

System Requirement Specifications

For

Smart visitor counter

Project

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1. Project Description

The smart visitor counter system is designed for optimum energy usage and is very beneficial in case if we want to count the number of people going to attend a particular event or any function thereby helps in collecting data by counting the number of people. This is done by simply incrementing the counter. As soon as a person enters the area where the system is placed, it is detected by the IR sensor module and this info is fed to the microcontroller. The microcontroller processes this input received. At this time the system also counts the number of people present and increments a counter on each arrival, this count is displayed on a screen display.

a) The System would have two sensors at both doors:

- The first one (interior): after the visitor enters the room, it senses him & count him down.
- The second one (exterior): after the visitor exits the room, his/their number is/are decremented from the display.

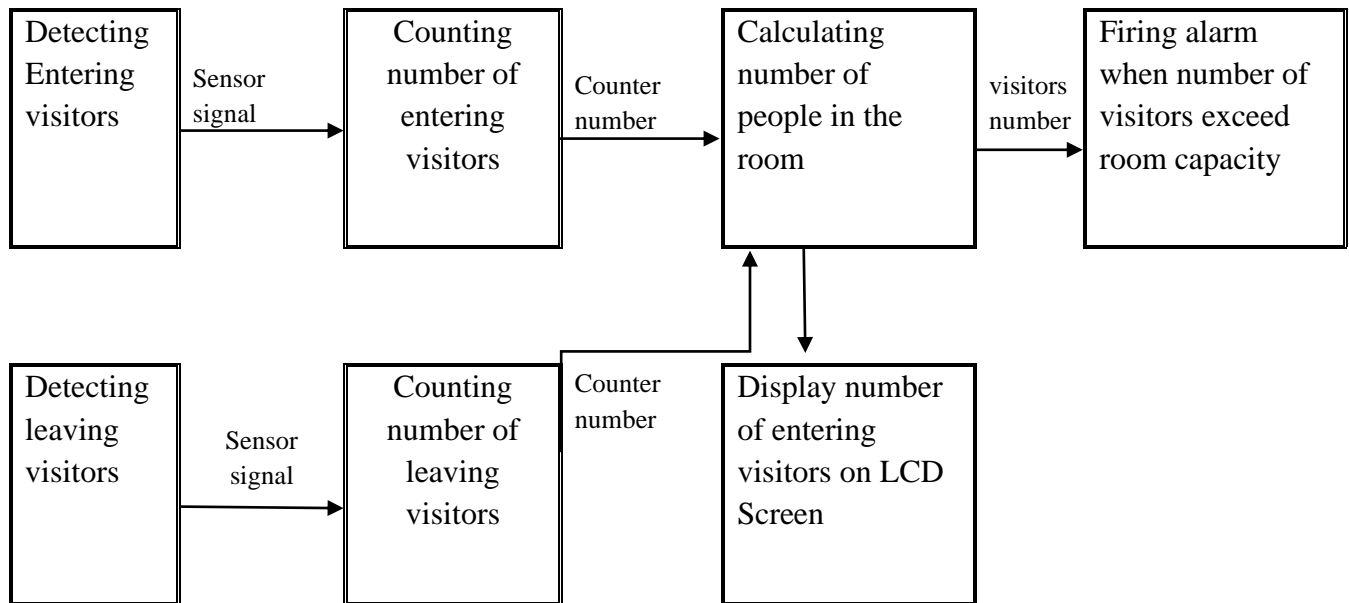
b) Two motors at both doors: to open & close the doors.

c) Display connected to a Controller to:

- Increments the number of visitors when entering the room
- Decrements the number of visitors when exiting the room.
- Calculating the current number of visitors in the room (Entering – leaving)

d) The system also would have an alarm connected to the controller to detect if number of current visitors in room exceeded a specific number, it would fire.

