Software Test Cases

GB Manufacturing Inventory Management System

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Revisions

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# Test # 1 - Tool Management

## Test Case Specification Identifier

**Test Case ID:** BGIMS\_TC#1\_V1.0\_15FEB2025

**Test Description:** Successfully adding, removing, and displaying a tool in the database.

**Creator:** Alfred Beam

**Tester Name:** Alfred Beam

**Test Date:** 02/15/2025

## Requirements Addressed

**Requirement ID**: SYS-011

**Description**: The system will allow employees with the appropriate access level to add, display, and delete tools from the inventory management system.

## Features to be Tested

* Adding a Tool to the SQL Database
* Deleting a Tool From the SQL Database
* Displaying the current Tools in the SQL Database

## Prerequisites Conditions

**Workstation:** The tester will need either access to a Headquarters or Satellite Warehouse Workstation that can connect to the IMS Server running the IMS system and database software.

**User Access Level:** Tester should be logged into the IMS with one of the following system access levels:

1. Inventory Manager
2. Manager
3. Admin

## Test Input

**Example Tool(s):** The tester should have a list of tools provided by the purchasing department to enter into the system via the IMS GUI. These should include the following data points.

* Tool Name: String variable 1-30 characters
* Tool Serial Number: String variable 1-30 characters
* Tool Value: Double variable

**Description**: The system will allow employees with the appropriate access level to add, display, and delete tools from the inventory management system.

## Expected Test Results

**Display Tools:** After the tester clicks on the “Display Tools” button the system should update the JTable object with the table titles and display any tools currently in the SQL database.

**Add Tool:** After the tester enters the tool data into the provided fields the clicks the “Add Tool” button the IMS should add the tool to the SQL database and redisplay the tool list.

**Delete Tool:** After the tester enters the tool ID number into the provided field and clicks the “Delete Tool” button the system should remove the tool entry from the SQL database and redisplay the remaining tools in the JTable along with the table titles.

## Test Procedure

**Test 1 – Access the Tools GUI Tabbed Panel**

1. From the Main Menu GUI tab, click on the Tools GUI tab.
2. The Panel should change from the Main Menu GUI Tab to the Tools GUI Tab.

**Test 2 – Display Current Tool List**

1. Click on the “Display Tools” Button
2. The JTable should update and display the current SQL database tool list.

**Test 3 – Add a Tool to the Tool List**

1. Enter the data into the following fields: Tool Name, Tool Serial Number, Tool Value.
2. Click the “Add Tool Button”.
3. The fields should clear the entered text the JTable should update with the tool that was added.

**Test 4 – Delete a Tool from the Tool List**

1. Choose a random tool from the tool list and type its ID number into the Tool ID field.
2. Click the “Delete Tool” Button.
3. The tool associated with the entered tool ID should be deleted form the SQL database and the displayed tool list should update the JTable.

## Pass / Fail Criteria

**Test 1 – Pass Criteria**

* The Main Menu Tab GUI panel is hidden, and the Tools GUI panel is displayed.

**Test 1 – Fail Criteria**

* The Main Menu GUI Panel is not hidden.
* The Tools GUI Panel is not displayed.
* Any error messages are displayed or the program crashes.

**Test 2 – Pass Criteria**

* The JTable updates with the tools that are loaded in the SQL database.
* The JTable column titles are updated with the Tool ID, Tool Name, Tool Serial Number, and Tool Value.

**Test 2 – Fail Criteria**

* The JTable does not populate with the SQL database data.
* The JTable column names do not update with the names listed in the pass criteria.
* The “Display Tools” button does not function.
* Any error messages are displayed or the program crashes.

**Test 3 – Pass Criteria**

* The Text Fields in the GUI allow data to be typed into them.
* When the “Add Tool” button is clicked the JTable is updated with the tool data that was typed into the text fields.
* The text fields are cleared of data when the “Add Tool” button is clicked.

**Test 3 – Fail Criteria**

* Data cannot be entered into the tool name, serial number, or value text fields.
* The tool data is not added to the SQL database and displayed in the JTable.
* The tool data is incorrectly displayed in the tool table.
* The “Add Tool” button does not function.
* Any error messages are displayed or the program crashes.

**Test 4 – Pass Criteria**

* The Tool ID text field allows data to be typed into it.
* When the “Delete Tool” button is clicked the JTable is updated and the tool associated with the Tool ID that was entered is removed.
* The Tool ID text field is cleared of data when the “Delete Tool” button is clicked.

