Overview
In chip fabrication facilities freedom from contaminations (such as dust) is imperative. In this assignment you will develop the policy that governs the rules for entering and leaving such a facility.

The description below is deliberately unclear and incomplete; clarification is the reason we are performing the modeling. You are allowed to make reasonable modifications to the requirements if necessary.

A Clean Room in VDM-SL
Consider a room that is supposed to be sealed at all times. To enter the room you have to go through an air-lock. To get in, you have to open the front door, step into the air-lock, close the door, open the inside door, step into the room, and finally close the inside door. To open a door, a person must use an identification card; thus, the identity of the person entering the room is known. There are several air-locks leading into the room but only one can be in use at one time.

The system shall provide several alarm and log features. Every time a person opens or closes a door an entry should be added to a log for later review. If safety constraint is violated, an alarm shall sound. If a violation is detected, an entry containing the time of the violation, the person causing the violation, and a message describing the violation shall be added to an alarm log. All doors must be closed before the alarm is turned off. Alarm off shall also be recorded in the log.

We should be able to get an account of all the people currently in the clean room. We should also be able to get a list of all people that have cause alarms to be raised.

Your Task
Develop a VDM SL model of the Clean Room to clarify the rules that govern the entry to the room and the logging of information.
Deliverables
I want you to turn in one solution per team. I expect you to make sure the specification is (1) liberally commented, (2) syntactically correct, and (3) type checked. Hand in the following

1. A printout of the specification.
2. A floppy with a soft copy of the specification.

Due Date
At the end of class on Tuesday, February 22.