**The focus of the assignment is on the testing, CI, CD and Makefiles.**The project shall use automatic tests, CI, CD, Makefiles and **at least some tests  
writen in Python.** Start with an empty main (or something simple like a print out  
to see that it is running) and then continue with CI/CD and Makefile.

**Start implementing features by writing test cases and then write the code.**

**The projects will be presented on March 24th where you will be divided into groups with one person from each project where you will present your project.**

These are suggestions on assignments which your group may choose.

**- Implement a REST server (basically HTTP).  
  Implement GET, PUT and DELETE to store data on the filesystem. You may store  
  the data as text files.  
  Possible features:  
    - An index path to list all existing files**

**- ESP32 command line over UART.**  
  Implement a command line on the ESP32 UART where a user can run commands.  
  Possible features:  
  - Implement to read and write values and/or pointers from the command line.  
  - Implement calling predefined functions.  
  - Implement storing some values as non-volatile (i.e. keeps the value after reboot)  
  Some features should be visible by hardware, e.g. allow you to control LEDs  
  by writing a command.

**- Write a network server**  
  Implement a simple TCP server which can receive commands over the network. It  
  only needs to handle one client at a time.  
  Possible features:  
  - Commands for storing and retrieving data from files  
  - Login  
  - Add user/remove user

Useful link:

1. <https://www.geeksforgeeks.org/tcp-server-client-implementation-in-c/>
2. <https://github.com/misaakidis/SimpleUDPTCP> ---simple project
3. <https://www.devdungeon.com/content/unit-testing-tcp-server-client-python> unit testing in python