```
package com.validCode;
import org.apache.log4j.Logger;
import javax.imageio.lmagelO;
import javax.servlet.ServletException;
import javax.servlet.ServletOutputStream;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import java.awt.*;
import java.awt.image.BufferedImage;
import java.io.IOException;
import java.util.ArrayList;
import java.util.List;
import java.util.Random;
@WebServlet(urlPatterns = "/ValidCodeServlet")
public class ValidCodeServlet extends HttpServlet {
  protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    doGet(request, response);
  }
  protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    //创建一张图片
    //单位是像素
    BufferedImage image=new BufferedImage(200,100,BufferedImage.TYPE INT BGR);
    //透明的玻璃
    //向画板上画内容之前必须先设置画笔
    Graphics gra=image.getGraphics();
    gra.setColor(Color.white);
    //从那个坐标开始填充,后两个参数,矩形区域
    gra.fillRect(0,0,200,100);
    List<Integer> randList=new ArrayList<>();
    Random random=new Random();
    //设置字体
    gra.setFont(new Font("宋体",Font.ITALIC|Font.BOLD,50));
    Color[] colors=new Color[]{Color.RED,Color.BLACK,Color.BLUE,Color.PINK,Color.GRAY};
    for(int i=0; i<4; i++){
       randList.add(random.nextInt(10));
    }
    for(int i=0; i<30; i++) {
       gra.setColor(colors[random.nextInt(colors.length)]);
```

```
//画横线
    gra.drawLine(random.nextInt(200), random.nextInt(100), random.nextInt(200),
random.nextInt(100));
    }
    for(int i=0;i<randList.size();i++) { ;
        gra.setColor(colors[random.nextInt(colors.length)]);
        gra.drawString(String.valueOf(randList.get(i)), i*40, 50+(random.nextInt(21)-10));
    }
    ServletOutputStream out=response.getOutputStream();
    //工具类
    ImageIO.write(image, "jpg",out);
    //将验证码放到session中
    HttpSession session=request.getSession();
session.setAttribute("code",""+randList.get(0)+randList.get(1)+randList.get(2)+randList.get(3));
}
```