Inventory Manager App

Add Product

Add → Display Add Product & Product ID Prompt → User Input → Validate Unique String input

- Display Invalid Message
- !Valid
- Valid

Validate Unique String input → Display Product Name Prompt → User Input → Validate String input

- Display Invalid Message
- !Valid
- Valid

Validate String input → Display Quantity Prompt → User Input → Validate Numeric input

- Display Invalid Message
- !Valid
- Valid

Validate Numeric input → Display Price Prompt → User Input → Validate Numeric input

- Display Invalid message
- !Valid
- Valid

Validate Numeric input → Add the product to inventory → Display Success Message → Prompt for return to Main Menu → User Input → Validate input

- Display Invalid Message
- !Valid
- Valid

→ Menu

View Product

View → Get Inventory → Display Inventory in a structured format → Prompt for return to Main Menu → User Input → Validate input

- Display Invalid Message
- !Valid
- Valid

→ Menu

Search for Product by ID or Name

Search → Display Search by ID or Name Prompt → User Input → Validate input exists

- !Found → Display not found Message
- Found

Validate input exists → Display header & Product information → Prompt for return to Main Menu → User Input → Validate input

- Display Invalid Message
- !Valid
- Valid

→ Menu

Update Product quantity and/or price

Update → Check if Inventory isEmpty → Process result

- isEmpty → Display empty Inventory message → Menu
- !isEmpty

Process result → Display Search by ID Prompt → User Input → Validate input exists

- !Found → Display not found Message
- Found

Validate input exists → Display header & Product information → Prompt for new quantity → User Input → Validate Numeric input

- Display Invalid Message
- !Valid
- Valid

Validate Numeric input → Update Product quantity → Prompt for new price

- isEmpty

→ User Input → Validate Numeric input

- Display Invalid message
- !Valid
- Valid

Validate Numeric input → Update Product price

- isEmpty

→ Display Product update success message → Prompt for return to Main Menu → User Input → Validate input

- Display Invalid Message
- !Valid
- isEmpty

→ Menu

Delete Product

Delete → Check if Inventory isEmpty → Process result

- isEmpty → Display empty Inventory Message → Menu
- !isEmpty

Process result → Display Search by ID Prompt → User Input → Validate input exists

- !Found → Display not found Message
- Found

Validate input exists → Display Prompt Confirm Message → User Input → Validate Input

- !Valid
- Yes
- No

Validate Input → Delete Product from Inventory (Yes)
Validate Input → Prompt for return to Main Menu (No)

Delete Product from Inventory → Prompt for return to Main Menu → User Input → Validate input

- Display Invalid Message
- !Valid
- Valid

→ Menu

Save Inventory to File

Save → Display Save Message → Check if File exists → Process result

- No → Create File
- Yes

Process result → Write Inventory Data to File → Display Confirmation Message → Prompt for return to Main Menu → User Input → Validate input

- Display Invalid Message
- !Valid
- Valid

→ Menu

Load Inventory from File

Load → Display Load Message → Check if File exists → Process result

- No → Menu
- Yes

Process result → Get Data from File → Display Loading Message → Copy Data to to Inventory → Display Success Message → Prompt for return to Main Menu → User Input → Validate input

- Display Invalid Message
- !Valid
- Valid

→ Menu

Exit Program

Exit → Display Exit Prompt → User Input → Manual input

- Display Invalid Message
- !Valid
- Yes
- No

Manual input → End (Yes)
Manual input → Menu (No)

Main Menu

Start → Display Main Menu → User Input → Validate Input

- Display Invalid Message
- !Valid
- Valid

Validate Input → Redirection

Menu → Display Main Menu

- Input = 1 → Add
- Input = 2 → View
- Input = 3 → Search
- Input = 4 → Update
- Input = 5 → Delete
- Input = 6 → Save
- Input = 7 → Load
- Input = 8 → Exit