Lightweight Processes

And Threading

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Description

This project implements support for lightweight processes on a linux machine. Scheduler.h and scheduler.c contain the round robin doubly linked list structure used to organize the child processes running on the machine. On the other hand, lwp.h and lwp.c handle initializing the stack frame and executing the threads. The round robin scheduling structure describes a time-sharing slotting method that allows a child process to execute for a given amount of time, until it switches to the next child process. The image below shows the cyclical nature of the algorithm, in which the order of the processes continues in a circle until all child threads are finished.

