REPORT

Overview of project

Create a system with an **AT-Command based server** and a **cli-enabled client** that communicates with it via a serial port.

Editing the list of registers at compile time:

At server.c line 167 increase SIZE from 2 to the amount of register you add
At line 193 give the default value of the reg and the list of allowed values
In the function execute command in the if-clause of id_command==3 you can validate the input of the user if it is correct based on the list

Editing the list of registers at run time:

When prompted the CLI write AT+ADD
Give the integer you want
(Check if integer is given is done by the server)
Give the list of allowed value numbers
(We save the list but we cannot process the input that the user will give the next time.
There is a wide range of limitations that a user can give e.g 0-16 & 64-128 or multiple discrete numbers 1|2|5|6|8|17 & 17-30. We cannot incorporate at runtime this information but only at compile time.)

Open virtual ports:

socat -d -d pty,raw,echo=0 pty,raw,echo=0

e.g. output of socat
2021/08/02 16:49:30 socat[5760] N PTY is /dev/pts/3
2021/08/02 16:49:30 socat[5760] N PTY is /dev/pts/4
2021/08/02 16:49:30 socat[5760] N starting data transfer loop with FDs [5,5] and [7,7]

At line 200 in server.c edit port and write number 3(the first number whichever it is).
At line 95 in cli.c edit port and write number 4 (the second number whichever it is).

Compile:

In file Client: cmake .
make
In file Server: cmake .
make

Run:
Open one terminal for client and run the executable ./client
Open one terminal for server and run the executable ./server