2. Software Context

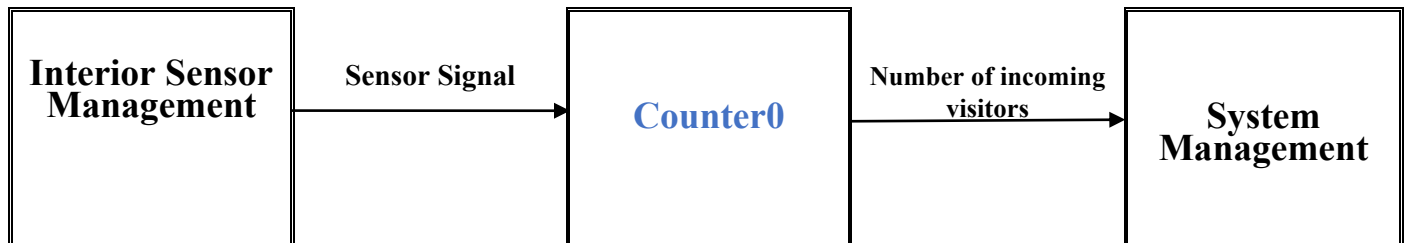


3. Software Requirements

Req_ID	Req_ PO7_SRS _01-v01	Covers	Req_ PO7_CRS _01-v01
Author	Hager AbdelAal	Date	16 February 2023
Description	SW shall detect coming visitor at entrance door by Interior sensor		
Inputs	Inertance of a visitor	Outputs	Signal out of Interior Sensor
Test Scope	ITD		



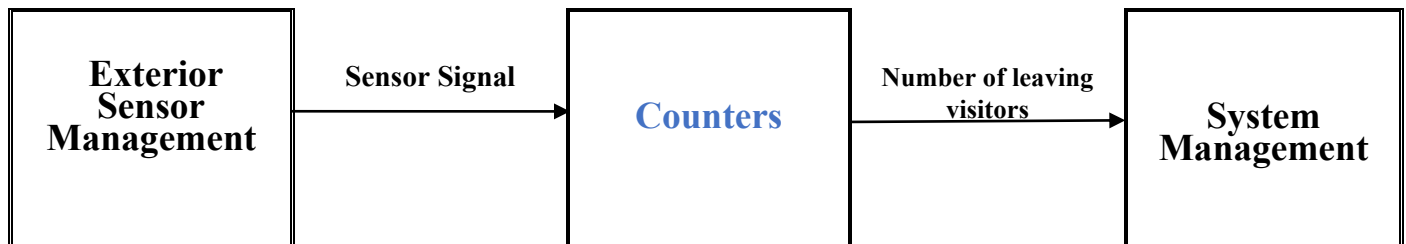
Req_ID	Req_ PO7_SRS _02-v01	Covers	Req_ PO7_CRS _01-v01
Author	Hager AbdelAal	Date	16 February 2023
Description	SW shall count number of visitors entering from the entrance door		
Inputs	Signal out of Interior Sensor	Outputs	Number of incoming Visitors
Test Scope	ITD		



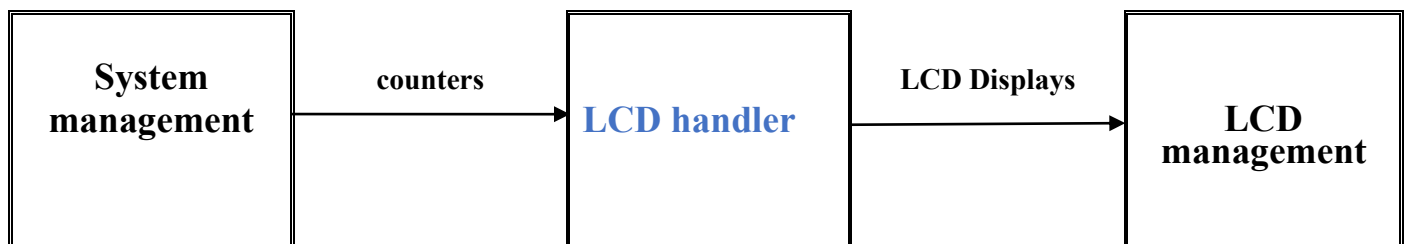
Req_ID	Req_ PO7_SRS _03-v01	Covers	Req_ PO7_CRS _02-v01
Author	Hager AbdelAal	Date	16 February 2023
Description	SW shall detect leaving visitor at exit door by Exterior sensor		
Inputs	Leaving of a visitor	Outputs	Signal out of Exterior Sensor
Test Scope	ITD		



