Assignment 2

I confirm that I will keep the content of this assignment confidential. I confirm that I have not received any unauthorized assistance in preparing for or writing this assignment. I acknowledge that a mark of 0 may be assigned for copied work.

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This assignment creates a child process that is exited without waiting, therefore creating a zombie process. The program will also find zombie processes and show them, then kill the parent of any zombie process, then display the updated list of processes with their states.

```
[EYeung@EricMac Operating System Fundamentals % ./A2b
This is the parent process
This is the child process
                             CPU PRI NI
                                                     RSS WCHAN
                                                                                   ADDR TTY
  UID
        PID
             PPID
                                               SZ
                                                                                                       TIME CMD
                                  31 0
                                         4297436
                                                                 S
  501
       6736
              6735
                        4006
                               0
                                                    2196 -
                                                                                      0 ttys004
                                                                                                    0:00.11 -zsh
  501
        6816
              6736
                        4006
                                  31
                                      0
                                          4269164
                                                     656
                                                                 S+
                                                                                      0 ttys004
                                                                                                    0:00.00 ./A2b
                                                                                                    0:00.00 ./A2a
0:00.00 (A2a)
  501
       6818
                        4006
                               0
                                 31
                                          4268140
                                                     664 -
                                                                 S+
                                                                                      0 ttys004
  501
       6820
              6818
                        2006
                               0
                                   0
                                      0
                                                a
                                                       0
                                                                 Z+
                                                                                      0 ttys004
sh: line 0: kill: (2006) - No such process
sh: line 0: kill: (4006) - No such process
sh: line 0: kill: (6) - No such process
sh: line 0: kill: (4006) - No such process
Updated list of processes
        PID PPID
                           F CPU PRI NI
  UID
                                               SZ
                                                     RSS WCHAN
                                                                                   ADDR TTY
                                                                                                       TIME CMD
        6736
                                  31 0
                                          4297436
                                                    2196
                                                                                        ttys004
                                                                                                    0:00.11 -zsh
  501
              6735
                        4006
                               0
                                                                                      0
                                                                 S+
  501 6816
                        4006
                               0 31 0
                                         4278380
                                                     684 -
                                                                                      0
                                                                                        ttys004
             6736
                                                                                                    0:00.01 ./A2b
EYeung@EricMac Operating System Fundamentals % gcc Assignment\ 2\ Part\ 2.c -o A2b
EYeung@EricMac Operating System Fundamentals % ./A2b
This is the parent process
This is the child process
        PID
                           F
                                                     RSS WCHAN
                                                                    S
                                                                                   ADDR TTY
  UID
              PPID
                             CPU PRI NI
                                               SZ
                                                                                                       TIME CMD
  501
       6736
              6735
                        4006
                                  31
                                      0
                                          4297436
                                                    2208
                                                                 S
                                                                                        ttys004
                                                                                                    0:00.12 -zsh
       6870
                        4006
                                          4269164
                                                     656
                                                                                      0 ttys004
                                                                                                    0:00.00 ./A2b
  501
              6736
                                  31
                                                                                                    0:00.00 ./A2a
0:00.00 (A2a)
       6872
                        4006
                               0
                                      0
                                          4268140
                                                     656
                                                                 S+
                                                                                      0 ttys004
  501
                                  31
             6872
  501 6874
                               0
                                   0
                                      0
                                                                                        ttys004
                        2006
                                                       0
sh: line 0: kill: (2006) - No such process sh: line 0: kill: (4006) - No such process
sh: line 0: kill: (6) - No such process
sh: line 0: kill: (4006) - No such process
Updated List of Processes
                           F CPU PRI NI
                                                     RSS WCHAN
        PID PPID
                                               SZ
                                                                    S
                                                                                   ADDR TTY
                                                                                                       TIME CMD
                               0 31 0
                                                                                      0 ttys004
  501
       6736
             6735
                        4006
                                         4297436
                                                    2208 -
                                                                 S
                                                                                                    0:00.12 -zsh
                                                                 S+
                               0 31 0
                                         4270188
                                                                                      0 ttys004
  501 6870 6736
                        4006
                                                     668
                                                                                                    0:00.01 ./A2b
EYeung@EricMac Operating System Fundamentals %
```