



PG5 Starter Training
PG5 Core and WebEditor 8

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Lesson 4 - PG5 Core WebEditor 8

Introduction



Material required:

- Notebook or computer
- PCD1 E-Controller
- USB cable
- Training board
- Ethernet cable

Software required

- PG5 Core at least Version 2.1.027
- Saia® WebEditor 5 (contained in PG5 Core)
- Java at least Version XXX

Lessons required

- Lesson 1
- Lesson 2
- Lesson 3 PG5 Core

Aims of the PG5 Core WebEditor 5 course

- Visualization of program created in Lesson 3
- Basic understanding of Saia® WebEditor 5



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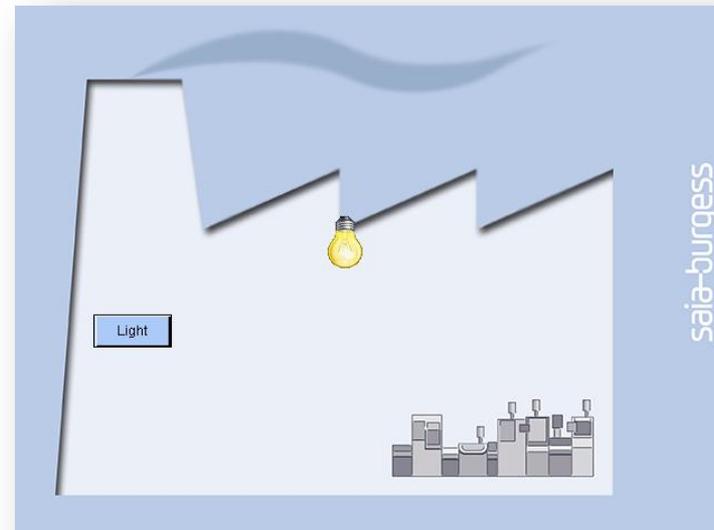
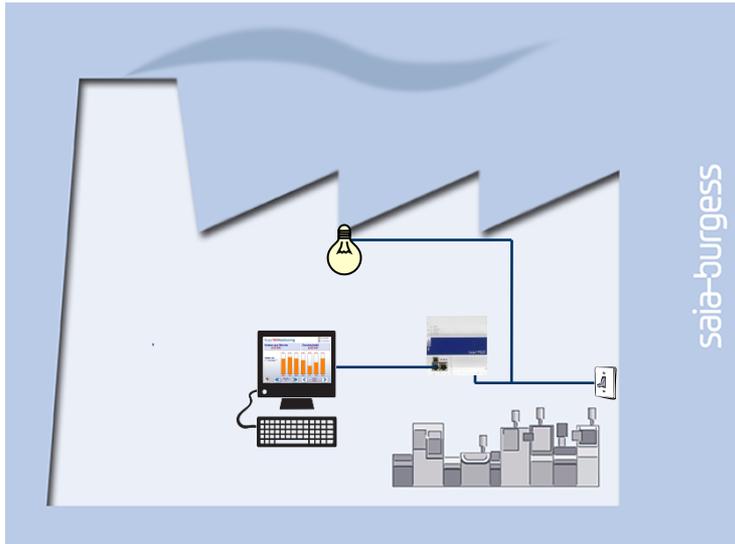
Introduction

Explanation / Introduction

- The light in the cellar must be switchable not only using switches, but also via a web browser
- In addition, the current status of lamp and digital inputs must be shown in the visualization

What is necessary to achieve this?

- Program produced in Lesson 3
- Ethernet connection to Saia® PCD1 E-Controller
- Monitor with web browser

