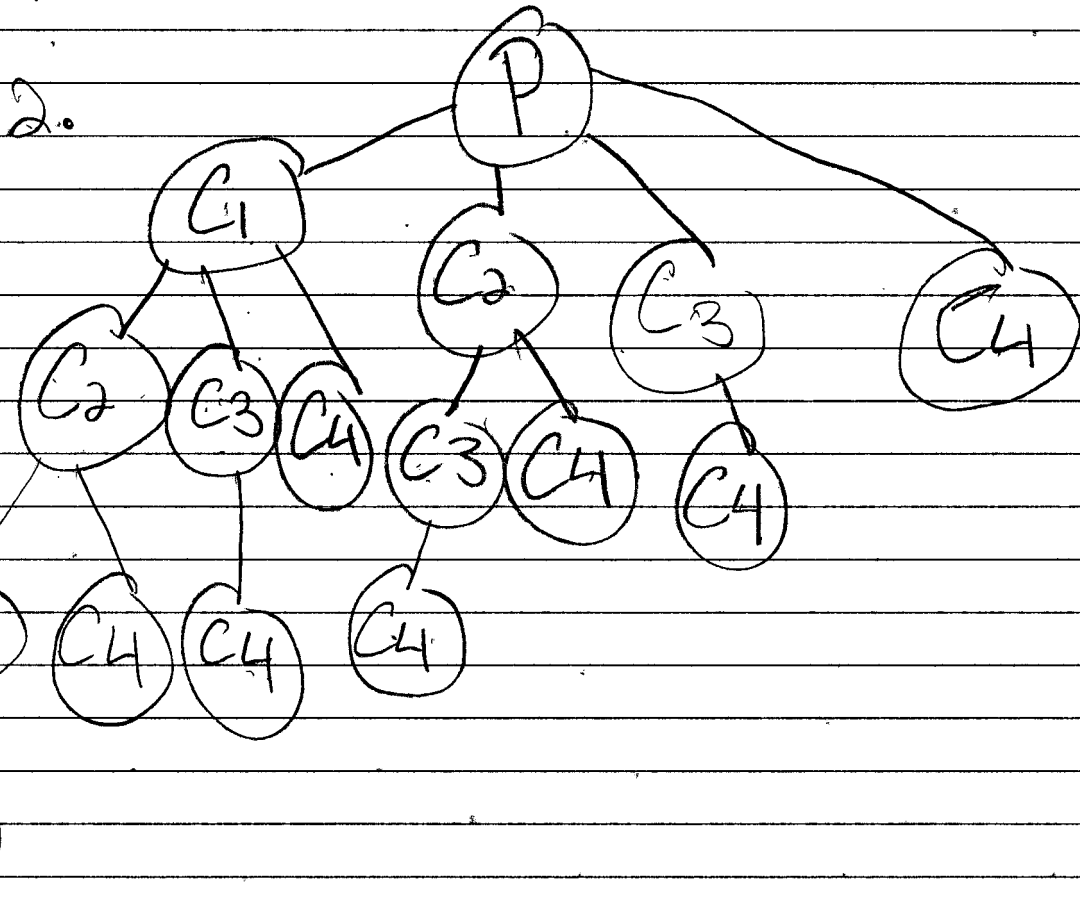James Clark.

1. There will be $2^4 = 16$ processes in total created by the program.

2.

In diagram P = Parent Process

C_i for example corresponds to Child created by the 1st fork() call.