CS4375 Fall 2025 Homework Report

<Your name> Submitted on <date>

<Your email address>

**HW 2: Time Command**

Please replace red text with your report text and any tables or figures, names of any accompanying files, etc. Remember to commit all the files for your lab submission, to put the URL for your private xv6 repo in the Teams assignment, to submit the Teams assignment, and to give the instructor and TA access to your repo.

Task 1. Implement a time1 command that reports elapsed time.

Your code time1.c should be in the user directory in the hw2 branch of your xv6 repo. Remember to add your new command to UPROGS in Makefile.

Show results from running your time1 command.

Summarize what you learned by carrying out this task.

Describe any difficulties you ran into with this task and if/how you overcame them.

Task 2. Keep track of how much cputime a process has used.

Describe what files you changed and how you changed them. Explain the purpose of each change. Be sure to do git add and git commit as needed and push your changes to your online repo.

Summarize what you learned by carrying out this task.

Describe any difficulties you ran into with this task and if/how you overcame them.

Task 3. Implement a wait2() system call that waits for a child to exit and returns the child’s status and rusage.

List the files you changed and explain the purpose of each change. Be sure to do git add and git commit as needed and push your changes to your online repo.

Summarize what you learned by carrying out this task.

Describe any difficulties you ran into with this task and if/how you overcame them.

Task 4. Implement a time command that runs the command given to it as an argument and outputs elapsed time, CPU time, and %CPU used.

Your time.c code should be in the user directory in the hw2 branch of your xv6 repo. Remember to add your new command to UPROGS in Makefile.

Show results from running your time command.

Extra Credit (5 points). Discuss limitations of our time command. (Hint: For one limitation, consider what would happen if the command that is being timed forks child processes).