CSI 402 – Systems Programming – Handout 13.1
A Simple Example for the fork System Call

Note: The following is a simple example of the use of the `fork` system call. The child process simply prints its pid and exits. The parent process prints its own pid and also the pid of the child. When you run this program, the output produced by the parent and child processes may be *interleaved*.

```c
#include <stdio.h>
#include <sys/types.h>
#include <unistd.h>

int main(void) {

  pid_t  child;

  if ((child = fork()) == 0) {

     /* Child process. */

     printf("Child: PID of Child = %ld\n", (long) getpid());
  }
  else {

     /* Parent process. */

     if (child == (pid_t)(-1)) {
        fprintf(stderr, "Fork failed.\n");
        exit(1);
     }
     else {
        printf("Parent: PID of Child  = %ld\n", (long) child);
        printf("Parent: PID of Parent = %ld\n", (long) getpid());
     }
  }
  return  0;
} /* End of main. */
```