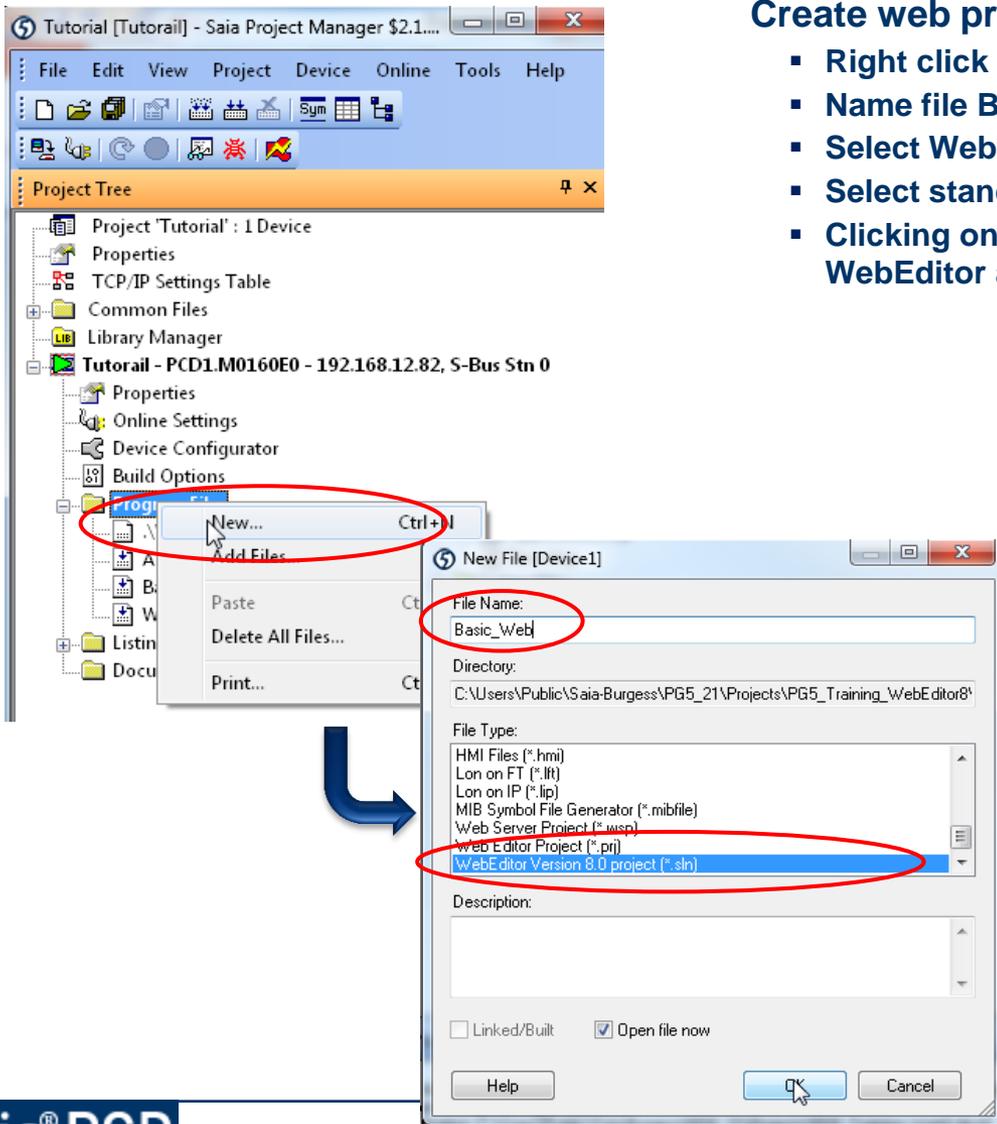


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Create web project file

Create web project

- Right click on file folder → New
- Name file Basis_Web
- Select WebEditor 8 project (*.sln) and confirm with OK
- Select standard project
- Clicking on the newly created file Basic_Web.sln will open the WebEditor automatically

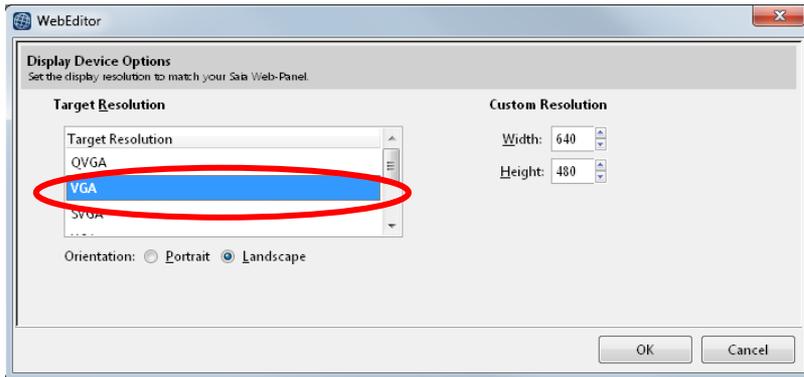


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Create project

Project resolution

- When the project is opened for the first time, a resolution must be set for pages
- Select resolution VGA



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WebEditor structure



The screenshot shows the WebEditor interface for a project named 'Basic_Web'. The main workspace is a grid-based editor. On the left, a 'Solution' tree shows the project structure. On the right, a 'Libraries' panel lists various components like 'Alarming', 'Application Library', and 'Icon Gallery'. A 'Toolbar (Align, Move...)' is located at the top right. A 'Toolbar with drawing tools' is on the left side of the workspace. A 'Web page editing' toolbar is at the bottom. The status bar at the bottom shows 'Zoom: 75%' and 'Main Layer'.

Project folder with all files

Libraries and Icon Gallery

Toolbar (Align, Move...)

Definition and selection of different levels

Toolbar with drawing tools

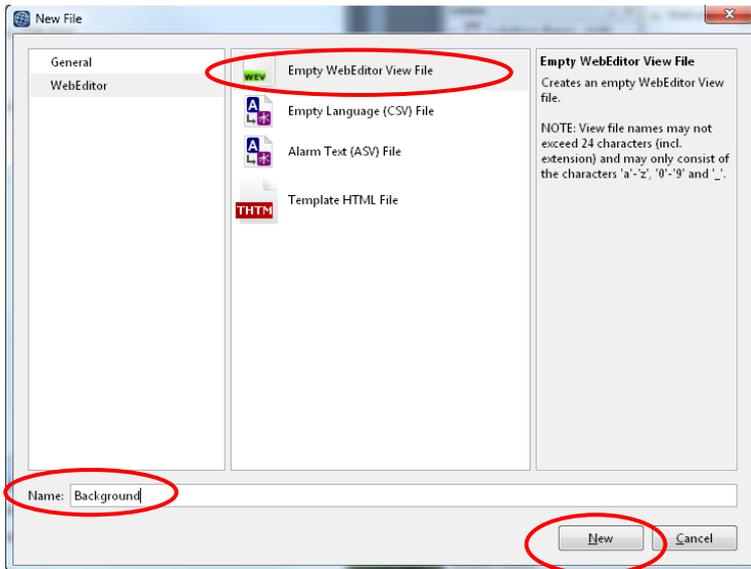
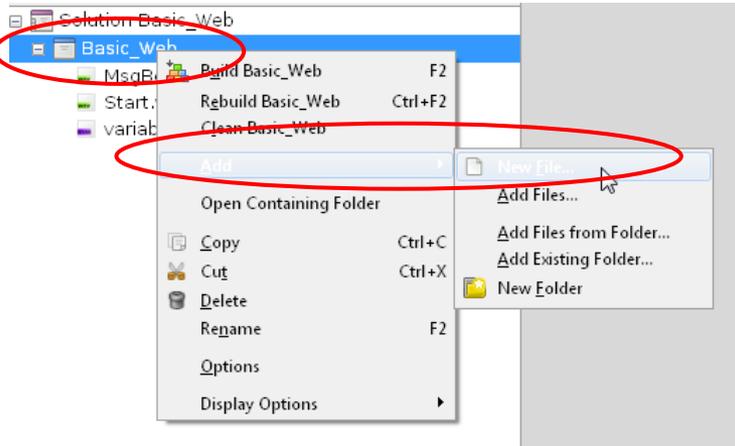
Web page editing

