

Linux system programming assignment – 2

1. Create 5 children processes from a common parent and ensure that the parent terminates after cleaning all the terminated children using `waitpid()`. The `waitpid()` must be called after all the children are created and the parent has completed its work real work, if any.
2. Create 5 processes but not from the common parent. Meaning, each child creates a new process. clean-up the children using `waitpid()`.

3. Create a child process and compile any of programs in the child process. Parent process must use `waitpid()` to collect the termination status of the child process and print a message accordingly to the user.
4. Create 5 processes from a common parent and ensure that the parent terminates after cleaning all the terminated children using `waitpid()`. The `waitpid()` must be called after all the children are created and the parent has completed its work real work, if any; in addition, you must compile 5 different program files in children processes to generate their respective object files ; the parent process must use `waitpid()` to collect the termination status of children processes and link all the object files to generate the final, linked program/application.

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5. use the example1.c sample program to find the following:

Note: first, you must understand the working of example1.c thoroughly – meaning, overall working of the program and individual system call APIs

- a) without accessing the pages/page-frames, what is the largest size process that you can create and load in the system
- b) how many such large processes can you create and load – again without accessing the pages/page-frames
- c) now, signal the process to access all the pages/page-frames and find what is the largest process you can create and load
- d) using the condition in c), how many such processes can be created and loaded