

Pointers	
struct thread_block initp	
thread freeQ [T1,T2,T3,T4]	
thread readyQ [T0]	
thread doneQ	
thread current	A

threads											
T0				T1				T2			
idx	function	arg	stack	idx	function	arg	stack	idx	function	arg	stack
	context				context				context		
Per_Dead	Rel	Per_D	Rel	Per_D	Rel	Per_D	Rel	Per_D	Rel	Per_D	Rel
	next				next				next		

main()
spawn()
function = computePower
arg = 0
new p = T0

A
function = main
arg = 0
context =

T0
function = computePower
arg = 0
context =

```

int main() {
    spawn(computePower, 0);
    computePrimes(1);
}

void spawn(void (*function)(int), int arg) {
    thread newp;
    if (!initialized)
        initializeThreads();
    newp = dequeue(&freeQ);
    newp->function = function;
    newp->arg = arg;
    newp->next = NULL;
    if (setjmp(newp->context) == 1) {
        ENABLE();
        current->function(current->arg);
        DISABLE();
        enqueue(current, &freeQ);
        dispatch(dequeue(&readyQ));
    }
    SETSTACK(&newp->context, &newp->stack);
    enqueue(newp, &readyQ);
    ENABLE();
}

void yield(void) {
    DISABLE();
    if (readyQ != NULL) {
        thread p = dequeue(&readyQ);
        enqueue(current, &readyQ);
        dispatch(p);
    }
    ENABLE();
}

static void dispatch(thread next) {
    if (setjmp(current->context) == 0) {
        current = next;
        longjmp(next->context, 1);
    }
}

```