Test And Set

This is C-pseudo-code, don't try to compile it!

```c
int test_and_set(boolean *lock){
    boolean was_already_locked = *lock;
    *lock = true;
    return was_already_locked;
}

while (test_and_set(&lock));

// Here goes the critical section
lock = false;
```

Compare And Swap

This is C-pseudo-code, don't try to compile it!

```c
int compare_and_swap(int *value, int expected, int new_value){
    int temp = *value;
    if (*value == expected){
        *value = new_value;
    }
    return temp;
}

while (compare_and_swap(&lock, 35, 43) != 35));

// Here goes the critical section
lock = 35;
```

Mutex Locks

```c
void acquire(){
    while (!available);
    available = false;
}

void release(){
    available = true;
}
```

Semaphore

```c
void wait(S){
    while (S <= 0);
    S--;
}

void signal(S){
    S++;
}
```