

In the code below, assume that (i) all `fork` and `execvp` statements execute successfully, (ii) the program arguments of `execvp` do not spawn more processes or print out more characters, and (iii) all `pid` variables are initialized to 0.

- What is the total number of processes that will be created by the execution of this code?
- How many of each character 'A' to 'J' will be printed out?

You must justify your answers with a clear and readable table or diagram.

```
void main()
{
    ...
    pid1 = fork();
    printf("A");
    if (pid1) pid2 = fork();
    if (!pid2) {
        pid3 = fork();
        printf("B");
    }
    else {
        execvp(...);
        printf("C");
    }
    if (pid1 != pid3) {
        printf("D");
        if (pid1 && pid3) {
            printf("E");
            execvp(...);
        }
        pid4 = fork();
        printf("F");
    }
    else {
        printf("G");
        pid5 = fork();
    }
    if (pid2) {
        pid6 = fork();
        pid7 = fork();
        if (pid6) pid8 = fork();
        printf("H");
    }
    if (!pid1 && !pid2 && !pid3 && !pid4 && !pid5) printf("I");
    execvp(...);
    printf("J");
}
```