**Test 4 – Fail Criteria**

* Data cannot be entered into the Tool ID text field.
* The tool data is not removed from the SQL database and is still displayed in the JTable.
* The tool data is incorrectly displayed in the tool table.
* The “Delete Tool” button does not function.
* Any error messages are displayed or the program crashes.

# Test # 2 - Material Management

## Test Case Specification Identifier

**Test Case ID:** BGIMS\_TC#2\_V1.0\_16FEB2025

**Test Description:** Successfully adding, removing and displaying a material in the database.

**Creator:** Alfred Beam

**Tester Name:** Alfred Beam

**Test Date:** 02/15/2025

## Requirements Addressed

**Requirement ID**: SYS-012

**Description**: The system will allow employees with the appropriate access level to add, display, and delete materials from the inventory management system.

## Features to be Tested

* Adding a Material to the SQL Database
* Deleting a Material From the SQL Database
* Displaying the current Materials in the SQL Database

## Prerequisite Conditions

**Workstation:** The tester will need either access to a Headquarters or Satellite Warehouse Workstation that can connect to the IMS Server running the IMS system and database software.

**User Access Level:** Tester should be logged into the IMS with one of the following system access levels:

* Inventory Manager
* Manager
* Admin

## Test Input

**Example Materials(s):** The tester should have a list of materials provided by the purchasing department to enter into the system via the IMS GUI. These should include the following data points.

* Material Name: String variable 1-45 characters
* Material Description: String variable 1-45 characters
* Material Value: Double variable
* Material Vendor: String Variable 1-45 characters

**Description**: The system will allow employees with the appropriate access level to add, display, and delete materials from the inventory management system.

## Expected Test Results

**Display Materials:** After the tester clicks on the “Display Materials” button the system should update the JTable object with the table titles and display any materials currently in the SQL database.

**Add Material:** After the tester enters the material data into the provided fields the clicks the “Add Material” button the IMS should add the material to the SQL database and redisplay the material list.

**Delete Material:** After the tester enters the Material ID number into the provided field and clicks the “Delete Material” button the system should remove the material entry from the SQL database and redisplay the remaining materials in the JTable along with the table titles.

## Test Procedure

**Test 1 – Access the Materials GUI Tabbed Panel**

1. From the Main Menu GUI tab, click on the Materials GUI tab.
2. The Panel should change from the Main Menu GUI Tab to the Materials GUI Tab.

**Test 2 – Display Current Material List**

1. Click on the “Display Tools” Button
2. The JTable should update and display the current SQL database tool list.

**Test 3 – Add a Material to the Material List**

1. Enter the data into the following fields: Material Name, Material Description, Material Value, and Material Vendor.
2. Click the “Add Material Button”.
3. The fields should clear the entered text the JTable should update with the material that was added.

**Test 4 – Delete a Material from the Material List**

1. Choose a random material from the material list and type its ID number into the Material ID field.
2. Click the “Delete Material” Button.
3. The material associated with the entered Material ID should be deleted from the SQL database and the displayed material list should update the JTable.

## Pass / Fail Criteria

**Test 1 – Pass Criteria**

* The Main Menu Tab GUI panel is hidden, and the Materials GUI panel is displayed.

**Test 1 – Fail Criteria**

* The Main Menu GUI Panel is not hidden.
* The Materials GUI Panel is not displayed.
* Any error messages are displayed or the program crashes.

**Test 2 – Pass Criteria**

* The JTable updates with the materials that are loaded in the SQL database.
* The JTable column titles are updated with the Material ID, Material Name, Material Description, Material Value, and Material Vendor.

**Test 2 – Fail Criteria**

* The JTable does not populate with the SQL database data.
* The JTable column names do not update with the names listed in the pass criteria.
* The “Display Materials” button does not function.
* Any error messages are displayed or the program crashes.

**Test 3 – Pass Criteria**

* The Text Fields in the GUI allow data to be typed into them.
* When the “Add Material” button is clicked the JTable is updated with the material data that was typed into the text fields.
* The text fields are cleared of data when the “Add Material” button is clicked.

**Test 3 – Fail Criteria**

* Data cannot be entered into the material name, description, value, or vendor text fields.
* The material data is not added to the SQL database and displayed in the JTable.
* The material data is incorrectly displayed in the material table.
* The “Add Material” button does not function.
* Any error messages are displayed or the program crashes.

