

Practical 10

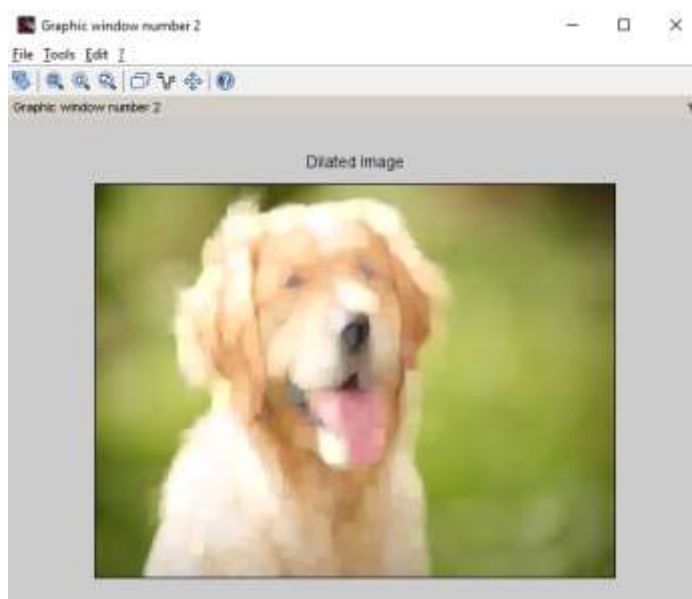
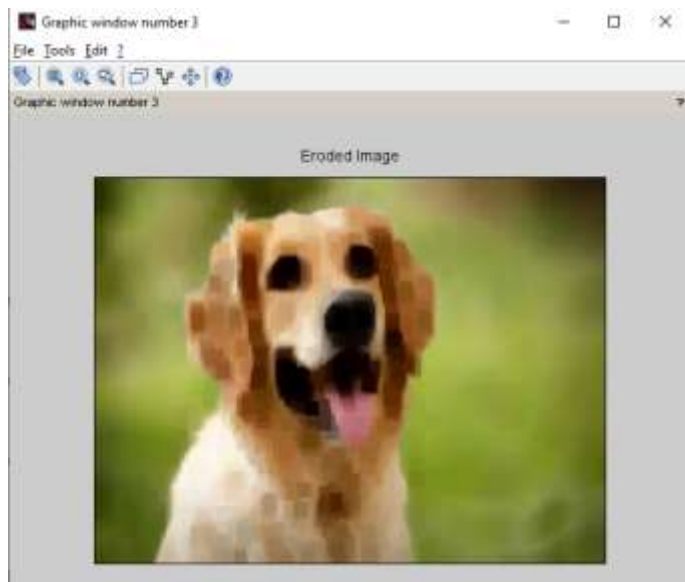
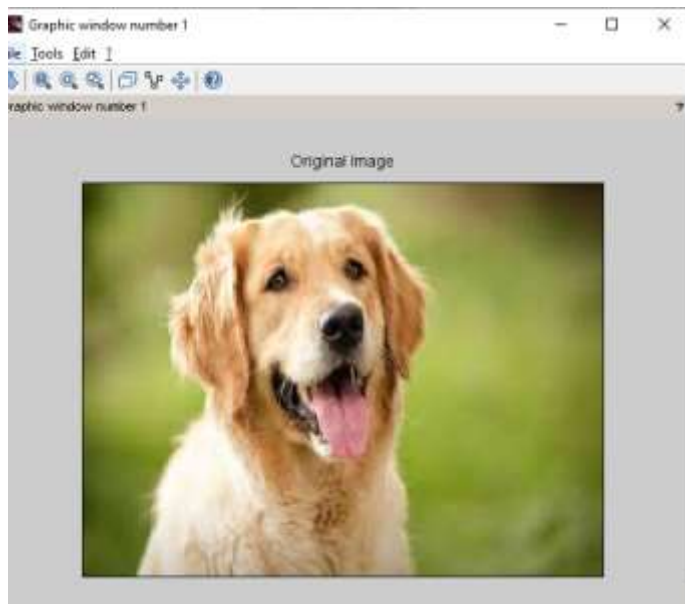
Aim: Binary Image Processing and Color Image Processing

Dilatoin and erosion process

Code:

```
close;
clear;
clc;
a=imread("C:\Users\admin\Desktop\dog.jpg");
b=imcreate('rect',7,7);
a1=imdilate(a,b);
a2=imerode(a,b);
figure(1);
imshow(a);
title("Original Image");
figure(2);
imshow(a1);
title("Dilated Image");
figure(3);
imshow(a2);
title("Eroded Image");
```

Output:

