

| Function / Feature | Test Data | Action / Steps | Expected Result | Actual Result | Pass/Fail | Notes |
|---------------------------|---|---|--|--|-----------|---|
| List Tickets | Tickets loaded in memory (IDs 100–123) | Menu option 1 | All tickets display with ID, Title, Category, Status | Tickets 100–123 displayed correctly | Pass | Lists all tickets in memory safely |
| View Ticket Details | Ticket ID = 104 | Menu option 2 → enter 104 | Full ticket details displayed including Title, Description, Assignee, Severity, Status, Category, Submission Date/Time | Correctly displayed all fields for ID 104 | Pass | Retrieves ticket safely by ID |
| Add Ticket | ID=124, Title="Keyboard faulty", Description="Cannot type the letter 'M'", Assignee=Olivia, Severity=Low, Status=Open | Menu option 3 → enter ticket data | Ticket added, CSV updated, AI predicts category as Software | Ticket 124 added successfully, category Software | Pass | Saves new ticket safely and predicts category |
| Update Ticket (Valid) | ID=124, Field=Status, New Value=In Progress | Menu option 4 → enter ID → select field → enter new value | Status updated in memory and CSV, log entry created | Status updated to In Progress, log entry saved | Pass | Validates input and applies update safely |
| Update Ticket (Invalid) | ID=124, Field=Status, New Value=hi | Menu option 4 → enter ID → select field → enter invalid value | Error message displayed, ticket not updated | "Invalid status" message shown | Pass | Prevents invalid data input |
| Delete Ticket (Confirmed) | ID=124, confirm=yes | Menu option 5 → enter ID → confirm "yes" | Ticket deleted from memory | Ticket 124 deleted, log entry saved | Pass | Confirms deletion and removes safely |

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| | | | and CSV, log entry created | | | |
| Delete Ticket (Cancelled) | ID=124, confirm=no | Menu option 5 → enter ID → confirm "no" | Deletion cancelled, ticket remains in memory and CSV | Deletion cancelled, ticket still exists | Pass | Protects against accidental deletion |
| Exit Confirmation (Return) | Input = n | Menu option 6 → enter n | Program does not exit, main menu displayed again | Returned to main menu | Pass | Confirms before exiting |
| Exit Confirmation (Exit) | Input = y | Menu option 6 → enter y | Program exits, displays goodbye message | Program exits, "Bye!" printed | Pass | Exits safely |