**‘’VTP’’**

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| **Requirements** | **Validation Test** |
| **Req\_SRS\_01** | **1st State:**  **Once the IR sensor signal fires.**  **Expected: Counter should increment and LCD shows “1 entry”.**  **2nd State:**  **Once the IR sensor signal fires.**  **Expexted: Counter should increment and LCD shows “1 exit”.**  **3d State:**  **Counter of entries < = 4**  **Expected: Motor runs.**  **4th State:**  **Counter of entries > 4**  **Expected: Buzzer will fires.**  **LCD will show “Warning”** |
| **Req\_SRS\_02** | **LCD is already ON**  **Led =1 (is on)**  **When Counter shows 0 more than 30 seconds,**  **Expected: LCD enable pin = 0**  **Led = 0 (is off)**  **When Counter = 1**  **Expected: Led=1(is on)**  **Expected: Motor starts to run.** |
| **Req\_SRS\_03** | **Password = 1234**  **1st State:**  **Password is wrong,**  **Expected: LCD shows “Incorrect Password, Try again”**  **2nd State:**  **Password is Correct,**  **Expected: LCD shows “Correct Password” and motor will run.**  **3d State:**  **When Motor runs**  **If any button of the three buttons is pressed,**  **Motor will run** |
| **Requirements** | **Validation Test** |
| **Req\_SRS\_04** | **State 1:**  **Elevator is free, Motor is off and someone calls it from any floor**  **Response: Motor is on and the elevator will serve the client directly**  **State 2:**  **Elevator is free then it received several calls.**  **Response :**  **Elevator responds to calls by the order they came with.**  **State 3:**  **Elevator is busy and receives a call.**  **Response:**  **- Elevator only stops and opens at the floor of the new call only if the elevator is in this floor otherwise it will respond to the call when it is on the top of the waiting queue.**  **- The request of the call takes place at the end of the queue but if the elevator reaches the destination of this call it will stop and open.**  **State 4:**  **Elevator free or busy and receives multiple calls from the same floor.**  **Response :**  **Only the first call will take place in the queue.** |

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| **Requirements** | **Validation Test** |
| **Req\_SRS\_05** | **Outside keys at each floor (Upward and Downward keys ) :**  **1st Scenario -> Client press Upward Key :**  **1st state(idle):**  **Elevator is empty and Motor is off**  **Expected: Motor is on and the elevator will serve the client directly**  **2nd state(upwards):**  **Elevator is already moving upward**  **Expected: if the current floor of the elevator is lower than the floor that the client pressed the key at, then the elevator will stop at this floor. Otherwise the elevator will serve the client after it finishes its current serving.**  **3rd state(downwards):**  **Elevator is already moving downward**  **Expected: the elevator will serve the client after it finishes the current serving.**  **2nd Scenario -> Client press Downward Key :**  **1st state(idle):**  **Elevator is empty and Motor is off**  **Expected: Motor is on and the elevator will serve the client directly**  **2nd state(upwards):**  **Elevator is already moving upward**  **Expected: the elevator will serve the client after it finishes the current serving.**  **3rd state(downwards):**  **Elevator is already moving downward**  **Expected: if the current floor of the elevator is upper than the floor that the client pressed the key at, then the elevator will stop at this floor. Otherwise the elevator will serve the client after it finishes its current serving.** |