

① Chromatic Adaptation?

→ The hue of a perceived colour depends on the adaptation of the viewer.

For example, chromatic flag will not immediately appear red, white, and blue if the viewer has been subjected to high intensity red lights before viewing the flag.

② Image → is an artifact that depicts visual perception, such as a photograph or other two-dimensional picture, that resembles a subject—usually a physical object—and thus provides a depiction of it.

④ Minimum and Maximum filters, also known as erosion and dilation filters, respectively, are morphological filters that work by considering a neighborhood around each pixel. From the list of neighbor pixels, the minimum or maximum value is found and stored as the corresponding resulting value.

Q 10 Rotate image! →

Package: java.awt;

import java.awt.*;

import java.awt.*;

import java.awt.image.BufferImage;

```

public class Rotate {
    static Buffered Image image;
    static int w, h;
    public static void main(String[] args)
        throws Exception {
        File input, new File ("C:\\pic\\img.jpg");
        int gc;
        Image IO = read (input);
        w = image.getWidth();
        h = image.getHeight();
        int p[][] = new int[w][h];

        double angle = Math.toRadians(45);
        double sin = Math.sin(angle);
        double cos = Math.cos(angle);
        double xo = 0.5 * (w + h);
        double yo = 0.5 * (h - w);
        double x1 = w * 0.7;
    }
}

```

5 → Histogram is a graphical display of data using bars of different heights. In a histogram, each bar represents a group of data. The height of the bar shows the frequency of data in that group. A histogram displays the shape and spread of continuous sample data.

Resolution \rightarrow Is product of width and Height of each pixel

② \rightarrow package java.awt;

import java.awt.*;

" " " " i.o.s;

" " java.awt.image BufferedImage;

" " java.io.IOException;

public class Javaapplication;

Buffered Image i

int h, w, count = 0, i, j;

public void demo()

{ try {

File input = new File("/ - .jpg);

image = ImageIO.read(input);

w = image.getWidth();

h = image.getHeight();

for (i = 0; i < h; i++)

{ for (j = 0; j < w; j++)

{ count++;


```
Colour c = new Colour(image.getRGB(0,0));
int red = c.getRGB();
int green = c.getRGB();
int blue = c.getRGB();
```

```
int bw = (int) ((red + green + blue) / 3);
Colour nc = new Colour(bw, bw, bw);
```

```
image.setRGB(0,0,nc.getRGB());
```

```
File output = new File("home/abhishek/Project/Java/HelloWorld/HelloWorld.java");
```

```
ImageIO.write(image, "png", output);
```

```
Catch (IOException)
```

```
System.out.println("Error");
```

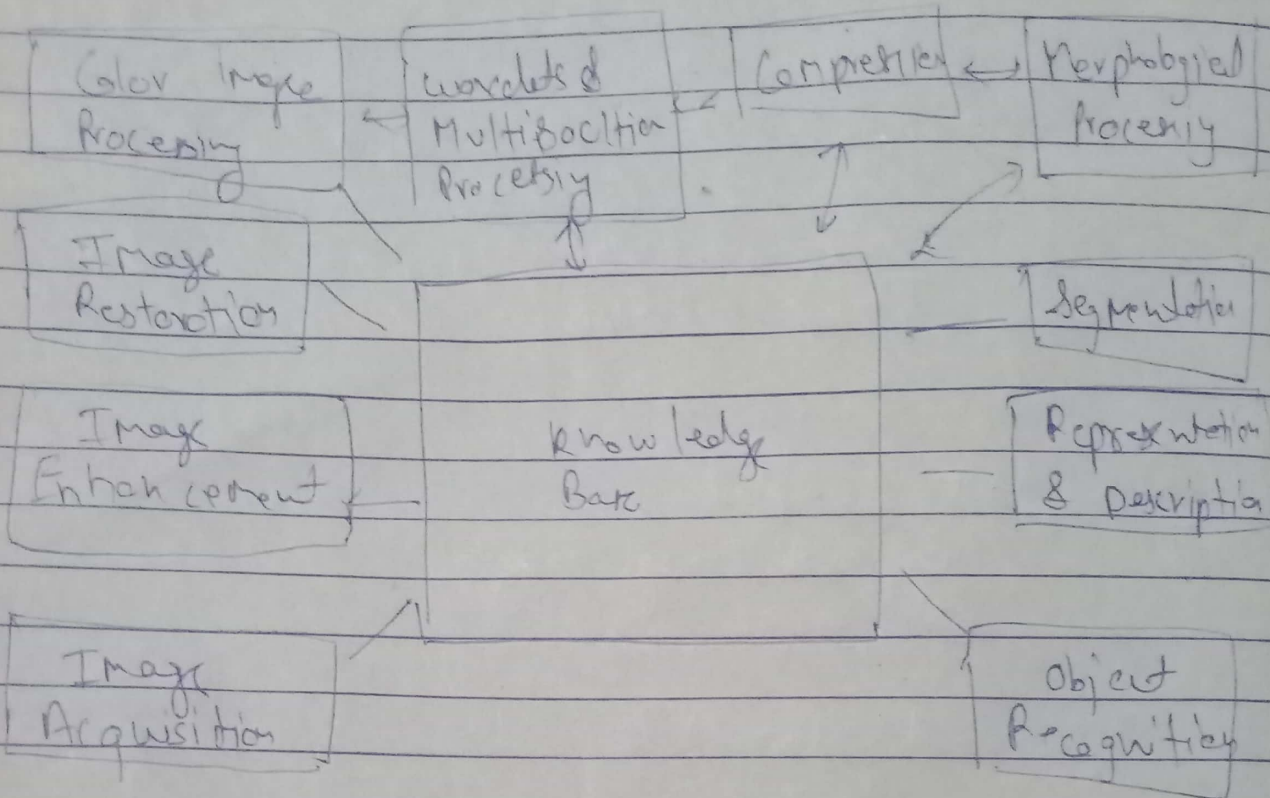
```
public static void main(String[] args) {
```

```
try {
    Application obj = new Application();
```

```
obj = obj.run();
```

```
}
```

Q-1 Step in DIO



Q 8 Resolution refers to the number of pixels in an image. Resolution is sometimes identified by the width and height of the image as well as the total number of pixel in the image.

Q 5 Buffered Image. `Img = new BufferedImage(w+2, h+2, image.getRGB());`
`int i, j, n, y;`
`for (i=0; i<h; i++)`
`for (j=0; j<w; j++)`


```

Color c = new Color (img.getRGB(i,j))
n=i, j=j+1;
n Image . set RGB (y+2, x+2, c.getRGB());
Image . set RGB (y+2, x+2+1, c.getRGB());
Image . set RGB (y+2+1, x+2, c.getRGB());
Image . set RGB (y+2+1, x+2+1, c.getRGB());
}

```

③ class Sample {
 Buffered Image img;
 int h,w;

void done() {

try {

File input = new File ("image");

img = ImageIO.read (input);

w = img.getWidth();

h = img.getHeight();

System.out.println ("Resolution: " + w + "x" + h);

}
 catch (Exception e) {}
 }
}