

Testing Project for www.cargus.ro

The scope of the final project for ITF Manual Testing Course is to use all gained knowledge through the course and apply them in practice, using a live application

Application under test: www.cargus.com

Tools used: Jira, Zephyr Squad.

Functional specifications:

The below stories were created in Jira and describe the functional specifications of the "Introducere_in_Jira" module, for which the final project is performed upon.

 AIT-23 Track a Parcel by Tracking Number

 AIT-24 Find a Ship & Go Location

 AIT-25 Return a Parcel

<https://itfclasses.atlassian.net/issues/?jql=project+%3D+%22AIT%22+AND+type+%3D+Story+ORDER+BY+created+DESC&atlOrigin=eyJpIjoiZTdkZGJhNzRkOTU5NDU2NGI2OGU2MzE5OTJkZGE0M2UiLCJwIjoiJ9>

Here you can find the release that was created for this project:


Release 1.0

Give this section a name  

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+



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AIT-22

Track and Manage Parcel Deliveries

DONE

AIT-23

Track a Parcel by Tracking Number

DONE

AIT-24

Find a Ship & Go Location

DONE

AIT-25

Return a Parcel

DONE

AIT-29

No Error Message Displayed When Clicking "Urmărește" with Empty Tracking Number Field

DONE

AIT-30

Incorrect redirection to tracking page when clicking "Urmărește" with an empty tracking number field

DONE

AIT-34

Incorrect Priority of Suggestions in "Gaseste o locatie Ship & Go" Feature

DONE

AIT-38

Photo Not Displayed, Shows "Pudo Point" Message in Location Details

DONE

Testing process

The test process was performed based on the standard test process as described below.

1.1 Test planning

The Test Plan is designed to describe all details of testing for all the modules from the www.cargus.ro application.

The plan identifies the items to be tested, the features to be tested, the types of testing to be performed, the personnel responsible for testing, the resources and schedule required to complete testing, and the risks associated with the plan. The test plan that was created for this project can be found here [Test Plan www.cargus.ro/pdf](http://www.cargus.ro/pdf/Test%20Plan)

1.1.1. Roles assigned to the project and persons allocated

Project manager Amalia Florescu

Product owner Paul Frunză

Software developer Lucian Trut

QA Engineer Alina Izvor

1.1.2 Entry criteria defined

Entry Criteria for the AIT_22 Track and Manage Parcel Deliveries Project

To ensure the project starts on a solid foundation and all prerequisites are met, the following entry criteria must be fulfilled before the testing phase can commence:

1. Requirements Documentation:

- All user stories (AIT_23, AIT_24, AIT_25) are fully documented and approved.
- Acceptance criteria for each user story are clearly defined and agreed upon by stakeholders.

2. Test Plan and Test Cases:

- The test plan is reviewed, finalized, and approved.
- Test cases (AIT_26 through AIT_40) are written, reviewed, and approved.
- Test cases are linked to their respective user stories for traceability.

3. Test Environment:

- The test environment is set up and is stable.

- Access to all necessary environments (development, staging) is granted to the testing team.
- All necessary test data is created and available in the test environment.
- 4. **Tools and Resources:**
 - Jira is set up for issue tracking and management.
 - Testers have access to the test environment and necessary tools.
- 5. **Development Artifacts:**
 - The code for the features (tracking a parcel, finding a Ship & Go location, returning a parcel) is complete and deployed to the test environment.
 - Unit tests are completed, and results are available.
 - Integration tests are completed, and results are available.
 - Code review and peer review processes are completed.
- 6. **Stakeholder Communication:**
 - All stakeholders are informed about the start of the testing phase.
 - Communication channels are established for quick issue resolution.
 - A point of contact is designated for any queries or issues that arise during testing.
- 7. **Risk Management:**
 - Risks related to testing are identified and documented.
 - Mitigation plans for identified risks are in place.
- 8. **Test Data:**
 - Test data sets are prepared, validated, and available for use.
 - Data privacy and security considerations are addressed.
- 9. **Team Readiness:**
 - The testing team is trained and familiar with the application features and the test plan.
 - Roles and responsibilities are clearly defined and communicated.
- 10. **Approval to Proceed:**
 - Formal approval is obtained from the project manager or other authorized personnel to begin the testing phase.

