

Homework 1: Process

Instructor: Professor Sharifi
Operating Systems Fall 2019
Iran University of Science and Technology

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Question 1.

Report the differences among types of *exec**(*execl*, *execvp*, ...) and *system* system calls. ¹

Question 2.

There are multiple sub-folders in the question2 directory each of which uses a type of *exec* system call and includes 2 C codes. First, add codes to *p2.c* files to execute *p1* using the name of sub-folders. Second, print the time before and after running *p1*. Discuss the results considering your report from question 1. ²

Question 3.

Write 2 programs in C, showing the difference between *wait* and *waitpid*.

Question 4.

A web server is an application which can handle requests over the web. One of the characteristics that a web server should have is capable of responding to many clients within the low latency. E.g. consider Google as a web server which millions of clients can get their response simultaneously. A very simple web server program is attached to this homework. This web server only could response to clients one by one. Modify this program to address this issue.

Deadline

The non-extendable deadline for this homework is on **Friday, 25th October, at 23:55** (3rd Aban).

The submission after this time will not be accepted with no exception.

Submission

Submit a *zip* file to lms. The file should be named as *your-student-number.zip*. E.g. *96521234.zip*. The file should contain a document, containing solutions for **all** questions in pdf and all the codes you have written.

¹Hint: use *man!*

²Hint: use *gettimeofday()*