HW2
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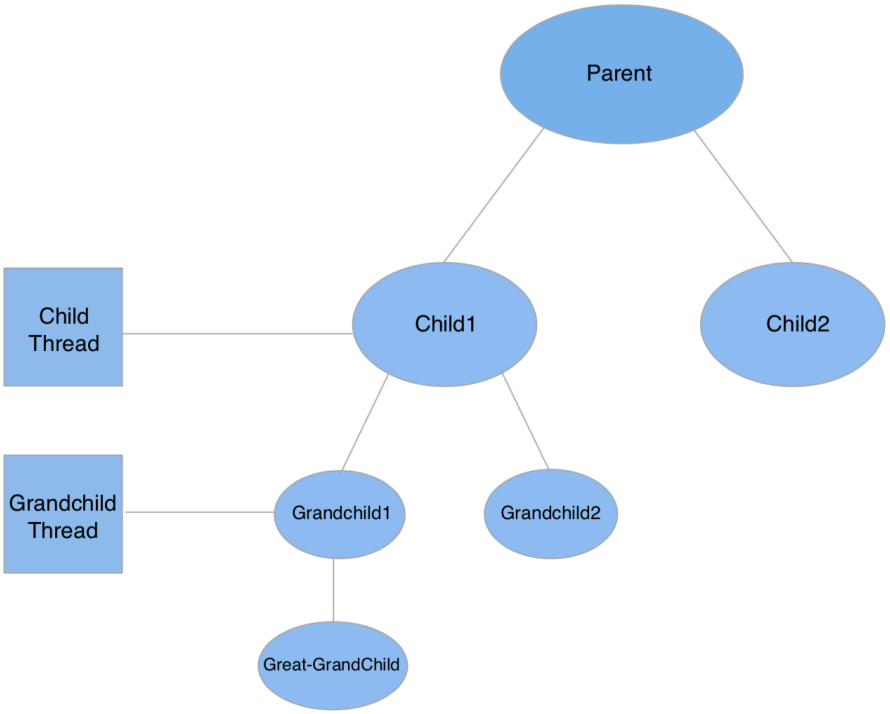
1. [10 Points]

a.How many unique processes are created (including the first main or root process)? Justify your answer.

There are 6 unique processes that are created.

b.How many unique threads are created by `pthread_create()`? Justify your answer.

There are two unique threads created by pthreads_create()



2.[90 Points]

I used three *for loops* to make the threads. One loop that checks the rows of the 9x9 grid, another loop that checks the columns in the 9x9 grid, and the final loop that checks each 3x3 grid within the 9x9 grid. Since each of these loops is checking to see if the numbers 1 through 9 appear, we can add each number in the thread and if the sum of each thread doesn't equate to 45, then the thread is invalid. That means the entire table is invalid. To check the validity of the table, there is an array that stores the result of each thread. If there is a 0 in the array, then the program will print out if the sudoku table is invalid, otherwise it will print that it's valid.

```
Craigs-MacBook-Pro:Homework2 craig$ gcc sudoku_CraigHuff_390.c -o sudoku -pthread
Craigs-MacBook-Pro:Homework2 craig$ ./sudoku
CS149 Sudoku from Craig Huff
6,5,3,1,2,8,7,9,4,
1,7,4,3,5,9,6,8,2,
9,2,8,4,6,7,5,3,1,
2,8,6,5,1,4,3,7,9,
3,9,1,7,8,2,4,5,6,
5,4,7,6,9,3,2,1,8,
8,6,5,2,3,1,9,4,7,
4,1,2,9,7,5,8,6,3,
7,3,9,8,4,6,1,2,5,

This is a valid Sudoku Table
```