Essay on the Differences between Stuff Solution and Our Solution

We got passed in almost all the test cases, the only test case we have problems in is the multi-oom test case. After comparing our solution to the staff solution, we found that the main problem occurs in the difference, which lies in our mistake in using the child_info struct. In our solution, it is possible to prevent the child process from freeing itself, when its parent has been exitted or killed for some uncommon reason. In that case, the parent process will not change the boolean variable "parent_exited" in the child info struct, which is used to signal the child process that the parent will no longer have the access to the child process. And if the parent exits normally, the variable will be changed, otherwise, in some cases, the parent process will be killed by the kernel, which will leave the variable unchanged, leading to a memory leakage problem, causing the failure in the multi-oom test case.

We have solved this problem by accounting for abnormal process exits when dealing with the freeing of allocated resources.