

# Operating Systems

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Department of Computer Science  
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ICSI 412

## Assignment-2

Assigned: Saturday, March 18<sup>th</sup>, 2023.

Due: Saturday, March 25<sup>th</sup> by 11:59 PM.

Student Name:

## OBJECTIVES

To develop a C program to implement process system calls.

## PROBLEM

You are to use the Ubuntu operating system or any other Linux distribution to write a C program that creates a process to determine the identification of the current user of your computer. I mean if *wang* is the login of the current user of your computer your solution should return *wang*. Your solution must also provide the *pid* of both the parent and the child processes used. You are to use the `fork()`, `getpid()`, `getppid()`, as well as the `execv()` system calls.

## HINT

You are to use the shell command `whoami` which returns the current user of the system.

## WHAT TO SUBMIT

The following are to be submitted to your co-instructor:

- 1) Your source code, as well as
- 2) any output produced by your solution that, clearly, states the following:
  - I. The current user of the system,
  - II. Information about *pids* of both the parent and the child processes, and
  - III. Screenshots of your command line illustrating the syntax used for the execution of your solution as well as the results it returned.

You are to use the following format to structure your output:

- a) Parent: My pid = *pid-of-parent*. My child has pid = *pid-of-child*
- b) Child: My pid = *pid-of-child*. My parent has pid = *pid-of-parent*
- c) Child: The current user is: *name-of-the-user*

Note: In a) Parent is to indicate that the output produced was generated by the parent process. In a similar way, in both b) and c) Child indicates that the output was generated by the child process.