**Test 4 – Pass Criteria**

* The Material ID text field allows data to be typed into it.
* When the “Delete Material” button is clicked the JTable is updated and the material associated with the Material ID that was entered is removed.
* The Material ID text field is cleared of data when the “Delete Material” button is clicked.

**Test 4 – Fail Criteria**

* Data cannot be entered into the Material ID text field.
* The material data is not removed from the SQL database and is still displayed in the JTable.
* The material data is incorrectly displayed in the material table.
* The “Delete Material” button does not function.
* Any error messages are displayed or the program crashes.

# Test #3 – Employee Management

## Test Case Specification Identifier

**Test Case ID:** BGIMS\_TC#3\_V1.0\_16FEB2025

**Test Description:** Successfully adding, removing, and displaying an employee in the database.

**Creator:** Alfred Beam

**Tester Name:** Alfred Beam

**Test Date:** 02/16/2025

## Requirements Addressed

**Requirement ID**: SYS-013

**Description**: The system will allow employees with the appropriate access level to add, display, and delete employees from the inventory management system.

## Features to be Tested

* Adding an Employee to the SQL Database
* Deleting an Employee from the SQL Database
* Displaying the current Employees in the SQL Database

## Prerequisite Conditions

**Workstation:** The tester will need either access to a Headquarters or Satellite Warehouse Workstation that can connect to the IMS Server running the IMS system and database software.

**User Access Level:** Tester should be logged into the IMS with one of the following system access levels:

* Inventory Manager
* Manager
* Admin

## Test Input

**Example Employee(s):** The tester should have a list of employees provided by the programs department to enter into the system via the IMS GUI. These should include the following data points.

* First Name: String variable 1-45 characters
* Last Name: String variable 1-45 characters
* Email: String variable 1-45 characters
* Phone Number: String Variable 1-45 characters
* Hire Date: Date variable
* Job Title: String variable 1-45 characters
* Department: String variable 1-45 characters
* Salary: Decimal Variable: (10,2) format
* Access Level: ENUM Variable, use ‘Admin” and ‘Manager as test data.
* Username: String variable 1-45 characters
* Password: String variable 1-45 characters

**Description**: The system will allow employees with the appropriate access level to add, display, and delete employees from the inventory management system.

## Expected Test Results

**Display Employees:** After the tester clicks on the “Display Employees” button the system should update the JTable object with the table titles and display any employees currently in the SQL database.

**Add Employees:** After the tester enters the employee data into the provided fields the clicks the “Add Employee” button the IMS should add the material to the SQL database and redisplay the employee list.

**Delete Employees:** After the tester enters the Employee ID number into the provided field and clicks the “Delete Employee” button the system should remove the employee entry from the SQL database and redisplay the remaining employees in the JTable along with the table titles.

## Test Procedure

**Test 1 – Access the Employee GUI Tabbed Panel**

1. From the Main Menu GUI tab, click on the Employee GUI tab.
2. The Panel should change from the Main Menu GUI Tab to the Employee GUI Tab.

**Test 2 – Display Current Employee List**

1. Click on the “Display Employees” Button
2. The JTable should update and display the current SQL database employee list.

**Test 3 – Add an Employee to the Employee List**

1. Enter the data into the following fields: First Name, Last Name, Email, Phone Number, Hire Date, Job Title, Department, Salary, Access Level, Username, and Password.
2. Click the “Add Employee Button”.
3. The fields should clear the entered text the JTable should update with the employee that was added.

**Test 4 – Delete an Employee from the Employee List**

1. Choose a random employee from the employee list and type its ID number into the Employee ID field.
2. Click the “Delete Employee” Button.
3. The employee associated with the entered Employee ID should be deleted from the SQL database and the displayed employee list should update the JTable.

## Pass / Fail Criteria

**Test 1 – Pass Criteria**

* The Main Menu Tab GUI panel is hidden, and the Employee GUI panel is displayed.

**Test 1 – Fail Criteria**

* The Main Menu GUI Panel is not hidden.
* The Materials GUI Panel is not displayed.
* Any error messages are displayed or the program crashes.

**Test 2 – Pass Criteria**

* The JTable updates with the employees that are loaded in the SQL database.
* The JTable column titles are updated with the Employee ID, First Name, Last Name, Email, Phone Number, Hire Date, Job Title, Department, Salary, Access Level, Username, and Password.

