

# Test Plans

*Inventory Management System*

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## Table of Contents

Tests and Analysis .....	3
Hardware Tests .....	3
Software Tests.....	3
Database Performance .....	3
Application .....	4
Acceptance Test .....	4
System Recovery Procedure .....	4

## Tests and Analysis

### Hardware Tests

Component	Test	Failure	Analysis
Hard Drive	MHDD	Any block >500ms read or any uncorrectable	Bad drive
RAM	MemTest86	Less than 3 successful passes, or any failed passes	Bad ram
CPU	Prime95	Shutdown before 24hr	Bad processor
Backup Storage	Recover from image	Corrupted image or failed recovery	Need new backup solution
Backup Storage	Nightly Checksum	Inconsistent checksum	Check backup process

### Software Tests

#### Database Performance

Function	Test	Failure	Analysis
Add Item	Add an item	Item not added	Misconfigured database or API call
Add Item	Add existing item	Allows it	Not checking if item is already in database
Remove Item	Remove existing item	Item not removed	Misconfigured database or API call
Remove Item	Remove non-existing item	Error not thrown	Not checking to see if item exists before removing
Modify Item	Change an item's properties	Properties not changed	Misconfigured database or API call
Modify Item	Change a non-existing item's properties	Error not thrown	Not checking if an item exists before modifying
Modify Item	Change an item's non-existing property	Error not thrown	Not checking if modification is valid
Search Database	Search for an item that exists	Item not returned	Search function implemented wrong

## Application

Screen	Test	Failure	Analysis
Login	Correct user	Failed login	Verification process wrong
Login	Incorrect credentials	Allows it	Not actually checking credentials
Login	Exceed login attempts	Not locking account	Not recording number of attempts accurately
Home	Shows items in user's database	Wrong items or no items shown	API call to database incorrect
Home	Add item to database	Item is not added	API call to database incorrect
Home	Search item in database	Matching items not returned	API call to database incorrect
Home	Clicking item	Doesn't transfer to correct item screen	API call to database incorrect
Item	Click on item	Does not retrieve correct properties	API call to database incorrect
Menu	Edit account information	Modifications not saved to account	API call to database incorrect

## Acceptance Test

1. Log in with user account
2. Add 25 Items to the database
3. Remove 5 items from the database
4. Modify the properties of one item
5. Search for the newly modified item

## System Recovery Procedure

1. In event of failed hardware
  - a. Replace failed hardware and then recover from most recent backup.
2. In event of database malfunction
  - a. Perform component and acceptance tests on database to identify issue and resolve appropriately.
3. In event of application failure
  - a. Perform component and acceptance tests on appropriate API calls in order to distinguish the failing procedure and remedy.