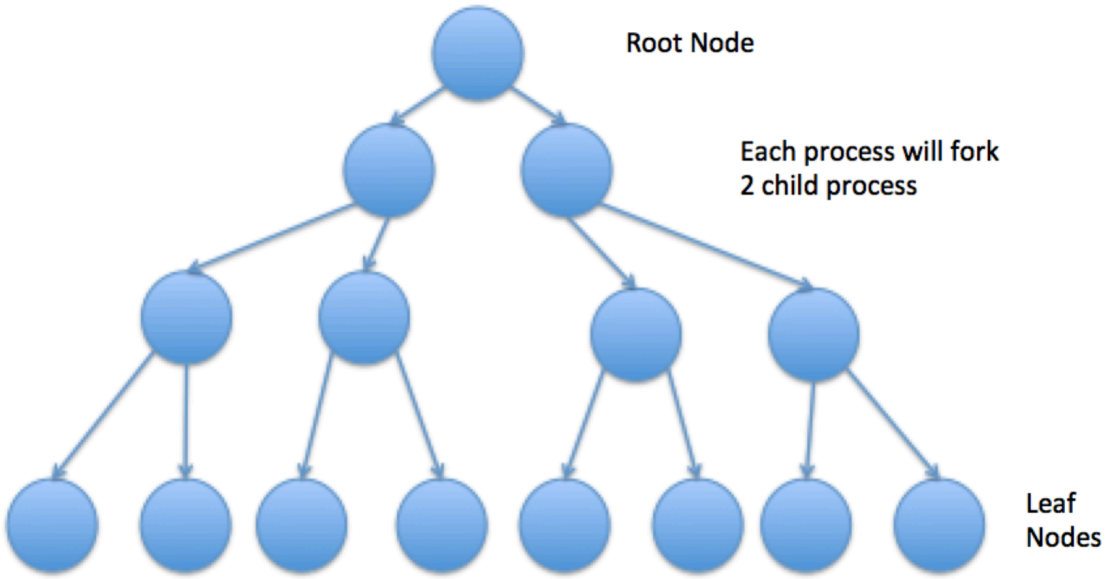
CSC 262 Operating Systems Course
Assignment #2
Due Date: Oct 3, Monday
Submit your source code via email.

1) Briefly read the file operations in C from any tutorial (you can read from here also: http://www.cprogramming.com/tutorial/cfileio.html)
2) Read the random number generation in C from any tutorial (perhaps from this web page: http://www.cprogramming.com/tutorial/random.html)
3) Create a full binary process tree with height = 3.



4) Each of the processes in the tree will create a text file with their own process id.
5) Each of the leaf processes will write a random number into the text file.
6) Each parent will sum the random number from children and write it into its text file.
7) Finally the root process will print out the sum of all random numbers generated by the leaf nodes.

Hint: You can get the pid of running process via getpid function. You can read the man page of function in linux.

So, you have 3 types of processes:

- Leaf Process: creates a random number and writes it into a file named with its own process id
- Root Process: Sums the values written by its child processes and writes summation to the screen.
- All other processes: sums the values written by child process and write the summation into a file named with its own pid.