A solution to the level crossing problem
Global System View

Level Crossing Control System
Schematic representation of the components and the signals and operations exchanged
The operation `insert(x)`, inserts the identity `x` in the set `trains_in_zone`, then performs the instruction: `number_in := Card(train_in_zone)`
State machine of the Train Controller

toControl->approach(id) : Sending of the signal approach(id) to the accessible object by association with the toControl rule (as indicated by the class diagram).
Alert_1 and Alert_2 can be considered as states in which the machine stops its operations and waits for human intervention.