# INFO 72220 Lab 3 – Process Creation

Due Date: October 22, 2020

Submission Format:

* 4 C programs, with comments answering the lab questions

We have learned in the class that fork() – exec\*() is the preferred practice in Linux for launching a program from within a program, because the parent program can retain the PID and subsequently the full control over the child process. However, there are 8 different versions of exec\*(), each of them with their own specific features and invocation signatures. They are:

* execl()
* execlp()
* execle()
* execlpe()
* execv()
* execvp()
* execve()
* execvpe()

In this lab, you are to research into execl(), execlp(), and two of your own choice of exec\*() family functions for their differences, and write three different versions of launchers for the sample executable attached with this lab.

**Requirement-based Marking Scheme (40 marks in total)**

* Write a execl() launcher **(5 marks)**
* Write a execlp() launcher **(5 marks)**
* Write a launcher with **TWO** of the remaining exec\*() family functions **(10 marks)**
* In each launcher, answer the following questions in the comments:
  + Explain the specialty of the given exec\*() function (what are the pros?)   
    **(3 marks per launcher)**
  + Given an example of when you’d not choose to use this given version of exec\*() function

**(2 marks per launcher)**

* Your program **MUST** compile without syntax error in order to receive any marks. The professor will not spend time figuring out how to get your program compiled properly. (as a result, a compilable partial solution is much better than a uncompilable full solution)