

Fire Alarm System

SFWR ENG 3KO4 (Software Development)

McMaster University

Instructor: Dr. Kamran Sartipi

By: Kai Wang (TA)

We intend to design a Fire Alarm System for a building with **two apartment units**. The software specification for the alarm system is as follows:

- The alarm system has an ON/OFF switch to activate or deactivate the whole system.
- Each apartment unit has a smoke sensor.
- When the smoke is sensed in one apartment unit, the alarm in that unit starts ringing.
- If the smoke is gone in less than 5 minutes then the alarm in that unit will stop ringing.
- If the alarm remains activate for more than 5 minutes, then the alarm system in both units become activate; and a message is sent to the fire station.

You must use the time-based transitions with label:

tm(entered(state A), delayedTime), that triggers a transition after “delayedTime” that the system enters state A.