Native Semaphore Implementation

```
struct semaphore {
    int value;
    queue Q;
}

void init(sema, value){
    sema->value = value;
}

void P (sema) {
    disable_interrupts();
    while (sema->value == 0){
        enqueue(sema->Q, current_thread);
        thread_block(current_thread);
    }
    sema->value--;
    enable_interrupts();
}

void V (sema) {
    disable_interrupts();
    if (!isEmpty(sema->Q)){
        thread_unblock(dequeue(sema->Q));
    }
    sema->value++;
    enable_interrupts();
```

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