1.1.3 Exit criteria defined

Exit Criteria for the AIT_22 Track and Manage Parcel Deliveries Project

The following exit criteria must be met to ensure the testing phase can be concluded and the project can proceed to the next stage, such as release or deployment:

1. Test Case Completion:

- All planned test cases (AIT_26 through AIT_40) have been executed.
- Test case execution results are documented, reviewed, and approved.
- No critical or high-priority test cases are left unexecuted.

2. Defect Management:

- All critical and high-priority defects (e.g., AIT_29, AIT_30, AIT_34, AIT_38) are resolved, retested, and closed.
- Medium and low-priority defects are documented with appropriate workarounds or planned for future sprints.
- The overall defect density is within acceptable limits as defined by project quality standards.

3. Test Coverage:

- Test coverage meets or exceeds the minimum acceptable criteria (e.g., 95% coverage of user stories and acceptance criteria).
- No significant functionality is left untested.

4. Regression Testing:

- All identified regression test cases have been executed, and any defects found have been addressed.
- The application is stable, and no new critical issues have emerged from regression testing.

5. Performance and Security Testing:

- Performance tests have been executed, and results meet the required performance benchmarks.
- Security tests have been conducted, and there are no unresolved critical security issues.

6. User Acceptance Testing (UAT):

- UAT has been completed successfully, with sign-off from all relevant stakeholders.
- Any UAT defects are resolved, retested, and closed or documented for future resolution.

7. Test Documentation:

- All test artifacts, including test plans, test cases, test scripts, and defect reports, are updated and stored in the test management tool.
- Test summary report is prepared, reviewed, and approved by stakeholders.

8. Stakeholder Approval:

- Formal approval from stakeholders (e.g., project manager, product owner, QA lead) to exit the testing phase and proceed to release/deployment.

9. Risk Assessment:

- **All identified risks have been mitigated or accepted by stakeholders.**
- **No unresolved risks pose a significant threat to the stability or functionality of the application.**

10. Readiness for Deployment:

- **Deployment checklist is prepared and reviewed.**
- **Release notes and user documentation are updated and ready for distribution.**
- **All necessary approvals for deployment are obtained.**

1.1.4 Test scope

Tests in scope:

Test Scope for the AIT_22 Track and Manage Parcel Deliveries Project

The test scope defines the specific areas and functionalities of the Cargus.ro website that will be covered during the testing phase, ensuring that all critical features are thoroughly tested.

The following sections and functionalities of the Cargus.ro website are included in the test scope:

- 1. Track a Parcel by Tracking Number (Story1: AIT_23)**
 - **Verify parcel tracking by valid tracking number (AIT_26)**
 - **Verify error handling for invalid tracking number (AIT_27)**
 - **Verify the functionality of the "Urmărește" button (AIT_31)**
 - **Verify tracking with an empty tracking number field (AIT_28)**
- 2. Find a Ship & Go Location (Story2: AIT_24)**
 - **Verify Redirection to Ship & Go Page (AIT_32)**
 - **Selecting Satu Mare, Romania from Valid City Input on www.cargus.ro (AIT_33)**
 - **Testing "Adresa" Button for Closest Cargus Location Retrieval (AIT_35)**
 - **Testing Zoom In and Zoom Out Features on Map View (AIT_36)**
 - **Verify Detailed Information when Selecting an Address from the List (AIT_37)**
- 3. Return a Parcel (Story3: AIT_25)**
 - **Verify Redirection to Return Instructions Page when Clicking on "Returnează un colet" Button (AIT_39)**

- **Verify Redirection to Return Instructions for Different Methods when Clicking on Hyperlinks (AIT_40)**

Tests not in scope:

The following areas are not included in the test scope for this project:

- 1. MyCargusLogin - Any functionality that requires user login (MyCargusLogin) is out of scope.**
- 2. Non-Public Sections - Internal admin or backend functionalities are not included.**
- 3. Third-Party Integrations - Testing of third-party services or APIs unless directly affecting the features in scope.**
- 4. Non-Functional Testing - Performance, load, stress, and security testing are not included in this phase.**

1.1.5 Risks detected

Project risks:

Project Delivery Delays

- **Impact: High**
- **Probability: Medium**
- **Mitigation: Detailed planning and continuous progress monitoring.**

Lack of Necessary Resources (Human and Technical)

- **Impact: High**
- **Probability: Medium**
- **Mitigation: Ensure resource availability before project commencement and have backup plans in place.**

Requirement Changes During Development

- **Impact: Medium**
- **Probability: High**
- **Mitigation: Efficient change management and constant stakeholder involvement.**

Product risks:

Errors in Parcel Tracking

- **Impact: High**
- **Probability: High**
- **Mitigation: Detailed testing and validation of the parcel tracking functionality.**

Incorrect Map Functionalities for Ship & Go Locations

- **Impact: Medium**
- **Probability: High**
- **Mitigation: Functional testing and validation of location data.**

Issues in the Parcel Return Process

- **Impact: High**
- **Probability: Medium**
- **Mitigation: Detailed testing of the return flow and verification of all possible scenarios.**

1.1.6 Evaluating entry criteria

The entry criteria defined in the Test Planning phase have been achieved and the test process can continue.

1.2 Test Monitoring and Control

Test Monitoring:

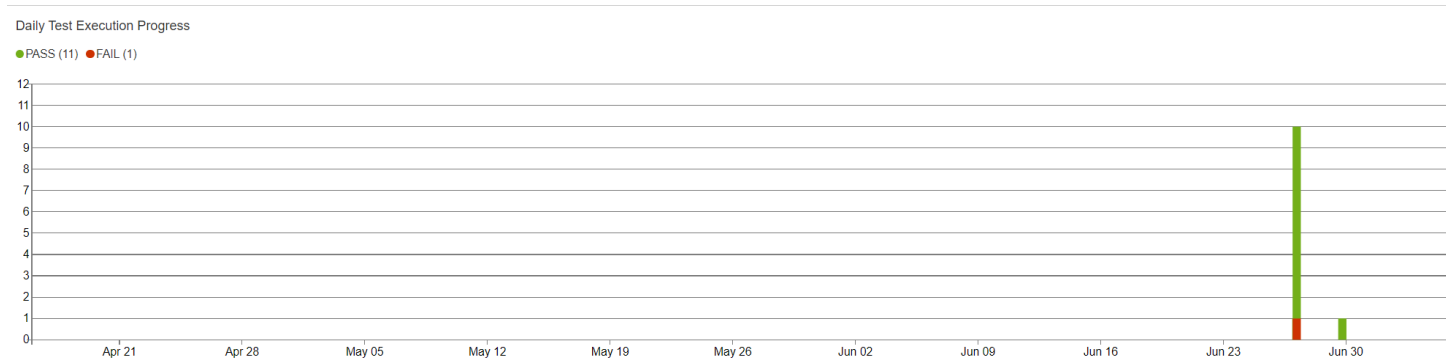
- **Daily Stand-Up Meetings: Conducted to discuss testing status, blockers, and next steps, ensuring alignment and prompt issue resolution.**
- **Test Execution Reports: Generated after each testing cycle to detail executed, passed, failed, and pending test cases, helping to focus efforts where needed.**

- **Defect Tracking:** Utilized JIRA to log, categorize, and prioritize defects, providing real-time defect status and resolution tracking.
- **Traceability Matrix:** Used to ensure all requirements were covered by test cases and to track the status of each requirement.
- **Dashboard Metrics:** Key metrics such as test coverage, pass/fail rates, and defect density were displayed on a dashboard for real-time project health insights.

