XV6 Project Phase 1:

Make a repo on GitHub and fork the xv6 repository (here). Make a branch named "phase_1" for this phase of the project and commit all the things you change on that branch.

For the first phase of the project, you must add a new system call to xv6. The system call you add must return information about processes in the RUNNING or RUNNABLE state as an array of struct proc_info. This array must be sorted in ascending order according to the memory usage of each process. Structure proc_info is defined as follows:

```
struct proc_info {
    int pid;
    int memsize;            // in bytes
};

```

You should write a test program for this system call. The test program may use the fork() system call to create some processes and malloc() system call to allocate some randomly sized memory for each process.

Note that:

- You should add the test file to UPROGS list in Makefile;
- If you define a new source file, you should add it to Makefile;

Important Notes:

You should **commit and push** the changes and the progress you have on the source code's repository. (we expect more than 10 valid commits). Make sure you **add comments** to your code whenever you add new parts to the source code.

Besides committing on the repository, you should upload to 3 things in a zip file to Quera:

1) A pdf report on **how** to add this system call to xv6 and talk about **the files** that should be modified and **what** each file does.

2) The **changed files** of xv6 on the final commit in the repository before the deadline. (Most files of the xv6 won't be changed.)

3) A text file containing the link to your repository.

Your projects will be graded based on:

- Your report
- Your comments on the code
- Your test file
- The fact that your codes work or not
- Your commits on the repository

Please make sure to ask any questions that you have from any of the assistants, we'll be happy to help :)