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Create background page

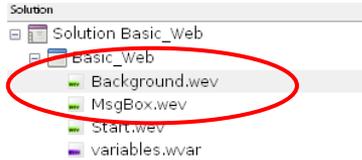
Create a background page

- Select resolution VGA
- Right click on Basic_Web project
- Select Empty Webeditor View File
- Enter name «Background»
- Confirm with «New»



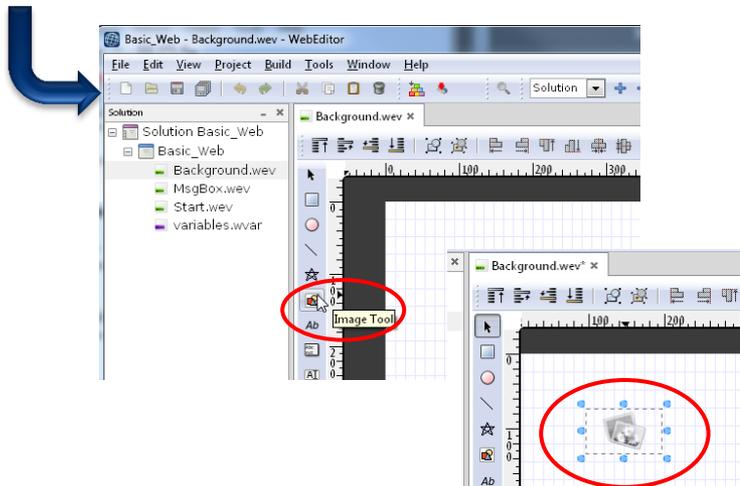
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Create background page



Insert background image

- Open page Background.wev
- Select Image Tool
- Place an image object by clicking on the workspace
- Click on image object to display settings on right (if the window cannot be seen, it may be opened via View/Windows/Properties)



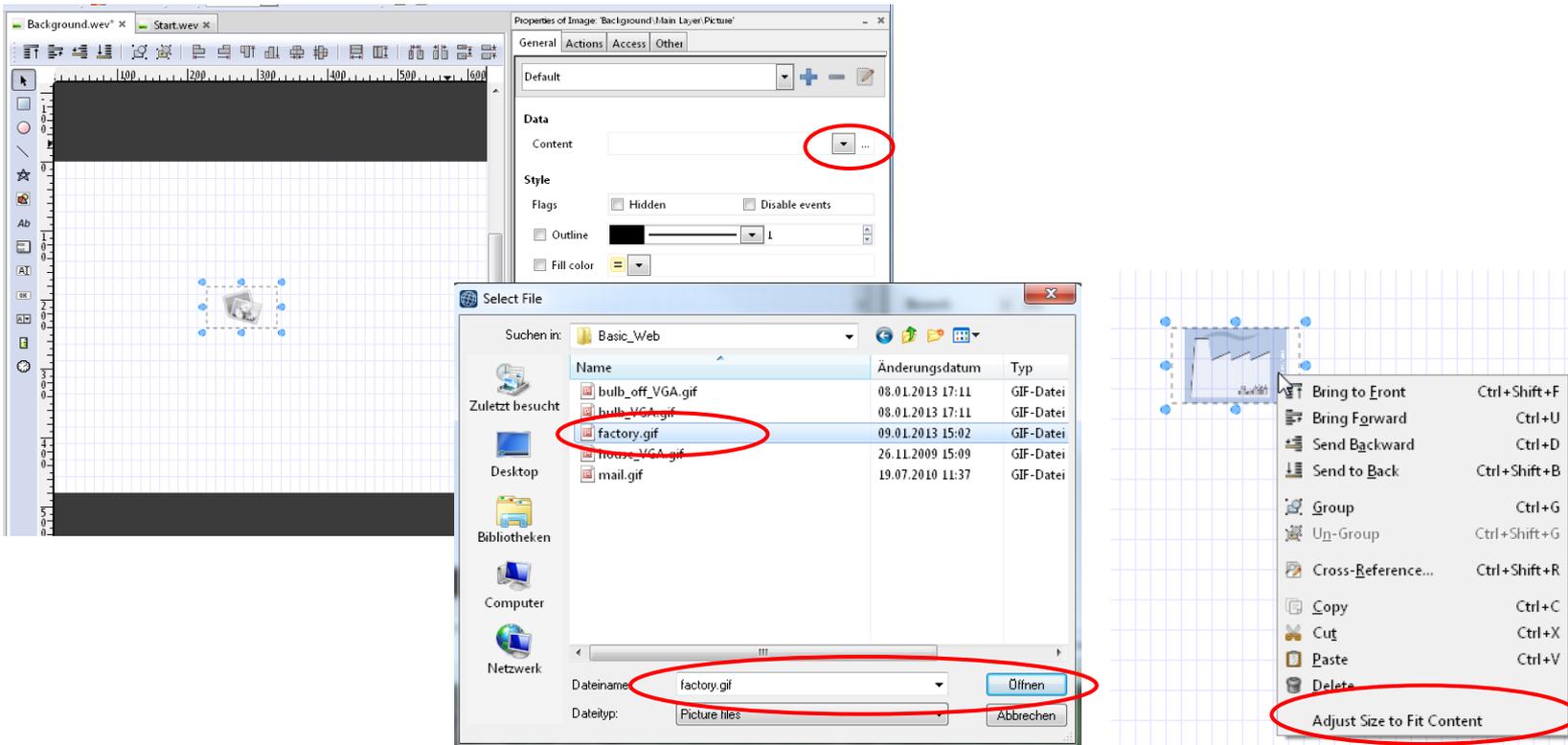


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Create background page

Insert background image

- Select image in Content window
- Insert the image factory.gif (images for the project can be downloaded from the site www.saia-support.com)
- By right clicking on the image window → Adjust Size to Fit content, it is possible to adjust the size of the image window to fit the size of the complete image.

