**Validation Testing for GUI Inventory Management System**

**Test Data:**

1. **Boundary Cases:**
   * Input: Item Name - "ABC", SKU - "123456"
   * Input: Item Name - "XYZ", SKU - "999999"
   * Input: Item Name - "LongName", SKU - "000000"
2. **Typical Cases:**
   * Input: Item Name - "Laptop", SKU - "123789"
   * Input: Item Name - "Mouse", SKU - "456123"
3. **Edge Cases:**
   * Input: Item Name - "", SKU - "123456" (Empty name)
   * Input: Item Name - "Name", SKU - "123" (SKU less than 6 digits)
4. **Invalid Cases:**
   * Input: Item Name - "Keyboard", SKU - "abcdef" (Non-numeric SKU)
   * Input: Item Name - "Monitor", SKU - "1234567" (SKU more than 6 digits)

**Results and Fixes:**

* **Boundary Cases:**
  + Program handled inputs correctly.
* **Typical Cases:**
  + Outputs matched expected results.
* **Edge Cases:**
  + Program correctly handled empty name and SKU less than 6 digits.
* **Invalid Cases:**
  + Program displayed appropriate error messages for non-numeric SKU and SKU more than 6 digits.
  + Fixed by adding input validation and error handling.

**Screenshots of Successful Test Data:**

* Main Window
* A cartoon character and a soda bottle

  Description automatically generated
* Product Input Window
* A screenshot of a computer screen

  Description automatically generated
* SKU Search Window
* A screenshot of a computer

  Description automatically generated

**Conclusion:**

Validation testing ensures that the GUI Inventory Management System behaves as expected under various scenarios. By testing boundary, typical, edge, and invalid cases, we verify the program's functionality and robustness. Incorporating input validation and error handling enhances the user experience and ensures data integrity within the system.