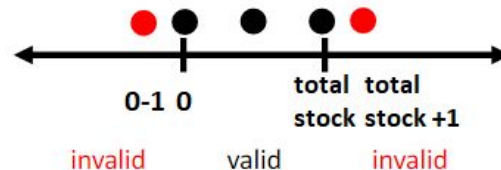


### Part 1: Software Testing

1. Functional requirement: Customers are able to pay online.  
Non-functional requirement: It should not take more than 500ms to calculate the total cost of the customer's items.
2. By conducting black-box testing, the functional requirement of the system can be tested. In this case, if customers are able to use online payment, then the functional requirement is fulfilled.  
Through performance testing, the non-functional requirements can be tested. In this case, performance testing can help to determine if the system can perform at the required speed.
3. Items in the shopping cart cannot be less than zero, and cannot be more than the total amount of stock available at the supermarket.



While creating the unit tests, values should be set at the boundary cases (0 and total stock) and the midpoint, as these cases are prone to errors.

### Part 2: Project Management (Risk Management)

1. Risk 1: Hardware is upgraded to newer version  
Risk 2: System is unable to handle items in large quantities
2. Risk 1: Probability: High, Severity: Tolerable  
Risk 2: Probability: Low, Severity: Serious
3. Risk 1: Thorough documentation so that any changes can be tracked and managed  
Risk 2: Upgrade hardware to be able to handle more data

### Part 3: Project Planning

1. A possible milestone is the completed prototype of the system, while the deliverable could be the requirements document for the system.
- 2.

Task	Task Description	Start Date	End Date	Duration	Dependencies
T1	Requirement gathering	26/10/2020	30/10/2020	4	
T2	User interface design	31/10/2020	12/11/2020	12	T1 (Milestone 1)
T3	System design	12/11/2020	26/11/2020	14	
T4	Database design	26/11/2020	02/12/2020	6	
T5	Prototype	02/12/2020	12/12/2020	10	T2,T3 (Milestone 2)