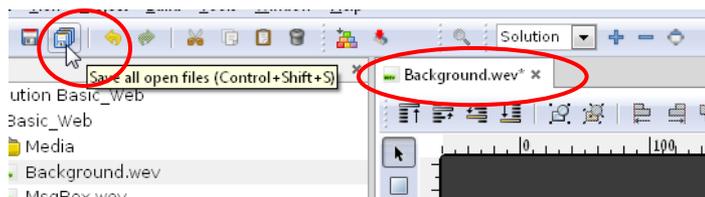
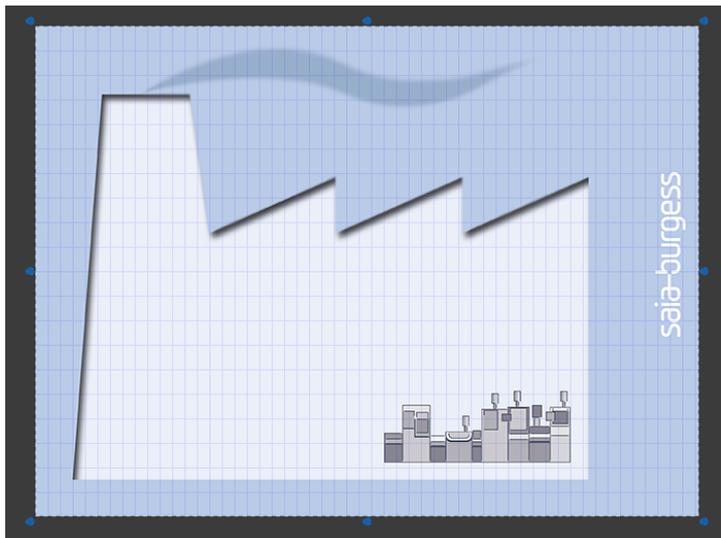


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Create background page

Place image

- Using the mouse, the image can be moved to the middle of the workspace
- Save changes and close page



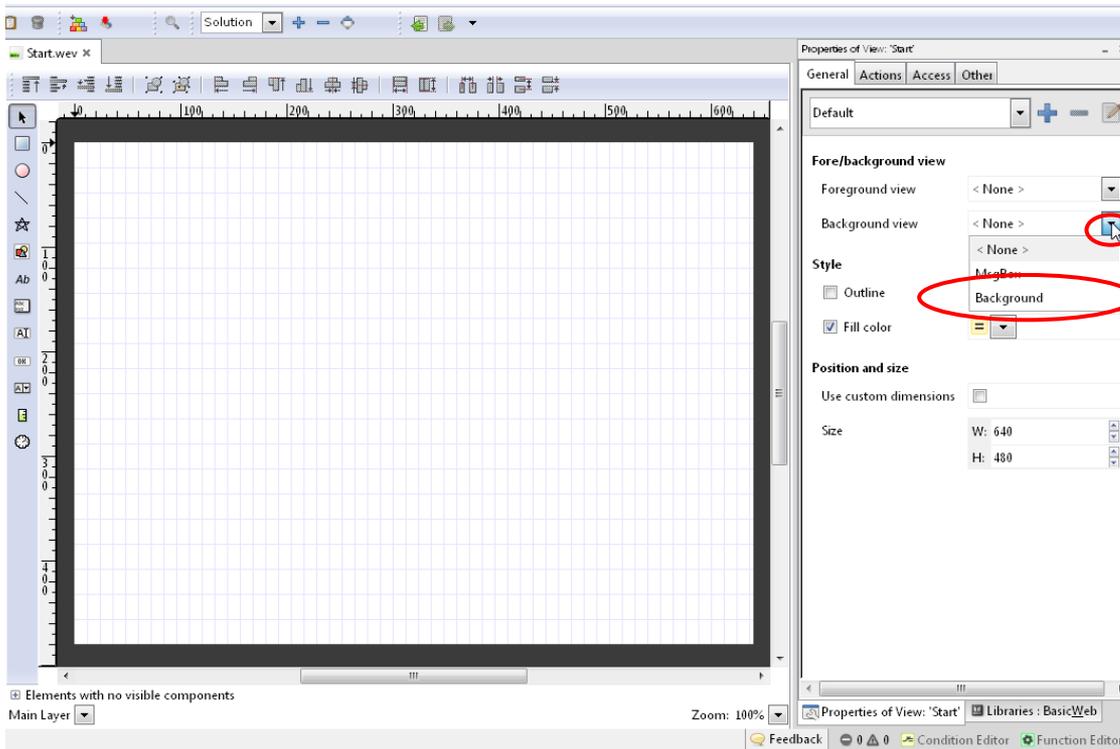


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Create start page

Insert background on other pages

- Select page Start.wev
- Double click on workspace to open page options
- At Background view, select the page «Background»
- The page Background.wev will automatically be integrated and displayed as the background