**Test 2 – Fail Criteria**

* The JTable does not populate with the SQL database data.
* The JTable column names do not update with the names listed in the pass criteria.
* The “Display Employees” button does not function.
* Any error messages are displayed or the program crashes.

**Test 3 – Pass Criteria**

* The Text Fields in the GUI allow data to be typed into them.
* When the “Add Employee” button is clicked the JTable is updated with the employee data that was typed into the text fields.
* The text fields are cleared of data when the “Add Employee” button is clicked.

**Test 3 – Fail Criteria**

* Data cannot be entered into the employee first name, last name, email, phone number, hire date, job title, department, salary, access level, username, or password text fields.
* The employee data is not added to the SQL database and displayed in the JTable.
* The employee data is incorrectly displayed in the employee table.
* The “Add Employee” button does not function.
* Any error messages are displayed or the program crashes.

**Test 4 – Pass Criteria**

* The Employee ID text field allows data to be typed into it.
* When the “Delete Employee” button is clicked the JTable is updated and the employee associated with the Employee ID that was entered is removed.
* The Employee ID text field is cleared of data when the “Delete Employee” button is clicked.

**Test 4 – Fail Criteria**

* Data cannot be entered into the Employee ID text field.
* The employee data is not removed from the SQL database and is still displayed in the JTable.
* The employee data is incorrectly displayed in the material table.
* The “Delete Employee” button does not function.
* Any error messages are displayed or the program crashes.

# Test #4 – Employee Login

## Test Case Specification Identifier

**Test Case ID:** BGIMS\_TC#4\_V1.0\_16FEB2025

**Test Description:** Verifying employee login and employee logout

**Creator:** Kenneth Battle

**Tester Name:** Kenneth Battle

**Test Date:** 02/16/2025

## Requirements Addressed

**Requirement ID**: SYS-014

**Description**: The system will verify an employee’s login credentials before allowing them access to the IMS system and allow a successful log out.

## Features to be Tested

* Employee with correct credentials login
* Employee successful logout

## Prerequisite Conditions

**Workstation:** The tester will need either access to a Headquarters or Satellite Warehouse Workstation that can connect to the IMS Server running the IMS system and database software.

Testers must possess correct credentials to gain access to the IMS system and database software.

**User Access Level:** Tester credentials must be able to log into the IMS with one of the following system access levels:

1. Inventory Manager
2. Manager
3. Admin
4. Employee

## Test Input

**Example:** The tester should have credentials to the IMS system as either an Inventory Manager, Manager, Admin, or Employee. The following data points are required to gain access:

* Employee Username: String variable 1-30 characters
* Employee Password: String variable 1-30 characters

No Input is needed by the tester or employees to log out of the system.

**Description**: The system will allow employees with the appropriate access level to log in to the IMS system and provide a simple way to log out of the system.

## Expected Test Results

**Employee Log in:** After the tester enters their credentials and click the “Log In” button, the system will check to make sure the credentials entered are correct and allow the user into the system.

**Employee Log Out:** After a successful log in, the tester will have a “Log Out” tab available. After clicking on the “Log Out” tab, the system will successfully take the tester back to the “Log In’ screen with the username and password blocks emptied.

## Test Procedure

**Step 1 – Employee Log In**

1. From the Employee GUI tab, click on “Username” and enter the correct username specified to the tester that is logging in.
2. After username is entered, click on “Password” and enter the correct password for that tester.
3. Click on the “Log In” button for the system to validate and grant access to the tester.

**Step 2 – Employee Log Out**

1. After a successful log in, click on the “Log Out” button.
2. The system will successfully take the tester back to the Log In screen and the username and password tabs will be emptied.

## Pass / Fail Criteria

**Step 1 – Pass Criteria**

* The system will accept inserted credentials and verify whether it is an Inventory Manager, Manager, Admin, or Employee log in and successfully log the user in.

**Step 1 – Fail Criteria**

* The credentials typed in do does not match what is in the system.
* The system is unable to determine who is trying to log in.

Example: Inventory manager or Employee.

* Any error messages are displayed upon login or the program crashes.

**Step 2 – Pass Criteria**

* The “Log Out” button can be seen after the user logs in.
* After clicking on “Log Out”, the system goes back to the Log in Screen with empty “username” and “Password” slots.

**Step 2 – Fail Criteria**

* The “Log Out” button is not displayed upon user logging in.
* After clicking “Log Out”, the system does nothing and continues to display the page the user is currently on.
* Any errors are displayed on the screen or if the program crashes.