



Discipline

Activity

CS5003

Activity 3

❖ Problem Statement:

Required Deliverable

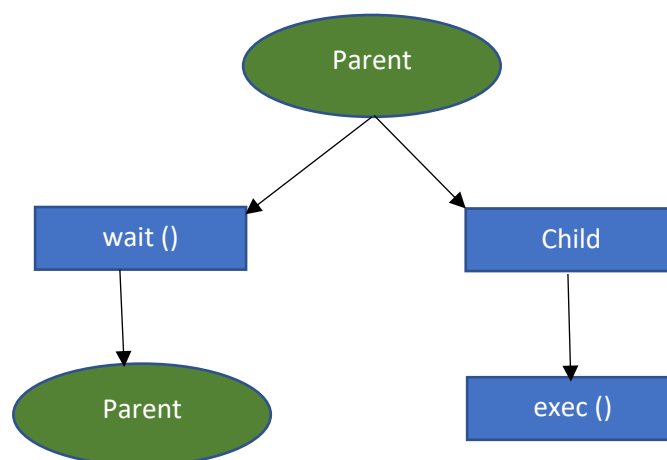
1. Submit the outcome in the proper order (Use Snipping tool to take Screen Snip).
2. Draw the process tree and submit the same (Photographs can be considered).
3. Express execution of an exec () call in your own words express with respect to the activity performed (1 Page only) (.txt file will be considered).

❖ Solution:

- 1) Below is the screenshot of the child process along with its PID and PPID i.e. wc which is running o wordcount.txt

```
tadeeb@TadeebsUbuntu:~/Documents/activities/CS5003-Live$ ./a.out
hello world (pid:35802)
hello, I am child (pid:35803)
5 126 683 wordcount.txt
hello, I am parent of 35803 (rc_wait:35803) (pid:35802)
tadeeb@TadeebsUbuntu:~/Documents/activities/CS5003-Live$ ps
  PID TTY          TIME CMD
 22940 pts/0    00:00:01 bash
 35804 pts/0    00:00:00 ps
tadeeb@TadeebsUbuntu:~/Documents/activities/CS5003-Live$ ps -aux | grep wc
tadeeb  35806  0.0  0.0 17540  728 pts/0    S+   19:10   0:00 grep --color=auto wc
tadeeb@TadeebsUbuntu:~/Documents/activities/CS5003-Live$ ps -h | grep wc
 35810 pts/0    S+      0:00 grep --color=auto wc
```

- 2) Below is the Process Tree:

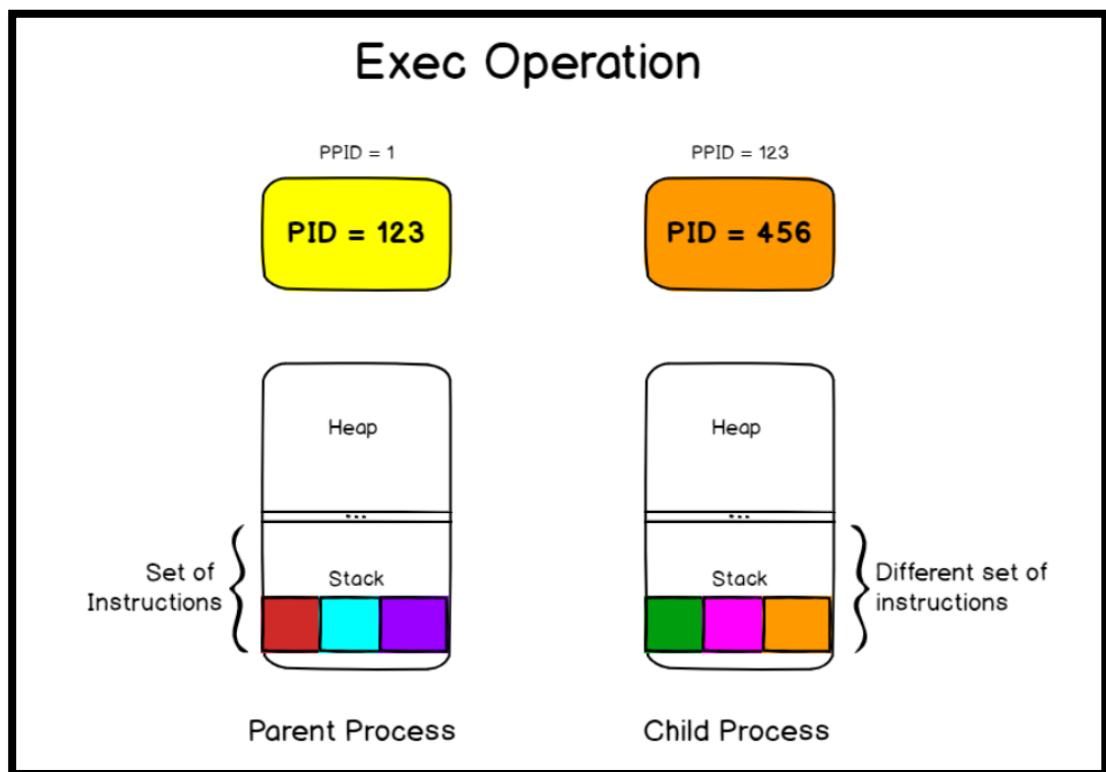


- 3) When we are creating and running a program on Linux, it generally involves two main steps: fork and execute:

`exec ()`:

The execute operation is used on Linux to replace the current process image with the image from another process.

The `exec` operation will replace the process image (i.e., the set of instructions that need to be executed) by another one.



If our were for example to execute the `exec` command in our bash terminal, our shell would terminate as soon as the command is completed as our current process image (our bash interpreter) would be replaced with the context of the command you are trying to launch.