

```

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package com.mycompany.pi4j2led;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import com.pi4j.Pi4J;
import com.pi4j.event.ShutdownListener;
import com.pi4j.io.binding.OnOffBinding;
import com.pi4j.io.gpio.digital.*;
import com.pi4j.io.group.OnOffGroup;
import com.pi4j.io.pwm.Pwm;
import com.pi4j.io.pwm.PwmType;

/**
 *
 * @author jnh
 */
public class Led1 extends HttpServlet {

    private static final int PIN_LED = 22; // PIN 15 = BCM 22

    public Led1() {

    }

    /**
     * Processes requests for both HTTP GET and POST
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {

            /* output your page here.*/
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>IoT Controller</title>");
            out.println("</head>");
            out.println("<body style=\"font-family: verdana;\">");
            out.println("<h1>IoT Controller</h1>");
            out.println("<form action=\"Led1\" method=\"post\">");

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        out.println("<p>");
        out.println("<input type=\"radio\" name=\"action\" value=\"1\"> LED on<br>");
        out.println("<input type=\"radio\" name=\"action\" value=\"0\"> LED off<br>");
        out.println("</p>");
        out.println("<input type=\"submit\" name=\"action\" value=\"send\">");
        out.println("</form>");
        out.println("</body>");
        out.println("</html>");
    }
}

/**
 * Handles the HTTP <code>POST</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
public void doPost(HttpServletRequest request,
    HttpServletResponse response) throws IOException, ServletException {
    response.setContentType("text/html;charset=UTF-8");

    // get the number of the LED to turn on and print to console
    String action = request.getParameter("action");
    System.out.println("action=" + request.getParameter("action"));

    try {
        var pi4j = Pi4J.newAutoContext();

        var ledConfig = DigitalOutput.newConfigBuilder(pi4j)
            .id("led")
            .name("LED Flasher")
            .address(PIN_LED)
            .shutdown(DigitalState.LOW)
            .initial(DigitalState.LOW)
            .provider("pigpio-digital-output");

        var led = pi4j.create(ledConfig);

        if (action.equals("1")) {
            System.out.println("led is on");
            led.high(); //gpio1.high();

        } else if (action.equals("0")) {
            System.out.println("led is off");
            led.low(); //gpio1.low();

        } else if (action.equals("quit")) {
            pi4j.shutdown();
        }

    } catch (Exception e) {

        System.out.print(e);
    }
}

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try (PrintWriter out = response.getWriter()) {

    /* output your page here.*/
    out.println("<!DOCTYPE html>");
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    out.println("<title>IoT Controller</title>");
    out.println("</head>");
    out.println("<body style=\"font-family: verdana;\">");
    out.println("<h1>IoT Controller</h1>");
    out.println("<form action=\"Led1\" method=\"post\">");
    out.println("<p>");
    out.println("<input type=\"radio\" name=\"action\" value=\"1\"> LED on<br>");
    out.println("<input type=\"radio\" name=\"action\" value=\"0\"> LED off<br>");
    out.println("</p>");
    out.println("<input type=\"submit\" name=\"action\" value=\"send\">");
    out.println("</form>");
    out.println("</body>");
    out.println("</html>");
}

/* if there was a valid LED number display a message
if ("10".contains(action)) {
    pagehtml = pagehtml + "LED number " + action + " selected";
}*/
}

// Redirect GET request to POST request.
@Override
public void doGet(HttpServletRequest request, HttpServletResponse response)
    throws IOException, ServletException {
    doPost(request, response);
}

/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description
 */
@Override
public String getServletInfo() {
    return "Short description";
} // </editor-fold>
}

```