Operating Systems

Homework 3 (due date: 05.04.2019)

1- a. Including the parent thread, how many threads are created in the following program? Explain your answer.

b. What will be the maximum speedup if we run the following program on a computer with 4 cpu assuming that the 4*T percentage of program can be run in parallel. (T is the number of threads).

```
int main()
{
        /* some commands….*/
        pid = fork();
        if (pid == 0) {
            fork();
            create_thread ( . . .);
        }
        /* other commands….*/
}
```

2- Assume that the following function is called by 2 threads and x is a global variable. What are the possible outputs? Explain the scenarios that leads to each output.

```
void func()
{
        x = 1;
        x = x*2;
        x=x+1;
        print  x;
}
```