LabManual used for FHdortmund-session Nov.2022 on how to create a FW with webServer that hosts a webpage like this

Graphical user interface, text, application

Description automatically generated

which provides a two-way communication

1. downLink: web->phyHW: push-button on webpage to toggleLED
2. upLink: phyHW->web: continuously/dynamically read value of extPoti that simulates an analog value which could also be the engine-rpm

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# History

v1.0: first version (SL, 31.10.22)

# first version of webserver '**L1basic\_ telnet\_0-1-Q**'

to run step1 of webserver-demo

## base-prj

The base prj is <h3>\wireless\_apps\_winc1500\apps\wifi\_tcp\_server\_in\_softap

All that was not needed was removed

## Get prj from git

Get prj from git with

(dos)> cd <yourPath>

(dos: yourPath\)> git clone \  
https://github.com/stefanluethin-microchip/gh\_fhd22\_lab2\_websrv

(dos: yourPath\)> git checkout L1basic\_ telnet\_0-1-Q

## MPLABX

Load prj '<repo>\fhd22\_lab2\_websrv\firmware\sam\_d21\_xpro\_winc1500.X'

Graphical user interface, application, Word

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## Start MCC check that you have these settings correct

Diagram

Description automatically generated with medium confidence

Graphical user interface, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

## download+run prj

Next download and run

Graphical user interface, application

Description automatically generated

If all works fine, you should see 'loading completed'

## vCOM

Now open a console and connect to the vCOM and press HW-reset

Text

Description automatically generated

You should see something like above. Now you're winc1500/webserver is ready to be connected to -> next

## Connect to winc1500

In the H3-settings you specified the SSID=Webserver so connect from your PC to it now

Graphical user interface

Description automatically generated

## telnet

once your connected to your 'Webserver' you can now connect via telnet to communicate with it via telnet.

In the H3-settings you assigned the IPaddress 192.168.1.1 to it and start tcp-port '80' so open a dos-shell (telnet comes with win10, but must be activated -> search web / alternatively you can use putty,Terraterm which include telnet-clients).

A successful connect via telnet to 192.168.1.1:80 is confirmed with the msg 'Hello, here is winc1500' -> see below screenshot

## Use webserver

Once connected you can now use the webserver - in this first version it provides these features:

* '0' to turn onboard LED0=off
* '1' to turn onboard LED0=off
* Press SW0-button and send '?' -> current button-state is reflected
* Release SW0-button and send '?' -> current button-state is reflected

A picture containing chart

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## End 'L1basic\_ telnet\_0-1-?'

Next step to follow…

# #eof