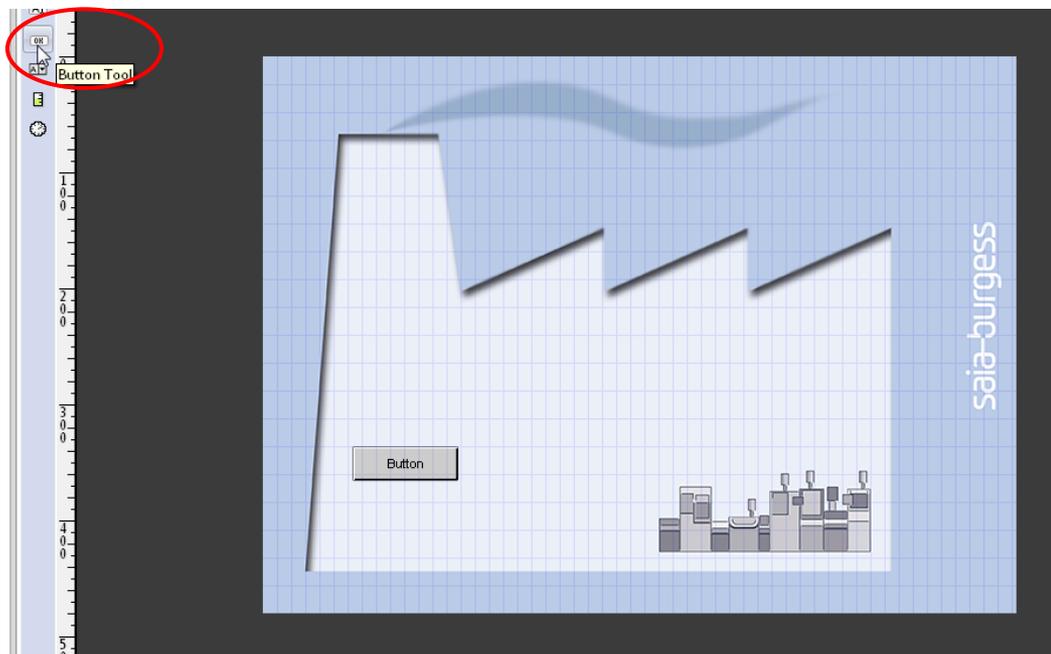


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Create button

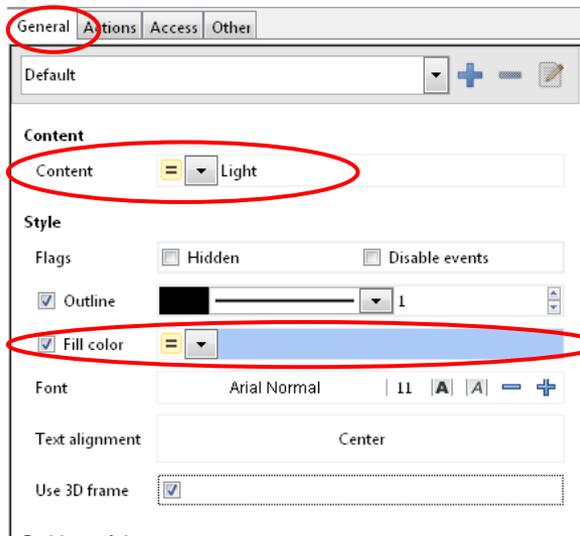
Create a button to be used for switching the DO0 lamp

- Select a button from the toolbar and place it



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Configure the button



Open the button settings

- Open by clicking on button

Change button name

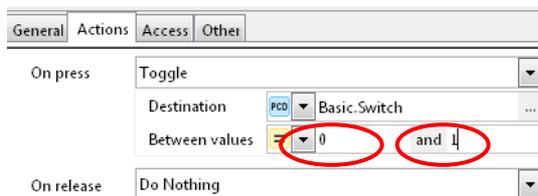
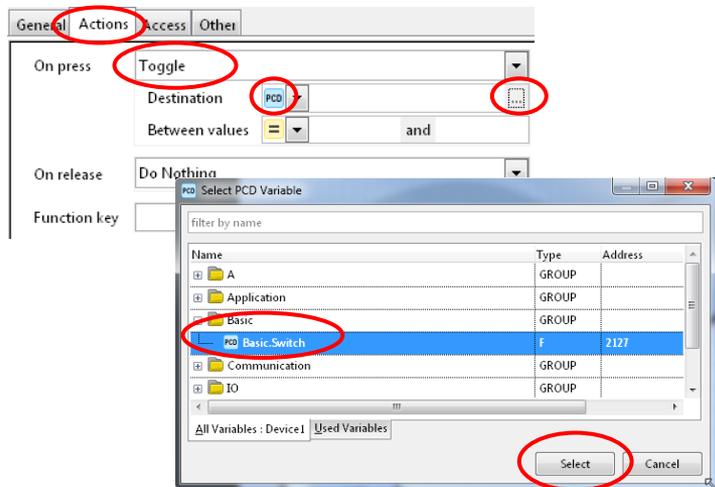
- Enter the name «Light» in the Content field

Change switch colour

- Select Fill colour
- Click on colour field and select appropriate colour

Configure button as switch

- Click on Action tab
- Select On press → Toggle
- Set «PCD» as the destination and select symbol Basic.Switch
- Select: «Basic.Switch» (symbol from Fupla project)
- Enter between Values 0 and 1
- Every time it is pressed, the PCD variable Basic.Switch will now change from 0 to 1



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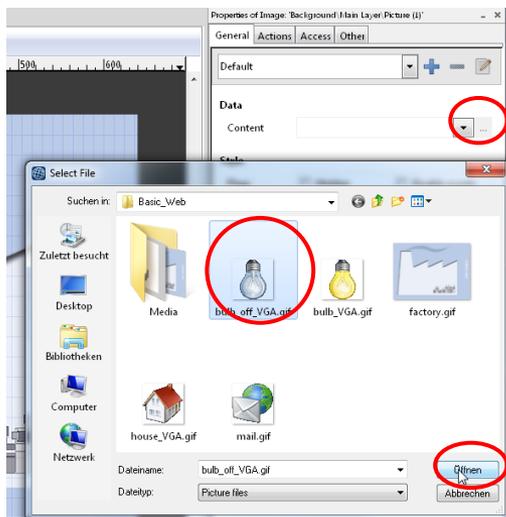
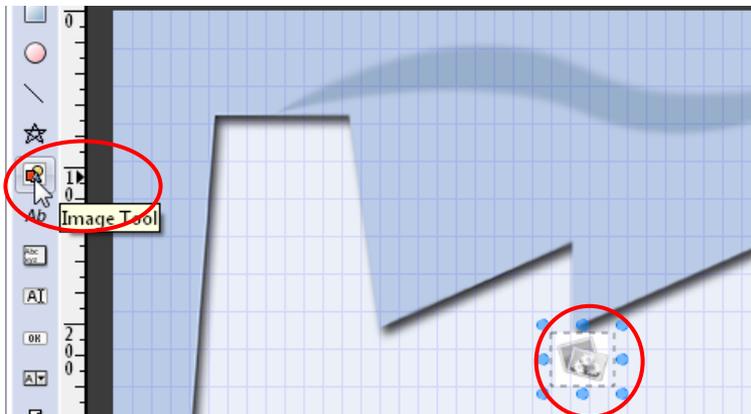
Display lamp states

