

10/10
Excellent
شعبة 4

Student Name: Diyar Barham

Student ID: 1191314

Quiz Time: 15 minutes

Question #1 (5 Points): Given the following C program. Answer the questions below.



```
#include <sys/types.h>
#include <stdio.h>
#include <unistd.h>
int main()
{
    pid_t pid = fork();
    if (pid == 0) {
        printf("Parent Process\n");
    }
    else if (pid > 0) {
        printf("Child Process\n");
    }
    fork();
    fork();
    // Line A
    return 0;
}
```

A. (3 Points) What is the output of this program?

Parent Process
child Process

B. (2 Points) How many processes are created at line A?

8

Question #2 (5 Points):

A. (2 Points) In a multithreaded process, which of the following components are shared across all threads of the process, and which components are thread-specific: (code, files, registers, and pc)

Shared Components	Thread Specific Components
code	registers
files	pc

B. (3 Points) What is the difference between data-level parallelism and task-level parallelism?

Mainly, the difference in parallelism is the difference in the level that ~~happens~~ have the ~~same~~ parallelism. The data level distributes the same data at multi-cores ~~with~~ with the same task for all of them, but in task level threads are distributed to multi core with each thread having a different task.