Uthread

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Introduction

This is a small project of the Operating System course at Brown University. It's written in C programming language and our goal was to develop an "uthread" package that mimicked the POSIX thread in Unix. I implemented most of the functions in "uthread" that corresponded to the implementation of POSIX thread. Here we didn't use a preemptive scheduler; so the thread only yielded CPU to other thread when it wanted to that. In our project, when the thread was doing some system calls, we would interpose the thread and let it yield the processor.

Code info

500 – 1000 lines of C code

Coding Standard

Please refer to my "Coding Standard" for more information

Files

The following files are written or modified by me:

uthread_sched.h	uthread_sched.c
uthread_queue.h	uthread_queue.c
uthread_private.h	uthread_mtx.h
uthread_mtx.c	uthread_idle.c
uthread_cond.h	uthread_cond.c
uthread.h	uthread.c
uthread_bool.h	

The following files are not written and modified by me (given by the TA of Operating System course):

uthread_ctx.h	uthread_ctx.c
list.h	interpose.c

The following test files are my own work:

test.c	(mutex test)

test_queue.c	(concurrent queue)
test_producer.c	(producer & consumer problem)
test_philosopher.c	(philosopher dining problem)

Thank you for reading my code.