Insert an image

- Use Image tool to place the image
- Click on it to open options

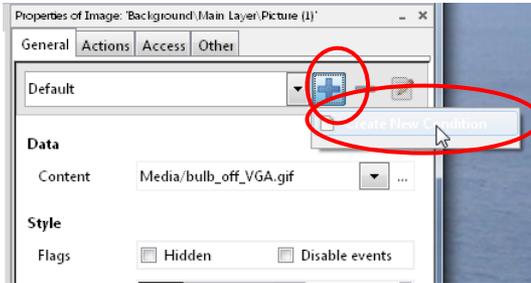
Display light (status: switched off)

- Select image object
- Insert the image `bulb_off_VGA.gif` at Data / Content
- The image of the switched off lightbulb will now be displayed as standard



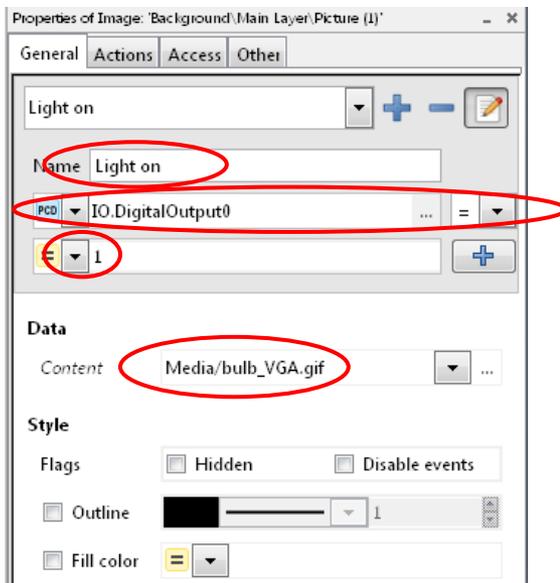
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Display lamp states



Display light (status: switched on)

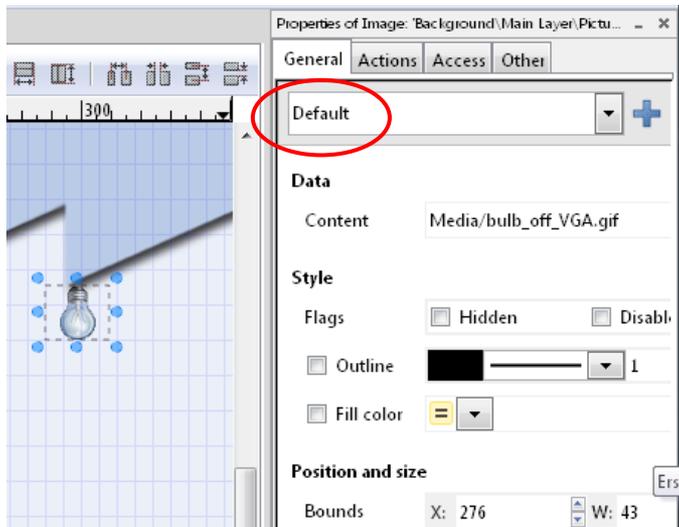
- Conditions may be added to image objects
 - Depending on these conditions, images can be changed
 - If digital output 0 is switched on, the lightbulb should be colored yellow
- Use the + symbol to add a condition
- Change condition name to: Light on
- Set symbol type as PCD and select the symbol IO.DigitalOutput0
- Insert condition = 1
- Settings made under this condition will be carried over, if the condition applies.
- Enter the image bulb_VGA.gif at Data Content



If PCD symbol IO.DigitalOutput0 = 1, carry over the settings for this condition (image bulb_VGA.gif will be uploaded)

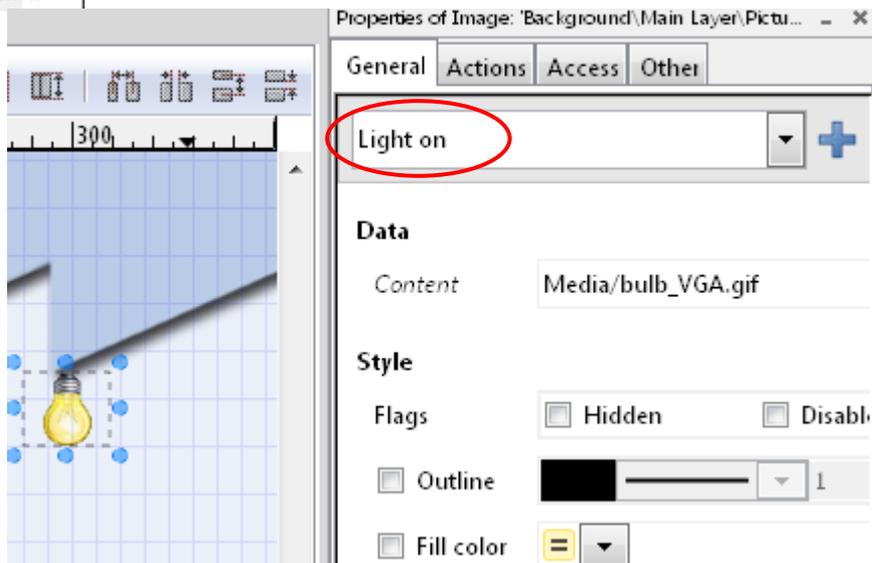
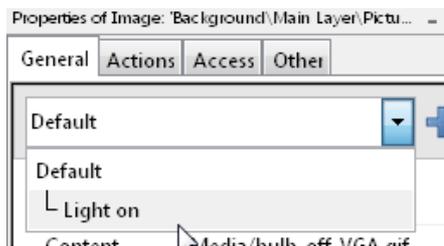
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Display lamp states



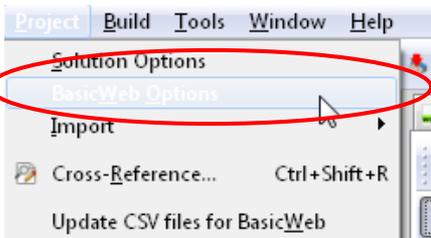
Check that it works

- Colour change can be checked by selecting the condition
- Default (no condition met)
→ Lightbulb off
- Light on (Digital Output0 = 1)
→ Lightbulb on



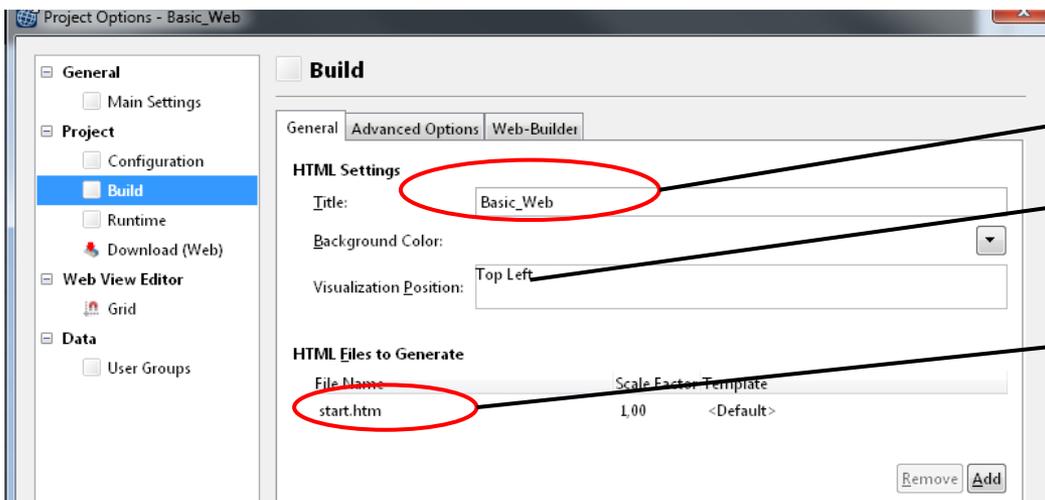
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Project settings



Change settings

- Open under Project / BasicWeb Options
- In Build options it is possible to set which HTML file will be generated as the start page. If the start page is called start.htm, it will be called automatically when the controller address is entered in the browser (e.g. http://192.168.0.10). If the page has a different name, it must be specified after the address (e.g. http://192.168.0.10/Basic_Web.html)



Set page name

Position of visualization in Web Browser

These start pages are generated



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Project settings

Runtime settings

- Set Main View Start.teq

Main View is called as the first page

The screenshot shows the 'Runtime' settings window with the following configuration:

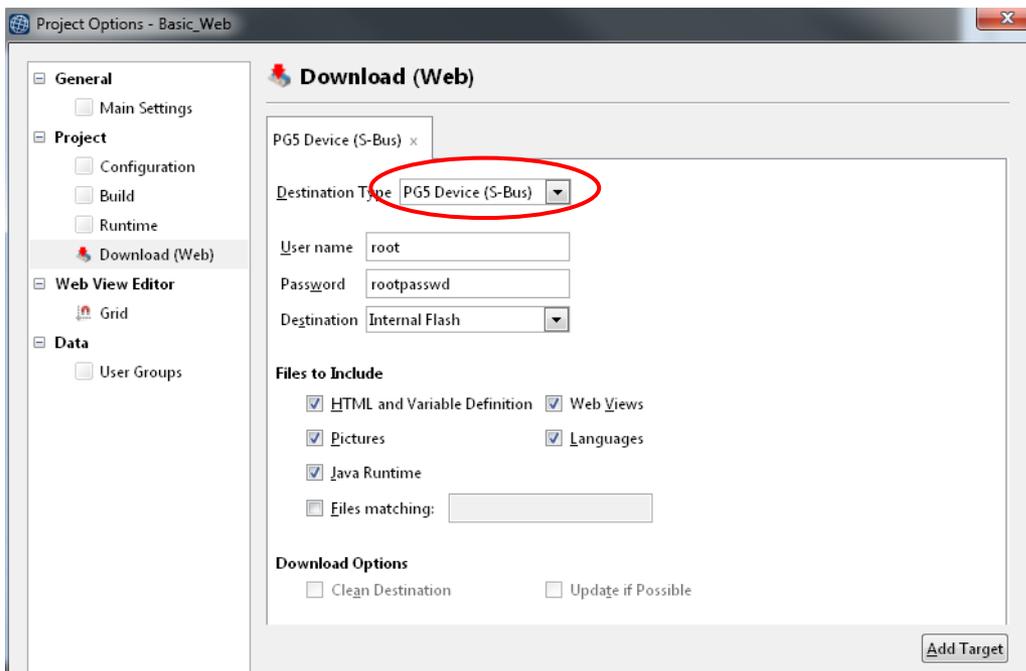
- General** (selected tab)
- Main View:** Start.wev
- Encode Special Characters**
- Read Data Per View**
- Date/Time Format:** dd.mm.yyyy HH:mm:ss
- Refresh Time (ms):** 500
- Decimal Symbol:** .

