**(8223) INTRODUCTION TO COMPUTER ENGINEERING**

**ASSIGNMENT 1**

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**STEP 5:**

**PLANNING AND IMPLEMENTING**

**The Sequence of Tasks Performed:**

**Step 1:**

Two sensors and a motion detector camera (surveilling the track) should be installed. The sensors should be at a distance where there is enough time to put a warning light (yellow signal) for the vehicles and then put down the gates so that the remaining few vehicles can pass and also get some buffer time. The train should follow a set/uniformed speed while crossing this area.

**Step 2:**

Two Signals should be installed at the gates. One controlling the vehicular traffic and the other one controlling the train. When vehicles are passing the track, the signal for trains shall remain yellow (warning signal). Only, if a car is stuck, it shall become red.

**Step 3:**

Now, the train approaches. When the first sensor gets activated by the passing train, it should trigger a warning signal (yellow) for the vehicles followed by a red signal and closing of the gates. During this process, the signal for the train turns green.

**Step 4:**

Gates remain closed while the train crosses. The vehicles remain on either side of the tracks waiting for the train to pass by.

**Step 5:**

Once the second sensor stops finding any motion (i.e. when the train has passed) then the vehicular signal turns green, and the gates are raised. The signal for the train turns yellow (warning sign).