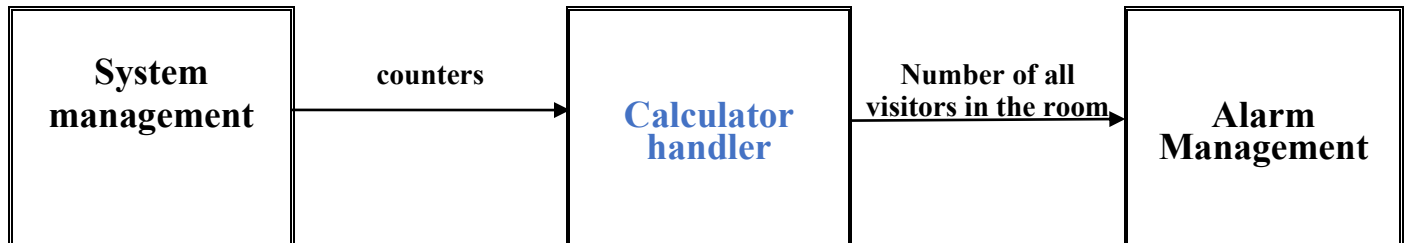
Req_ID	Req_PO7_SRS_04-v01	Covers	Req_PO7_CRS_02-v01
Author	Hager AbdelAal	Date	16 February 2023
Description	SW shall count number of leaving visitors from exit door		
Inputs	Signal out of Exterior Sensor	Outputs	Number of leaving visitors
Test Scope	ITD		



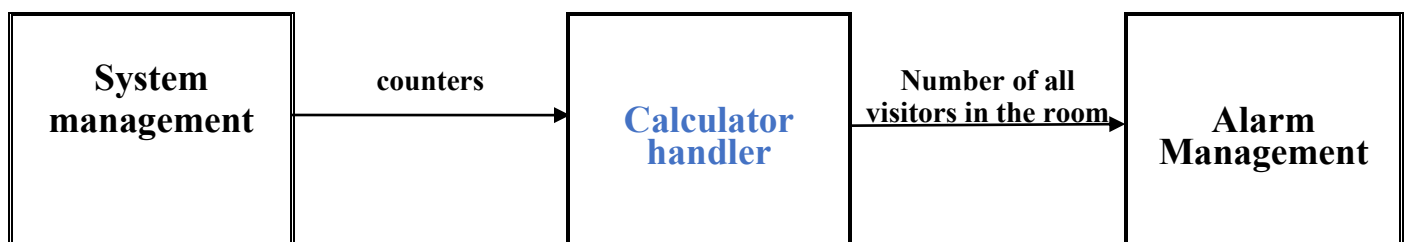
Req_ID	Req_PO7_SRS_05-v01	Covers	Req_PO7_CRS_04-v01
Author	Hager AbdelAal	Date	16 February 2023
Description	SW shall display Number of Entering and Leaving visitors on LCD Screen		
Inputs	Entering and Leaving counters	Outputs	Display counter on LCD screen
Test Scope	ITD / VTD		



Req_ID	Req_ PO7_SRS _06-v01	Covers	Req_ PO7_CRS _05-v01
Author	Hager AbdelAal	Date	16 February 2023
Description	SW shall calculate Number of all visitors in the Room		
Inputs	Entering and Leaving counters	Outputs	Number of visitors in the room
Test Scope	ITD / VTD		



Req_ID	Req_ PO7_SRS _07-v01	Covers	Req_ PO7_CRS _06-v01
Author	Hager AbdelAal	Date	16 February 2023
Description	SW shall Fire alarm when Number of visitors in the Room exceeds Room Capacity		
Inputs	Number of visitors and Room Capacity	Outputs	Alarm Signal
Test Scope	ITD / VTD		



4. Document Status

Document	Author	Update date	Current status	Version
PO7_SRS-v0.1	Hager AbdelAal	16 Feb 2023	Porposed	1.0

5. Document History

Version	Author	Date	Reason For Changes
1.0	Hager AbdelAal	16 Feb 2023	Initial creation

6. Reference Documents

Reference no.	Doc. Name	Version	Status
1	PO7 _CYRS	1.1	Proposed