```java
import java.applet.Applet;
import java.awt.Color;
import java.awt.Graphics;
import java.util.Arrays;
import java.util.Random;

public class Stars extends Applet{
 public void paint(Graphics g)
 {

  Random rand = new Random();

  int[] xPoints = new int[5];
  int[] yPoints = new int[5];

  int xCenter = 100;
  int yCenter = 100;
  int radius = 50;

  for (int i = 0; i < 10; i++) {
   //random values for the center and radii of stars
    int lowerbound = 80;
    int upperbound = 999;
    xCenter = (int) (Math.random() * (upperbound - lowerbound + 1) + lowerbound);
     lowerbound = 80;
     upperbound = 650;
    yCenter = (int) (Math.random() * (upperbound - lowerbound + 1) + lowerbound);
     lowerbound = 25;
     upperbound = 100;
    radius = (int) (Math.random() * (upperbound - lowerbound + 1) + lowerbound);


    /*
     * For the stars to output correctly, its points need to be in the same order as when one draws a star by hand.
     * the order of points draw goes:  Direct Top --> Bottom Right vertex --> Top Left vertex --> Top Right Vertex --> Bottom Left Vertex
     */

    //top vertex
    xPoints[0]= (int) (Math.abs(radius * Math.cos(Math.toRadians(90))) + xCenter) ;
    yPoints[0] = (int) Math.abs(yCenter - radius * Math.sin(Math.toRadians(90))) ;
   //bottom right
    xPoints[1]= (int) Math.abs(xCenter + radius * Math.cos(Math.toRadians(306)));
    yPoints[1] = (int) Math.abs(yCenter - radius * Math.sin(Math.toRadians(306)));
    //top left
    xPoints[2]= (int) Math.abs(xCenter + radius * Math.cos(Math.toRadians(162)));
    yPoints[2] = (int) Math.abs(yCenter - radius * Math.sin(Math.toRadians(162)));
    //top right
    xPoints[3]= (int) Math.abs(xCenter +radius * Math.cos(Math.toRadians(18)));
    yPoints[3] = (int) Math.abs(yCenter -radius * Math.sin(Math.toRadians(18)));
    //bottom left
    xPoints[4]= (int) Math.abs(xCenter +radius * Math.cos(Math.toRadians(234)));
    yPoints[4] = (int) Math.abs(yCenter -radius * Math.sin(Math.toRadians(234)));

    //random colors for the stars
    int red = rand.nextInt(255);
    int green = rand.nextInt(255);
    int blue = rand.nextInt(255);
    Color color = new Color(red, green, blue);
    g.setColor(color);
    g.fillPolygon(xPoints, yPoints, 5);

     }


 }

}
```