**Test Plan**

**Project:** DTN ADMLOD Export Prototype  
**Prepared by:** [Your Name/Team]  
**Date:** [Insert Date]

**1. Test Objectives**

* Validate that the prototype meets all business, functional, and technical requirements.
* Ensure the prototype correctly generates ADMLOD export files from mock data.
* Confirm that FTP upload and DTN response handling are properly simulated.
* Verify that error scenarios are handled and logged as specified.
* Ensure CLI options and logging work as intended.

**2. Test Scope**

**In Scope:**

* CLI export operation
* ADMLOD file generation
* FTP upload simulation
* Mock DTN response parsing
* Error scenario simulation (missing fields, FTP failure, invalid command)
* Logging to console and file

**Out of Scope:**

* Real FTP or DTN integration
* Import, add, modify, or delete operations
* UI/web interface

**3. Test Environment**

* OS: Windows 10/11 or Linux/Mac (if .NET 6+ is used)
* .NET SDK: 6.0 or later
* Local file system access for reading/writing mock files

**4. Test Cases**

| **Test Case ID** | **Description** | **Steps** | **Expected Result** |
| --- | --- | --- | --- |
| TC-01 | CLI Export Success | 1. Run dotnet run export --success 2. Observe console output | Export file is generated in /MockFiles. FTP upload is logged as successful. DTN response is parsed and all commands show as successful. All actions are logged to console. |
| TC-02 | CLI Export Error (DTN Response) | 1. Run dotnet run export --error 2. Observe console output | Export file is generated. FTP upload is logged as successful. DTN response is parsed and at least one command shows as error. Errors are logged to console. |
| TC-03 | CLI Export Error (FTP Failure) | 1. Run dotnet run export --error with FTP error simulation enabled 2. Observe console output | Export file generation is attempted. FTP upload fails (simulated). Error is logged and process aborts before DTN response parsing. |
| TC-04 | Missing Required Field | 1. Modify mock data to omit a required field (e.g., Product Code) 2. Run export | Export file is generated with missing field. DTN response parsing shows error for the affected command. Error is logged. |
| TC-05 | Invalid Command Format | 1. Modify export file generation to produce a malformed line 2. Run export | Export file contains invalid command. DTN response parsing shows error for the malformed command. Error is logged. |
| TC-06 | Logging to File | 1. Run dotnet run export --success --logfile test.log 2. Check test.log | All actions and errors are logged to the specified file as well as the console. |
| TC-07 | CLI Option Handling | 1. Run export with various CLI options (e.g., missing/invalid flags) 2. Observe behavior | CLI options are parsed correctly. Invalid options produce a usage/help message or error. |
| TC-08 | Review Output Files | 1. Run export 2. Inspect generated export file and parsed response output | Export file matches ADMLOD format. Parsed response output matches mock response file. Both success and error scenarios are reviewable. |

**5. Test Data**

* **Mock Products and Product Groups:**
  + At least 2 valid products and 2 valid product groups.
  + At least 1 product/group with a missing required field for error simulation.
* **Mock DTN Response Files:**
  + adm\_response\_success.txt: All commands succeed.
  + adm\_response\_error.txt: At least one command fails (e.g., missing field, invalid command).

**6. Responsibilities**

| **Role** | **Responsibility** |
| --- | --- |
| Developer | Provide build, run, and test instructions; support defect resolution |
| QA/Tester | Execute test cases, log defects, verify fixes |
| Stakeholder | Review test results and outputs |

**7. Acceptance Criteria**

* All test cases pass as described.
* All error scenarios are handled and logged as specified.
* CLI options and logging work as intended.
* Output files and logs are available for review.

**8. Defect Management**

* All defects are logged with steps to reproduce, expected and actual results.
* Defects are prioritized and resolved before final acceptance.

**9. Sign-Off**

* Test plan and results are reviewed and approved by stakeholders.