

# REPORT

I implemented Part\_A and Part\_B and they are working as expected. Also, I handled the zombie processes problem in the Part\_B. I tried to implement Part\_Bouns but I couldn't handle it. I added the implementation even though it doesn't work. You can check it if you wish.

## GPT USAGE

I mostly researched on Geeks for Geeks, StackOverflow, and documentations by IBM, Oracle etc. I have not used ChatGPT for any direct code generation for the project. You can find the prompts I used below:

- The child processes become zombie processes since the parent process does not wait them. I want to write a signal handler for the SIGCHLD signal coming from children when they are terminated. can you help me with this by showing an example?

- I am writing a daemon like inetd in C. It should listen for multiple ports. How can I prevent accept() function to block the program?

- Can you explain me this C code?:

```
#include <stdio.h>
#include <signal.h>
#include <sys/wait.h>
#include <sys/resource.h>
void proc_exit() {
    int wstat;
    union wait wstat;
    pid_t pid; while (TRUE) {
        pid = wait3 (&wstat, WNOHANG, (struct rusage *)NULL );
        if (pid == 0) return;
        else if (pid == -1) return;
        else printf ("Return code: %d\n", wstat.w_retcode);
    }
}

main () {
    signal (SIGCHLD, proc_exit);
    switch (fork()) {
        case -1:
            perror ("main: fork");
            exit (0);
        case 0:
            printf ("I'm alive (temporarily)\n");
            exit (rand());
        default:
            pause();
    }
}
```

- Can you comment out this C code?: <source codes of my project>