Assignment 3

范围：Monitors

5.7 *The One-Lane Bridge.* Cars coming from the north and the south arrive at a one-lane bridge. Cars heading in the same direction can cross the bridge at the same time, but cars heading in opposite directions cannot.

(a) Develop a solution to this problem. Model the cars as processes, and use a monitor for synchronization. First specify the monitor invariant, then develop the body of the monitor. Do not worry about fairness, and do not give preference to any one kind of car. Use the Signal and Continue discipline.

范围：Message Passing

7.11 *The One-Lane Bridge.* Cars coming from the north and south arrive at a one-lane bridge. Cars heading in the same direction can cross the bridge at the same time, but cars heading in opposite directions cannot.

(a) Develop a server process to manage use of the bridge. Assume the cars are client processes. Use asynchronous message passing for process interaction, and show how the clients interact with the server.