

Railroad Crossing

When a train is detected the following should happen:

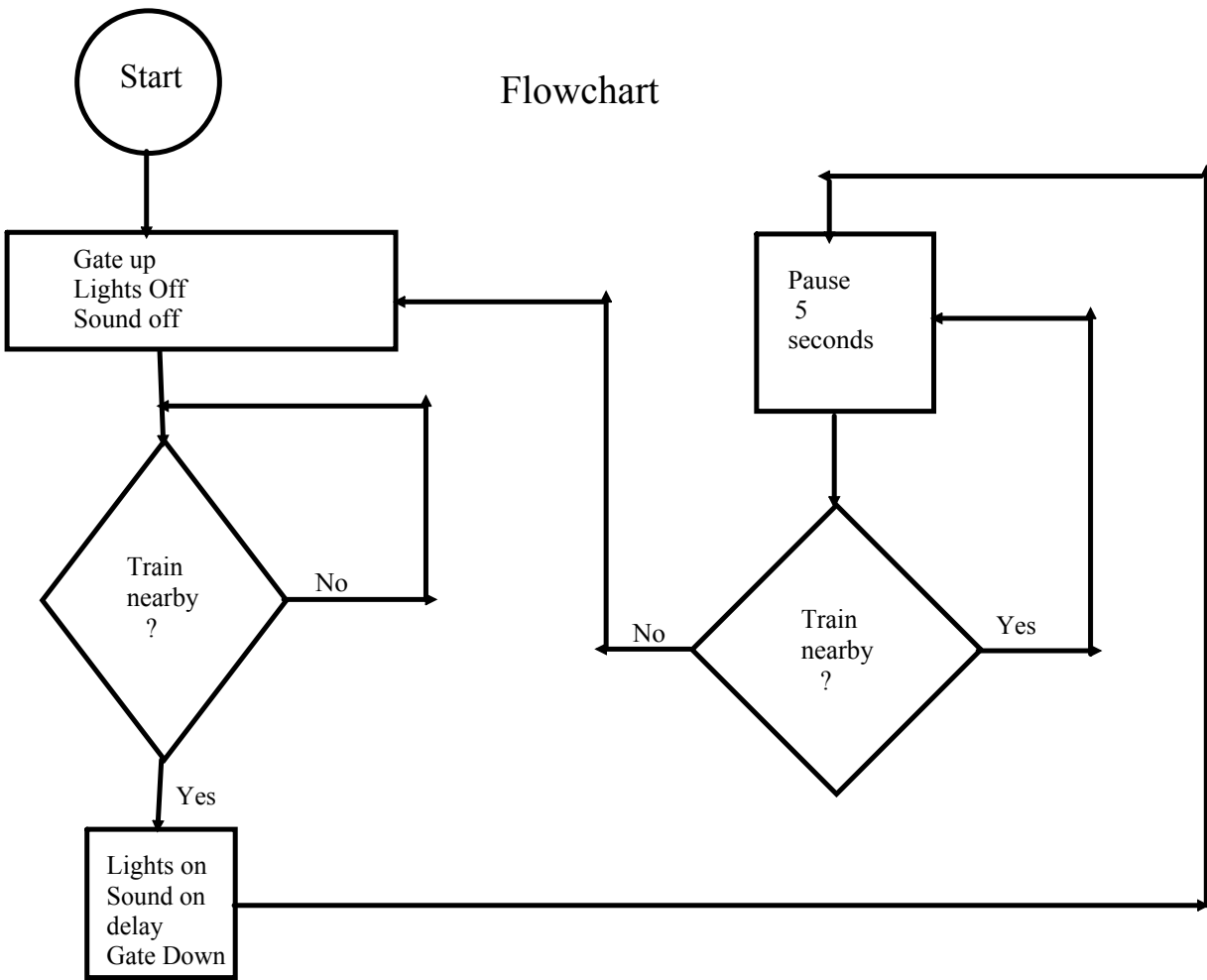
1. Lights begin to flash
2. Simultaneously, sounds begin
3. There is a pause for a few seconds
4. The gate comes down.

As long as the train continues to be there the flashing and sounds continue and the gate remains down.