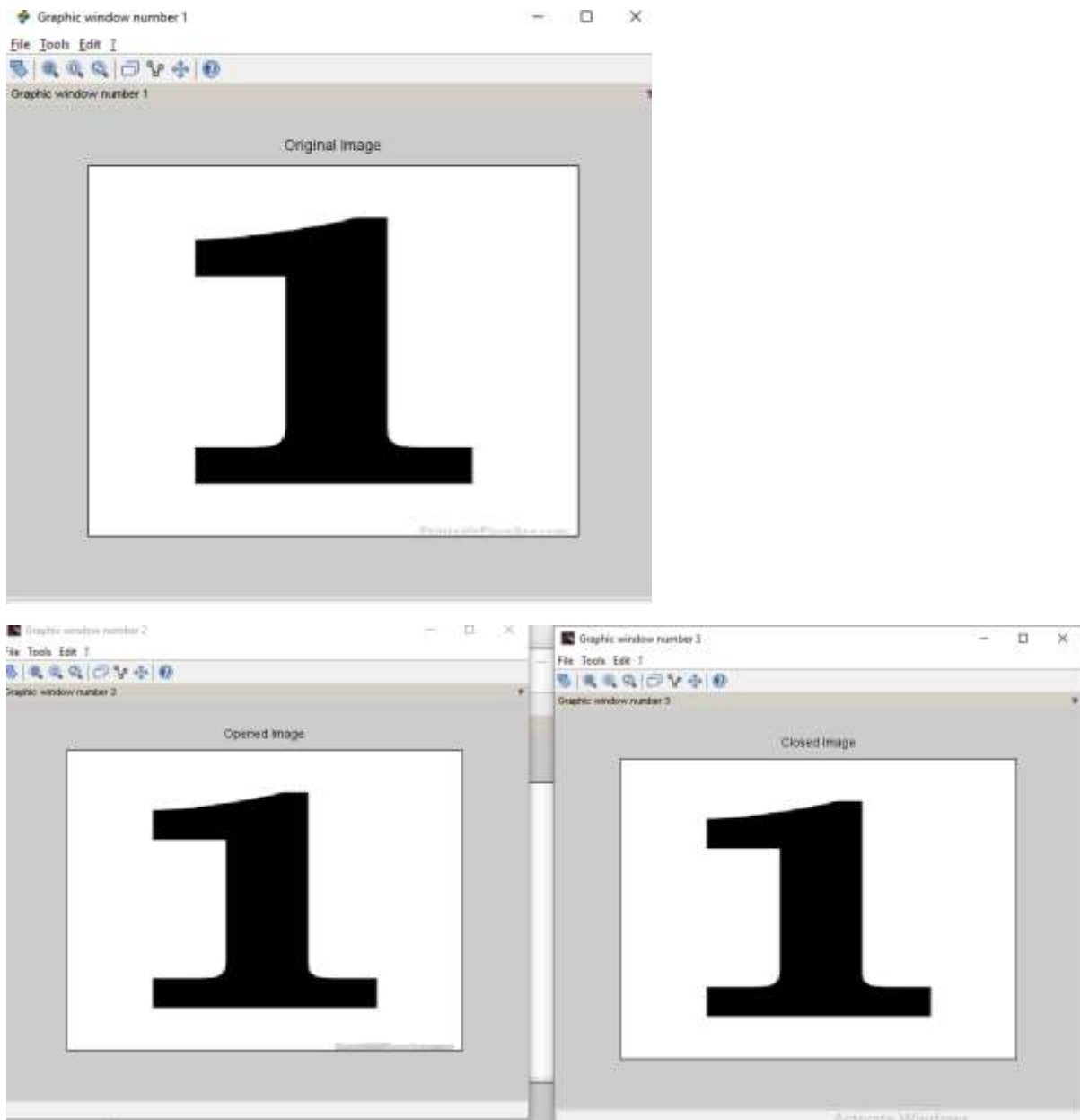


Opening and closing operatin on the image

Code:

```
close;  
clear;  
clc;  
a=imread("C:\Users\admin\Desktop\digit.png");  
b=imcreate('rect',7,7);  
a1=imopen(a,b);  
a2=imclose(a,b);  
figure(1);  
imshow(a);  
title("Original Image");  
figure(2);  
imshow(a1);  
title("Opened Image");  
figure(3);  
imshow(a2);  
title("Closed Image");
```

Output:



Read an RGB image and extract the three colour components red, green and blue

Code:

close;

clear;

clc;

RGB=imread("C:\Users\admin\Desktop\f1.jpg");

