

Webserver for a MYC System

Author: DK1RI

Version V01.01.05 20230315

This paper is published in <https://github.com/dk1ri> as well

Introduction

This paper describes a special SK – a webserver. It is a user interface for a MYC system
A browser should have access to this webserver and is the real SK (skin).
For more details of the MYC system please check the reference.
The program is not finished!

Definitions and formats

see <https://dk1ri.de/myc/Definitions.txt> or <https://dk1ri.de/myc/Definitions.pdf>

Status

Apache webserver (XAMPP) on windows set up
Basics GUI sending and receiving commands ok
USB interface to devices working (but may be changed)

Some limitations

The commandrouter has no interface to devices yet and a solution without commandrouter should work as a first step.

So the webserver has some limitations:
one device at the same time only.

It is necessary to start three programs: browser, web-server and a python program for the device interface.

I did not find a solution to connect the webserver to USB directly. So data exchange is done by filetransfer using an additional python program. This cost time.

For read commands there is a delay (dead) time of 3 s after a command.

Most often used commands should work, but some special conditions are missing.

Windows only is tested (Win10) with firefox.

As long as the web-server is not finished, there may be problems using the CR.

Starting / preparations

The following programs must be installed:

xampp (standard installation, nothing special [19])

a browser (firefox is used)

Enable javascript (not yet used, but will be used in future)

python (standard installation, nothing special [20])

pyserial is necessary

```
open Powershell
cd C:\Users\your_name\AppData\Local\Programs\Python\Python_version\Scripts
(you must replace yourname and version with your data)
pip.exe install pyserial
```

move the original \xampp\htdocs to another directory, (if you need this later usage).
download a new htdocs from [17], unzip and copy to xampp
create a new \xampp\htdocs\devices
download a device from [18], unzip and copy the content to \xampp\htdocs\devices
For most existing devices these data will be available soon.

Actual usage of the SK

```
call the xampp control Panel
start modul Apache (at least)
it may be necessary to enable firewall for Apache web server
in a powershell:
cd \xampp\htdocs
C:\Users\your_name\AppData\Local\Programs\Python\Python_version\python.exe USB_serial.py
```

In a browser (on the same computer as the webserver) call
localhost/myc.php

Some tips for usage, which may help:

- to unselect a switch of an or command “control” + mouse-click!
- for switches and range commands: if you change the stack, the new values are shown and the operating requests are ignored, if a read command is available. You must initiate changes of the new stack by another command. It is recommended to provide those read commands, because the webserver do not store the status for all stacks.

Other devices

For devices not found in [18] you can create your own.
create the directory \xampp\devices\your_new_device
copy your announcefile to this directory
open powershell
cd \xampp\htdocs
C:\Users\your_name\AppData\Local\Programs\Python\Python_version\python.exe
helper_202210.py
Syntax errors in the announcement file may create a crash of this program or the webserver

Other languages

The names for labels given by the announcements cannot be changed yet, but the (default) labels and names defined by the web-server. English and german is available now, others can be added in the _lang file (“;” is the separator)

Some additional explanations

I did some basic HTML programming earlier, and this is my first PHP program; so some enhancement have to be done.

My intention was:

- the web-server should work without the need of internet access (standalone).
- the programming should be as simple as possible and require as less resources as possible to work on simple equipment as an old raspberry.
- the web-server do not use a database program, but calculate many data at the first start.
- the usage should be simple (there is a lot to do)
- the web-pages will be completely dynamic, so that all kinds of announce-lists can be used.

Later additions:

- The user calls his own individual web site and get his personal web layout.
- Functions may disappear when a device disappears.
- The labels of those functions may disappear or be grayed out.
- The user should find a knob to switch to an edit mode.
- In this mode the web page behaves like a web editor. The user can modify those functions defined by the full announcement-list.
- So the user can define his own colors and view of the functions in the edit mode and use it later on.
- The result is stored in a user individual config file or data base.
- For simple usage preconfigured files (skins) can be used.

External programs

Because I found no simple way for the web-server to communicate with USB device, a additional python script is necessary.. The web-server create file file with the data to send, and wait for an answer (for answer commands).

The script USB_serial read the file, send data to the device, wait for answer (for answer commands) and put it to a file.

The web-server read it, and update the values and display the page

My Test environment

I work with one windows laptop.

For development of the pages I use PhpStorm, and I installed a web-server (XAMPP)..

Copyright

Dieses Dokument darf unverändert kopiert werden.

Die Ideen in diesem Dokument unterliegen der GPL (Gnu Public Licence, V2) soweit keine früheren, anderen Rechte betroffen sind.

Die Veforwendung der Unterlagen erfolgt auf eigene Gefahr; es wird keinerlei Garantie übernommen.

This document can be copied without changes.

The ideas of this document can be used under GPL (Gnu Public License, V2) as long as no earlier other rights are affected.

The usage of this document is on own risk, there is no warranty.

Reference

- [1] <https://dk1ri.de/myc/MYC.pdf> (german)

- [2] <https://dk1ri.de/myc/MYC.en.pdf>
- [3] <https://dk1ri.de/myc/Description.txt> or <https://dk1ri.de/myc/Description.pdf>
- [4] <https://dk1ri.de/myc/commands.txt> or <https://dk1ri.de/myc/commands.pdf>
- [5] https://dk1ri.de/myc/Reserved_tokens.txt or https://dk1ri.de/myc/Reserved_tokens.pdf
- [6] <https://dk1ri.de/myc/Rules.txt> or <https://dk1ri.de/myc/Rules.pdf>
- [7] <https://dk1ri.de/myc/commandrouter.txt> or <https://dk1ri.de/myc/commandrouter.pdf>
- [8] https://dk1ri.de/myc/Rules_device.txt or https://dk1ri.de/myc/Rules_device.pdf
- [9] <https://dk1ri.de/myc/skin.txt> or <https://dk1ri.de/myc/skin.pdf>
- [10] <https://dk1ri.de/myc/logicdevice.txt> or <https://dk1ri.de/myc/logicdevice.pdf>
- [11] <https://dk1ri.de/myc/Definitions.txt> or <https://dk1ri.de/myc/Definitions.pdf>
- [12] https://dk1ri.de/myc/spec_version.txt or https://dk1ri.de/myc/spec_version.pdf
- [13] <https://dk1ri.de/myc/webserver.txt> or <https://dk1ri.de/myc/webserver.pdf>
- [14] <https://dk1ri.de/myc/ki.txt> or <https://dk1ri.de/myc/ki.pdf>
- [15] <https://dk1ri.de/myc/communication.txt> or <https://dk1ri.de/myc/communication.pdf>
- [16] <https://dk1ri.de/myc/Security.txt> or <https://dk1ri.de/myc/Security.pdf>
- [17] <https://dk1ri.de/myc/htdocs.zip>
- [18] https://dk1ri.de/ew_dat.htm
- [19] https://www.apachefriends.org/de/download_success.html
- [20] <https://www.python.org/downloads/>