

IP - Image Creation

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Program Code

To create an image from scratch, plotting pixel by pixel on our own

Create.java

```
import java.util.*;
import java.io.File;
import java.io.IOException;
import java.awt.image.BufferedImage;
import javax.imageio.ImageIO;

public class Create
{
    static BufferedImage image;

    public static void main(String[] args) throws IOException
    {
        int width = 640;
        int height = 480;
        int r = 255, g = 255, b = 255, p = 0;
        File f = null;

        image = new BufferedImage(
            width,
            height,
            BufferedImage.TYPE_INT_RGB
        );

        for(int i=0; i<height; i++)
            for(int j=0; j<width; j++)
                image.setRGB(j, i, 0x00g688);

        int d = Integer.valueOf(args[0]);

        for(int i=50; i<100; i++)
        {
```

```

        drawCircleUsingMidpointCircleAlgo(320, 240, i, d, 0x3F51B5);
    }

    for(int i=50;i<100;i++)
    {
        drawCircleUsingMidpointCircleAlgo(320+150, 240, i, d, 0xFF5722);
    }

    for(int i=50;i<100;i++)
    {
        drawCircleUsingMidpointCircleAlgo(320-150, 240, i, d, 0x03A9F4);
    }

    for(int i=50;i<100;i++)
    {
        drawCircleUsingMidpointCircleAlgo(320, 240+100, i, d, 0x673AB7);
    }

    for(int i=50;i<100;i++)
    {
        drawCircleUsingMidpointCircleAlgo(320, 240-100, i, d, 0xE91E63);
    }

    f = new File("ViperOut.png");
    ImageIO.write(image, "png", f);
}

public static void drawCircleUsingMidpointCircleAlgo(int centre_x, int centre_y,
int r, float d_init, int draw_color)
{
    float d=0;
    int x=0;
    int y=0;
    int i=0;

    draw_color = 0xCDDC39;

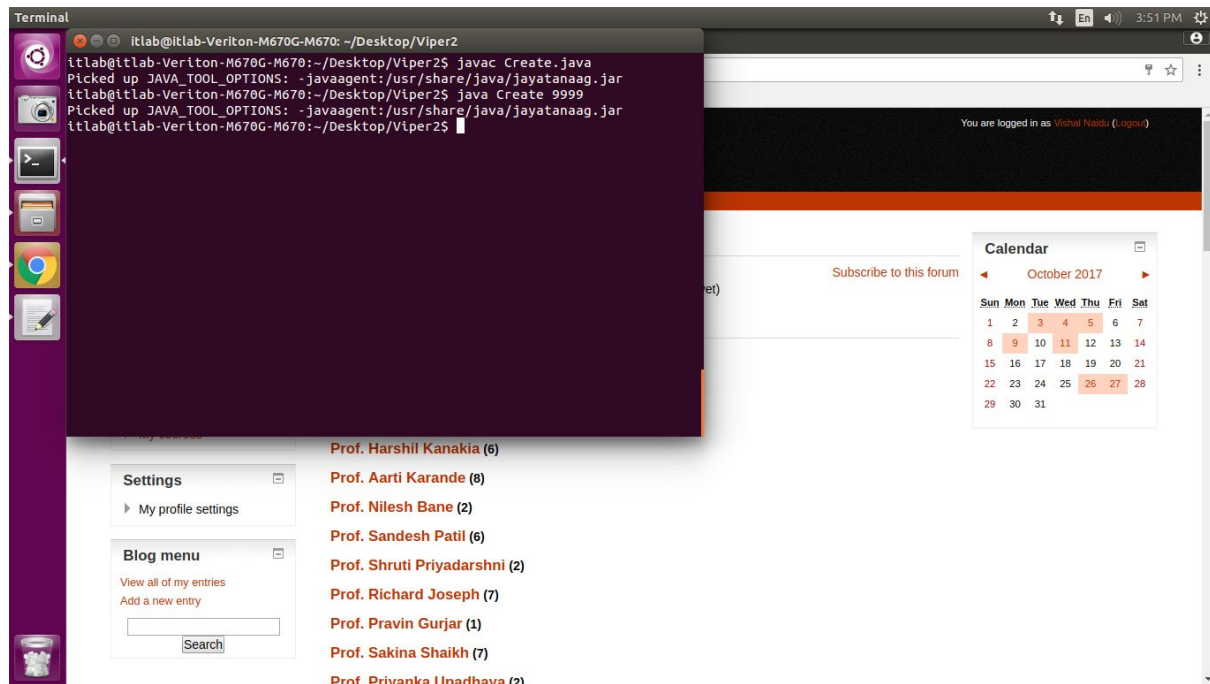
```

```

d=d_init-r;
x=0;
y=r;
do
{
    if(d<0)
    {
        //          printf("[%d]", d);
        x=x+1;
        d=d+2*x+1;
    }
    else
    {
        //          printf("[%d]", d);
        x=x+1;
        y=y-1;
        d=d+2*x-2*y+10;
    }
    image.setRGB(centre_x+x, centre_y+y, draw_color);
    image.setRGB(centre_x-y, centre_y-x, draw_color);
    image.setRGB(centre_x+y, centre_y-x, draw_color);
    image.setRGB(centre_x-y, centre_y+x, draw_color);
    image.setRGB(centre_x+y, centre_y+x, draw_color);
    image.setRGB(centre_x-x, centre_y-y, draw_color);
    image.setRGB(centre_x+x, centre_y-y, draw_color);
    image.setRGB(centre_x-x, centre_y+y, draw_color);
}
while(x<y);
}
}

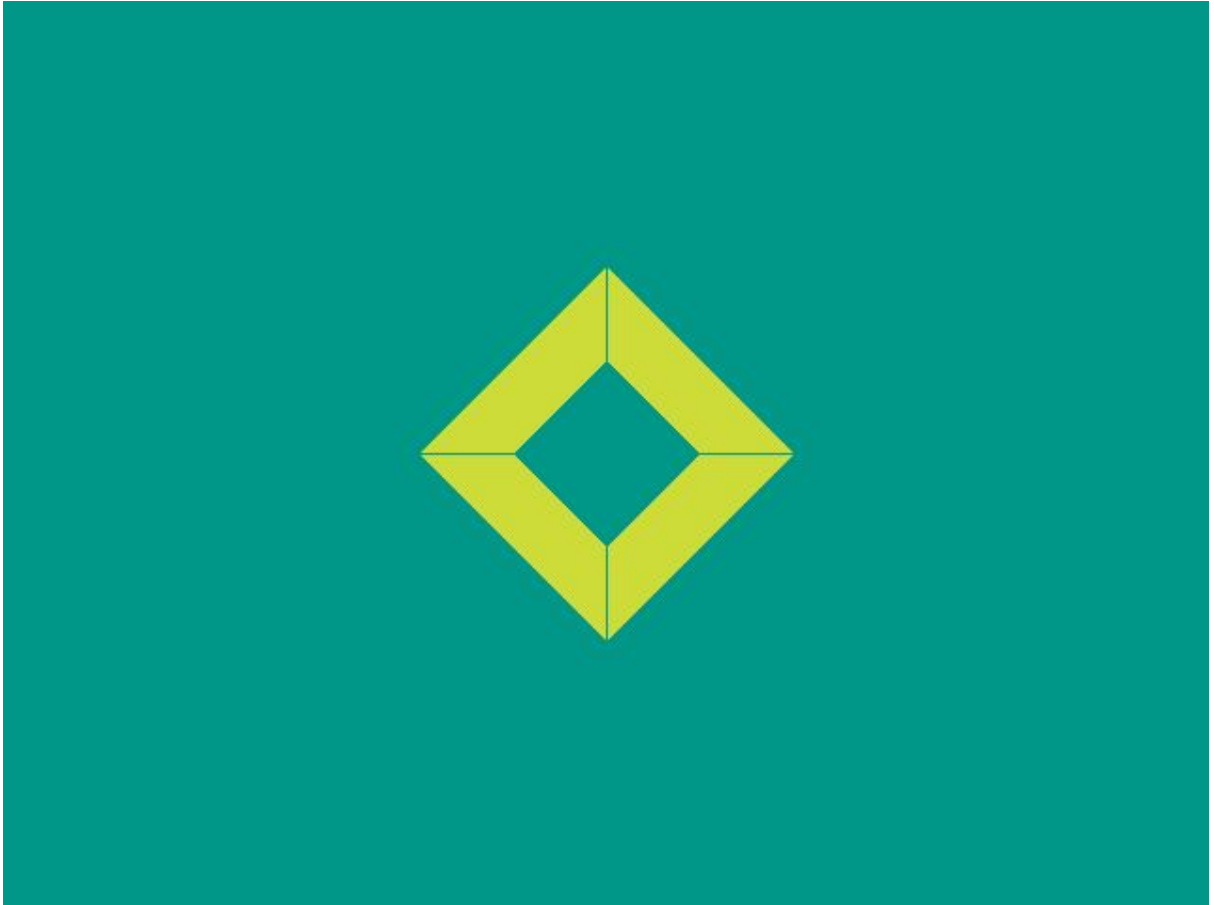
```

Execution



Output Image

ViperOut.png



ViperOutExtreme.png