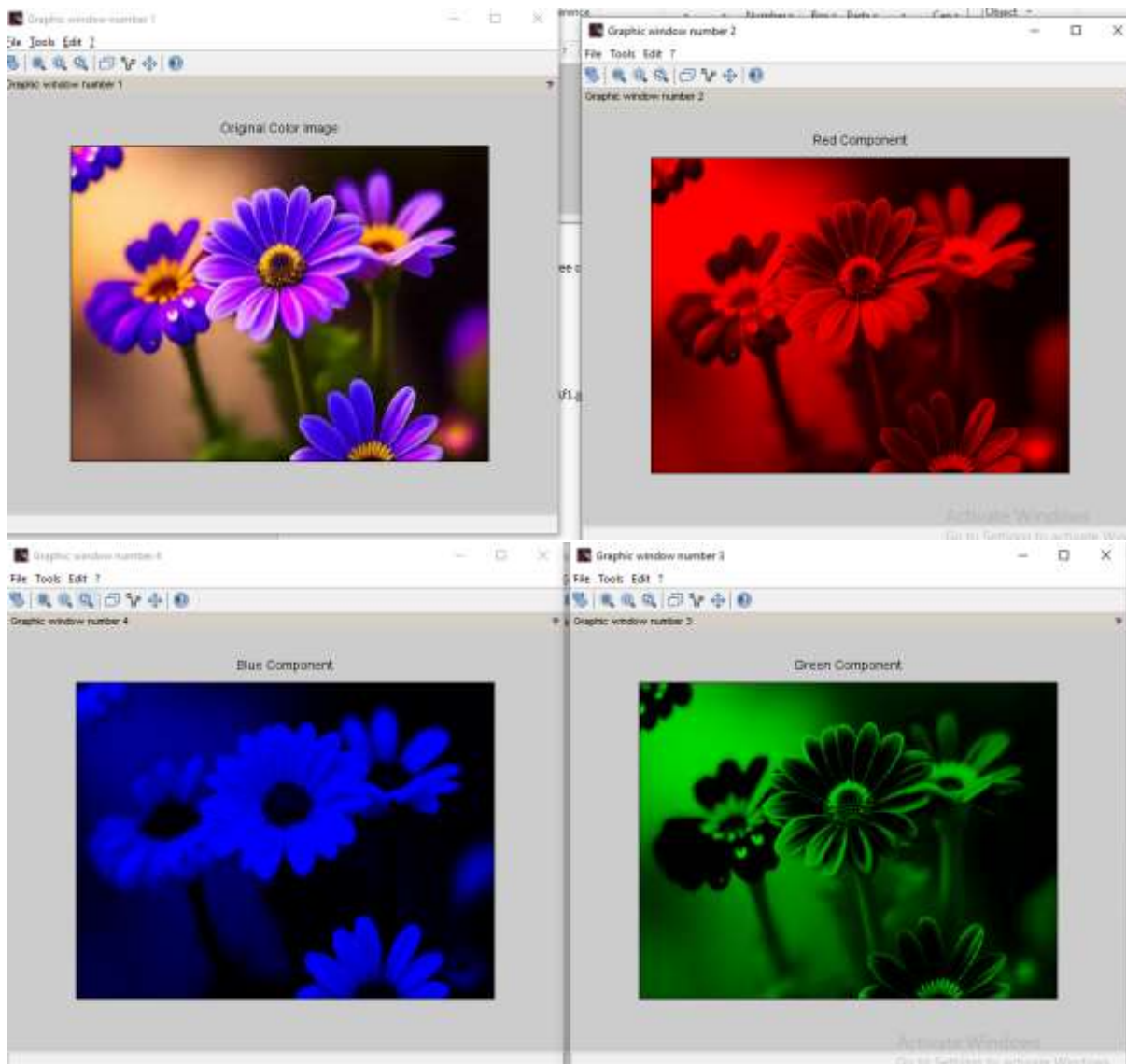
R = RGB;

G = RGB;

B = RGB;

```
R(:,:,2) = 0;  
R(:,:,3) = 0;  
G(:,:,1) = 0;  
G(:,:,3) = 0;  
B(:,:,1) = 0;  
B(:,:,2) = 0;  
figure(1);  
imshow(RGB);  
title("Original Color Image");  
figure(2);  
imshow(R);  
title("Red Component");  
figure(3);  
imshow(G);  
title("Green Component");  
figure(4);  
imshow(B);  
title("Blue Component")
```

Output:



Read a Color image and separate the color image into red green and blue planes

Code:

close;

clear;

clc;

RGB=imread("C:\Users\admin\Desktop\f1.jpg");

R = RGB;

G = RGB;

B = RGB;

R(:, :, 1) = 0;

```
G(:,:,2) = 0;  
B(:,:,3) = 0;  
figure(1);  
imshow(RGB);  
title("Original Color Image");  
figure(2);  
imshow(R);  
title("Red Component Missing");  
figure(3);  
imshow(G);  
title("Green Component Missing");  
figure(4);  
imshow(B);  
title("Blue Component Missing")
```

Output:

