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CS 3377-005

Homework 3 Report

Threads fib1:

```
antran@Anthonys-Air Homework3 % gcc fib1.c
antran@Anthonys-Air Homework3 % ./a.out 20
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765
Fibonacci 20: 6764
antran@Anthonys-Air Homework3 % time ./a.out 20
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765
Fibonacci 20: 6761
./a.out 20  5.22s user 2.93s system 146% cpu 5.572 total
antran@Anthonys-Air Homework3 %
```

```
antran@Anthonys-Air Homework3 % ./a.out 8
0 1 1 2 3 5 8 13 21
Fibonacci 8: 21
antran@Anthonys-Air Homework3 % time ./a.out 8
0 1 1 2 3 5 8 13 21
Fibonacci 8: 21
./a.out 8  0.00s user 0.01s system 91% cpu 0.007 total
```

Processes fib2:

```
antran@Anthonys-Air Homework3 % gcc fib2.c
antran@Anthonys-Air Homework3 % ./a.out 8
0 1 1 2 3 5 8 13 21
antran@Anthonys-Air Homework3 % time ./a.out 8
0 1 1 2 3 5 8 13 21
./a.out 8  0.00s user 0.00s system 64% cpu 0.009 total
antran@Anthonys-Air Homework3 % ./a.out 20
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765
antran@Anthonys-Air Homework3 % time ./a.out 20
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765
./a.out 20  0.00s user 0.01s system 62% cpu 0.012 total
antran@Anthonys-Air Homework3 %
```

Summary:

In summary, both programs use recursion to write the sequences of the fibonacci sequence. Both programs were about the same runtime when dealing with smaller n of the fibonacci sequences. However, threads turned out to be slower than processes. This may be due to the fact that there were more thread_create and thread_join that slowed down the program. For processes however, they only need to close and they are not connected in memory to each other.