

## Chapter 8

Purpose: A PROGRAMMING assignment to gain experience with signals and semaphors.

You will build an intersection control system.

Create and initialize a semaphore before you fork. Print the semaphore ID.

After the fork, the child handles traffic in the N/S direction; the parent handles traffic in the E/W direction. Both try to get their cars into the intersection as soon as possible.

Handling of the intersection must proceed as follows:

- 1) get a lock on the intersection
- 2) print "N/S car entering intersection" (or E/W car if you're the parent).
- 3) Sleep 1 seconds, this time represents how long it takes to cross the intersection.
- 4) print "N/S car leaving intersection"
- 5) release the lock on the intersection

Both the parent and the child should loop until they have gotten 10 cars across the intersection (i.e., loop 10 times).

Demo: Your traffic control program. The instructor will also want to look at the code.