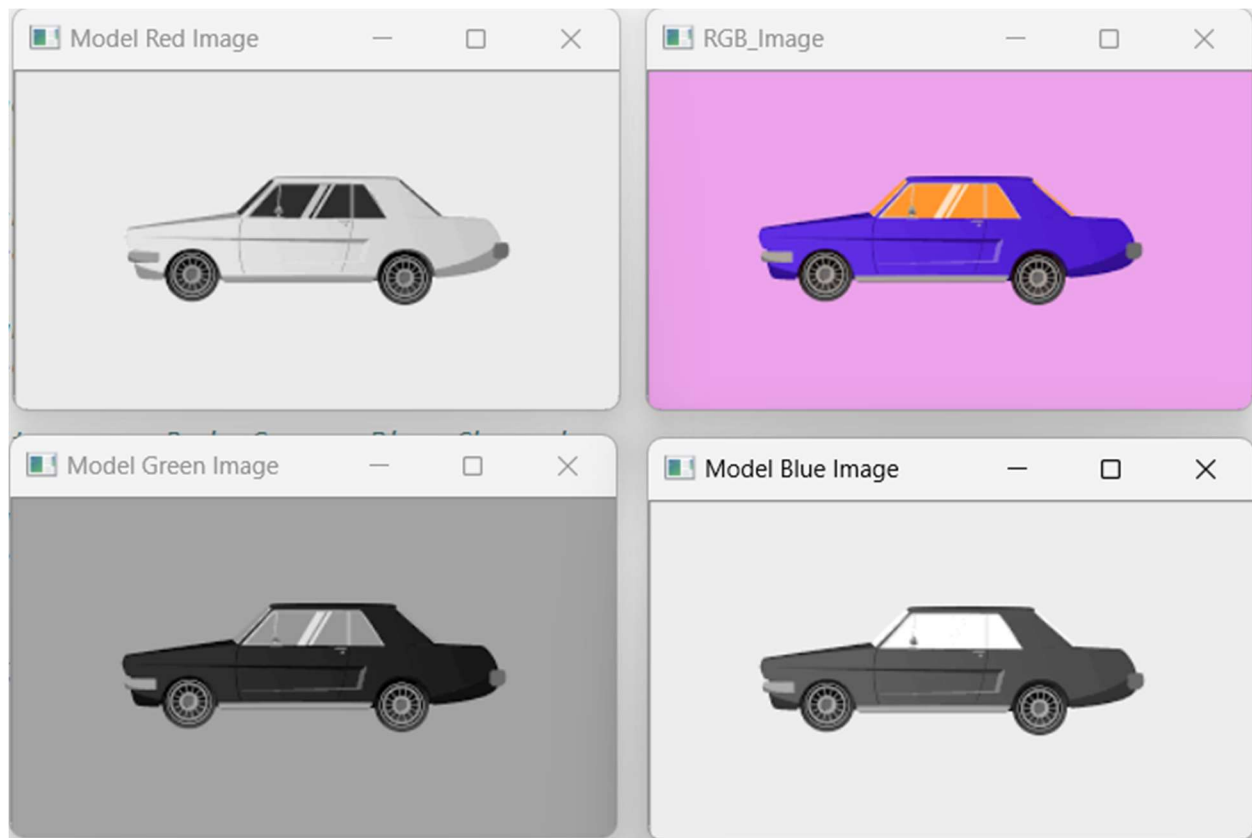
**Procedure:** -

```
import cv2  
image = cv2.imread("car.png")  
b, g, r = cv2.split(image)  
cv2.imshow("Model Blue Image", b)  
cv2.imshow("Model Green Image", g)  
cv2.imshow("Model Red Image", r)  
image_merge = cv2.merge([r, g, b])  
cv2.imshow("RGB_Image", image_merge)  
cv2.waitKey(0)
```

**Input:** -



**Output:**



**Result:** - We successfully split and merge channels using opencv.

## **EXPERIMENT – 10**

### **WRITE A PYTHON CODE TO RESIZE AN IMAGE IN OPENCV USING PYTHON**

**Aim:** - To perform the program to resize an image in opencv using python.

#### **Algorithm:**

Step 1: - Import opencv python library.

Step 2: - Make variable to import the image with colors.

Step 3: - Use opencv resize() function to change the size of an image and display that resized image.

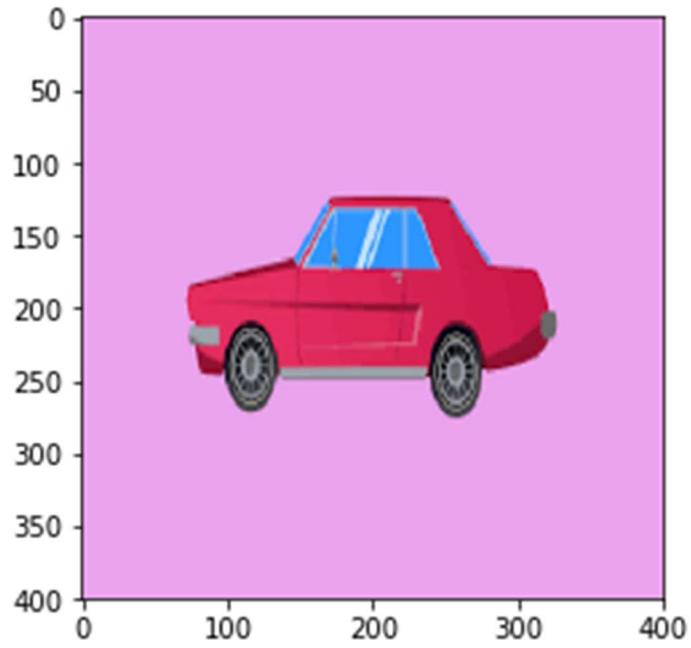
#### **Procedure:**

```
import cv2  
import matplotlib.pyplot as plt  
image = cv2.imread("car.png")  
image = cv2.cvtColor(image,cv2.COLOR_BGR2RGB)  
resize_img = cv2.resize(image,(400,400))  
plt.imshow(resize_img)
```

#### **Input:**



**Output:**



**Result:** - We successfully resize an image using opencv.