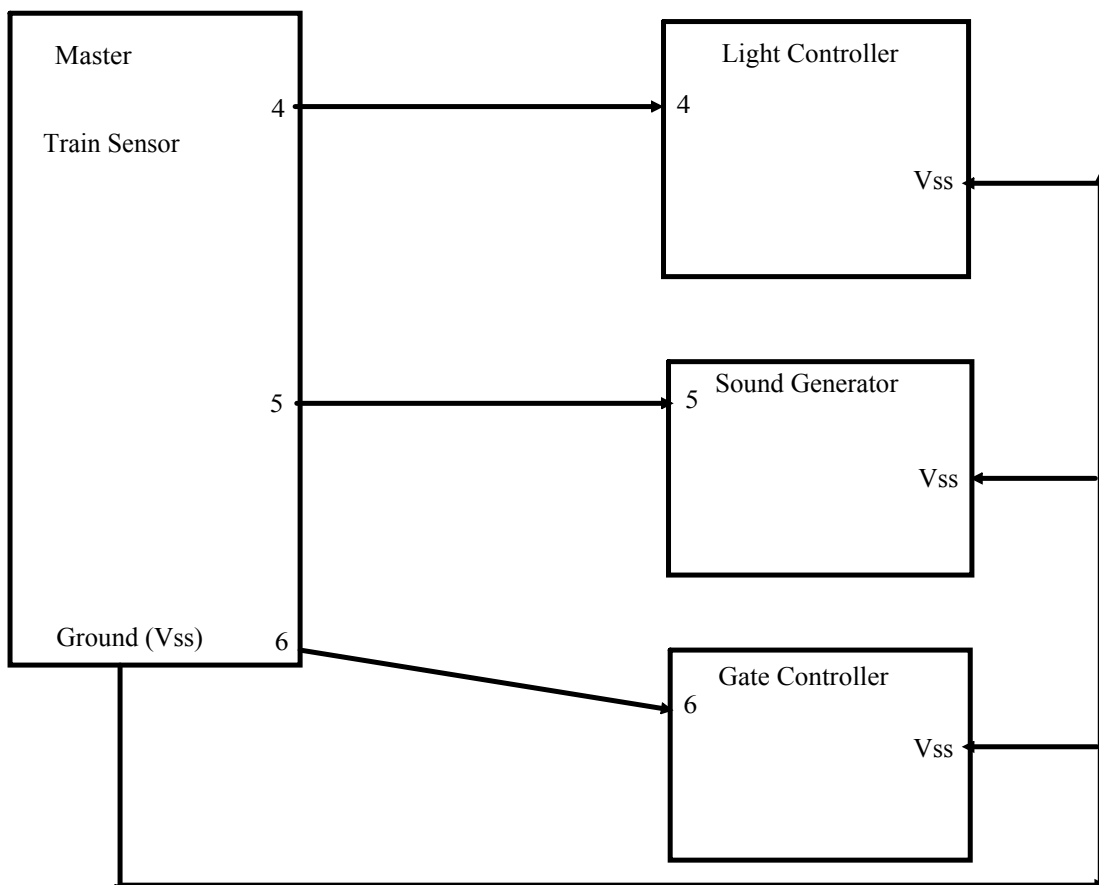
When the train has passed the following should happen:

1. The gate begins to go up
2. The lights stop flashing
3. The sounds stop

Flowchart



Organizational Blocks



Details of the requirements for each organizational block

1. When the beam is broken:
Start the lights flashing
Start the sound making
Wait 5 seconds
Move the gate down.

2. When the beam is clear
Start the gate going up
Wait 5 seconds
Turn off the sound
Turn off the lights

Gate:

On a HIGH signal, gate goes down and stays down. On a LOW signal, gate goes UP and stays up.

Lights

2 Lights alternate. Light A is on for one second while light B is off. Then Light A is off for one second while light B is on. Repeat as necessary.

Sound

Have 2 sounds which alternate sound A for 0.5 sec then sound B for 0.5 sec.

Do not attach any BOE to any other BOE using jumper wires before checking with the instructor.

What you need to hand in:

When the project is finished and checked by the instructor each group should submit the following for its own block:

1. Schematic Diagram
2. Flow Chart
3. Program listing (the program should have comments so that a person not in the group can tell what is going on.