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Project settings

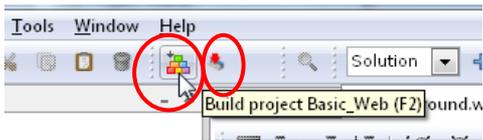
Download settings

- Download settings indicate the interface to be used for uploading data to the controller
- If the controller is connected via USB, you can select PG5 Device (S-Bus)
- Standard User Name: root
- Standard Password: rootpasswd



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Compile project

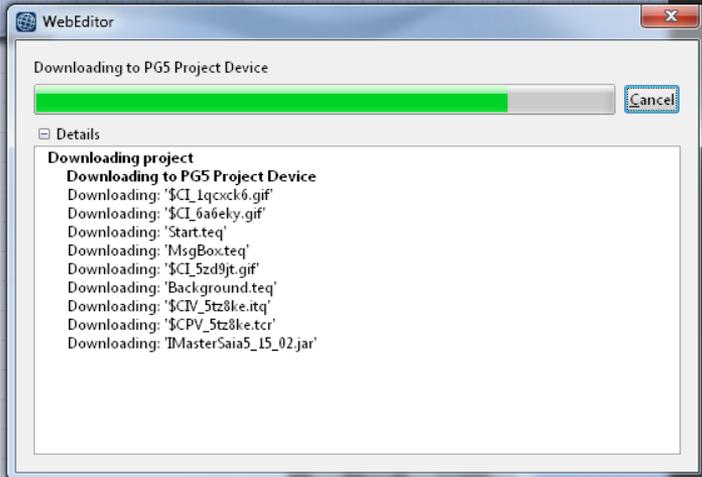


Compile project

- Press Build all
- Press Download Project

HTML file

- The save will automatically generate a start.htm.
- The htm file will be called later in the web browser as the start page
- Close the WebEditor



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Configure Ethernet

Set IP

- Open Device Configurator
- Select Ethernet
- Enter IP address and Subnet Mask

On the computer, the IP must be the same down to the last character as well as the Subnet Mask

The screenshot shows the Saia Device Configurator interface. On the left, the 'Selector' pane shows 'Onboard Communications Modules PCD7 for PCD1'. The main area is divided into several sections:

- Device:** PCD1.M0160E0 CPU with 1 MBytes code/text/DB flash memory and 1 MBytes extension memory (RAM).
- Memory Slots:** M1.
- Monitoring:** Monitoring and logging of meter data. Automatic scanning of S-Bus meters and gateways.
- Onboard Communications:** A table with columns Location, Type, and Description. The 'Ethernet' row is circled in red.

Location	Type	Description
Onboard	RS-485/S-Net	RS-485 port for Profi-S-Bus or general-purpose communications.
Onboard	USB	Universal Serial Bus port, PGU or general-purpose.
Onboard	Ethernet	Ethernet port. IP Settings, DHCP.
Socket A		
- Ethernet Protocols:** IP Transfer Protocols (FTP, HTTP Direct Protocols, ODM), IP Protocols (DNS, SNMP, SNMP protocols).

The right-hand pane shows the 'Properties' for 'Onboard : Ethernet':

- General:** MAC Address 7C:65:0D:00:29:EA
- TCP/IP:** Ethernet RIO Network none, IP Address 192.168.12.82, Subnet Mask 255.255.255.0, Default Router 192.168.12.221.
- DHCP Client Protocol:** DHCP Client Enabled No, Automatic Gateway IP Setting No, Automatic DNS IP Setting No, DHCP Server IP to Reject 1 0.0.0.0, DHCP Server IP to Reject 2 0.0.0.0, Host Name, Fully Qualified Domain Name.
- Ether-S-Bus:** Channel Number 9, Ether-S-Bus Enabled No, IP Node 0, PGU Port Yes, Slave Yes, Network Groups (Default).
- Ether-S-Bus Master Gateway:** Channel Number Gateway 9, Use Ether-S-Bus For Gateway No, First S-Bus Station 0.



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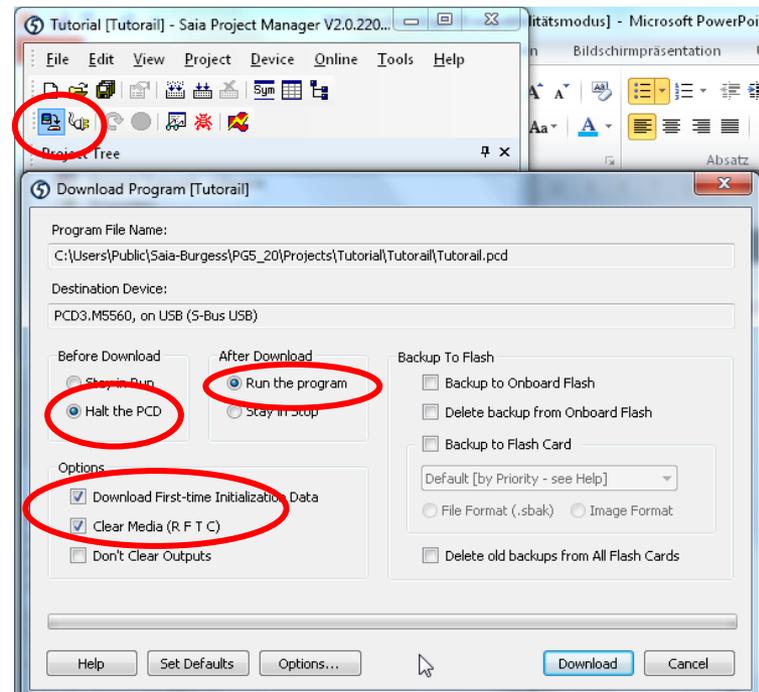
Compile and download project

Compile with «Rebuild all Files»

- Check whether any errors have occurred

Download project

- Plug USB cable into controller
-  Press Download button
- Download program



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Call project in browser

Establish Ethernet connection

- Connect Ethernet cable
- The flashing LED indicates that communication is working

Call web visualization

- Open browser
- Enter web project address
 - `http://«IP Controller»/«startpage.html»` (start page is not needed, when it's named start.htm)
 - In this example: `http://192.168.12.82/`
 - The light can be controlled via the switch or with the web button