Test Control:

- **Change Management:** Evaluated and managed any requirement or scope changes through a formal process to ensure documentation and impact assessment.
- **Risk Management:** Continuously monitored identified risks, implementing mitigation actions like resource reallocation and timeline adjustments.
- **Issue Resolution:** Escalated testing issues or blockers to stakeholders for timely resolution.
- **Test Plan Adjustments:** Regularly reviewed and adjusted the test plan based on monitoring data, including re-prioritizing test cases and extending test cycles as needed.
- **Retrospective Meetings:** Held after each testing phase to review successes and areas for improvement, refining the test process for subsequent phases.

These monitoring and control measures ensured that the testing activities for the Cargus project were well-managed, deviations were addressed promptly, and the project objectives were met efficiently.



1.3 Test Analysis

The testing process will be executed based on the application requirements.

The following test conditions were found:

Type	Key	Summary	Priority	Status Category
	AIT-40	Verify Redirection to Return Instructions for Different Methods when Clicking on Hyperlinks	Medium	DONE
	AIT-39	Verify Redirection to Return Instructions Page when Clicking on "Retornează un colet" Button	Medium	DONE
	AIT-37	Verify Detailed Information when Selecting an Address from the List	Medium	DONE
	AIT-36	Testing Zoom In and Zoom Out Features on Map View	Medium	DONE
	AIT-35	Testing "Adresa" Button for Closest Cargus Location Retrieval	Medium	DONE
	AIT-33	Selecting Satu Mare, Romania from Valid City Input on www.cargus.ro	Medium	DONE
	AIT-32	Verify Redirection to Ship & Go Page	Medium	DONE
	AIT-31	Verify the functionality of the "Urmărește" button	Medium	DONE
	AIT-28	Verify tracking with an empty tracking number field	Medium	DONE
	AIT-27	Verify error handling for invalid tracking number	Medium	DONE
	AIT-26	Verify parcel tracking by valid tracking number	Medium	DONE

1.4 Test Design

Functional test cases were created in Zephyr Squad based on the analysis of the specifications. The test cases can be accessed here :

<https://github.com/Alina4I/Cargus-Jira-Testing/blob/main/Jira%20Test%20Design%20July%202024.pdf>

1.5 Test Implementation

The following elements are needed to be ready before the test execution phase begins:

- test cases need to be prioritised according to business importance and risk;
- environment must be created and validated through smoke testing;
- test data will be created in this phase
- access will be given;
- any other items that need to be ready for test execution will be prepared during this phase;

1.6. Test Execution

Test cases are executed on the created test Cycle summary: [Release 1.0 - Personal Actions Quick Tests](#)

Bugs have been created based on the failed tests. The complete bug reports can be found here:

<https://itfclasses.atlassian.net/issues/?jql=project+%3D+%22AIT%22+AND+type+%3D+Bug+ORDER+BY+created+DESC&atlOrigin=eyJpIjoiMzU4NjQ5M2UyZTcwNDQzNWJjYmY5YmRiM2RmZDVkOGliLCJwIjoiajJ9>

The following is a summary of the bugs that have been found

List of Identified Bugs with Priority and Severity

1. Bug Title: No error message displayed when clicking "Urmărește" with an empty tracking number field.

- Priority: High
- Severity: Medium

2. Bug Title: Incorrect redirection to the tracking page when clicking "Urmărește" with an empty tracking number field.

- Priority: High**
- Severity: Medium**

3. Bug Title: Incorrect priority of suggestions in the "Gaseste o locatie Ship & Go" feature.

- Priority: Medium**
- Severity: Low**

4. Bug Title: Photo not displayed, shows "Pudo Point" message in location details.

- Priority: Medium**
- Severity: Low**

Full regression testing is needed on the impacted areas after the bugs are fixed and retesting will be done for every functionality that was previously failed.

1.7 Test Completion

As the Exit criteria were met and satisfied as mentioned in the appropriate section, this feature is suggested to 'Go Live' by the Testing team

The traceability matrix was generated and can be found here:

Traceability Matrix

Report Type

Export

Type: Story

Versions: All

Cycles: All

Folders: All

Execution Status: All

Clear Filters

Requirements without tests

Executions without defects

Executions with defects

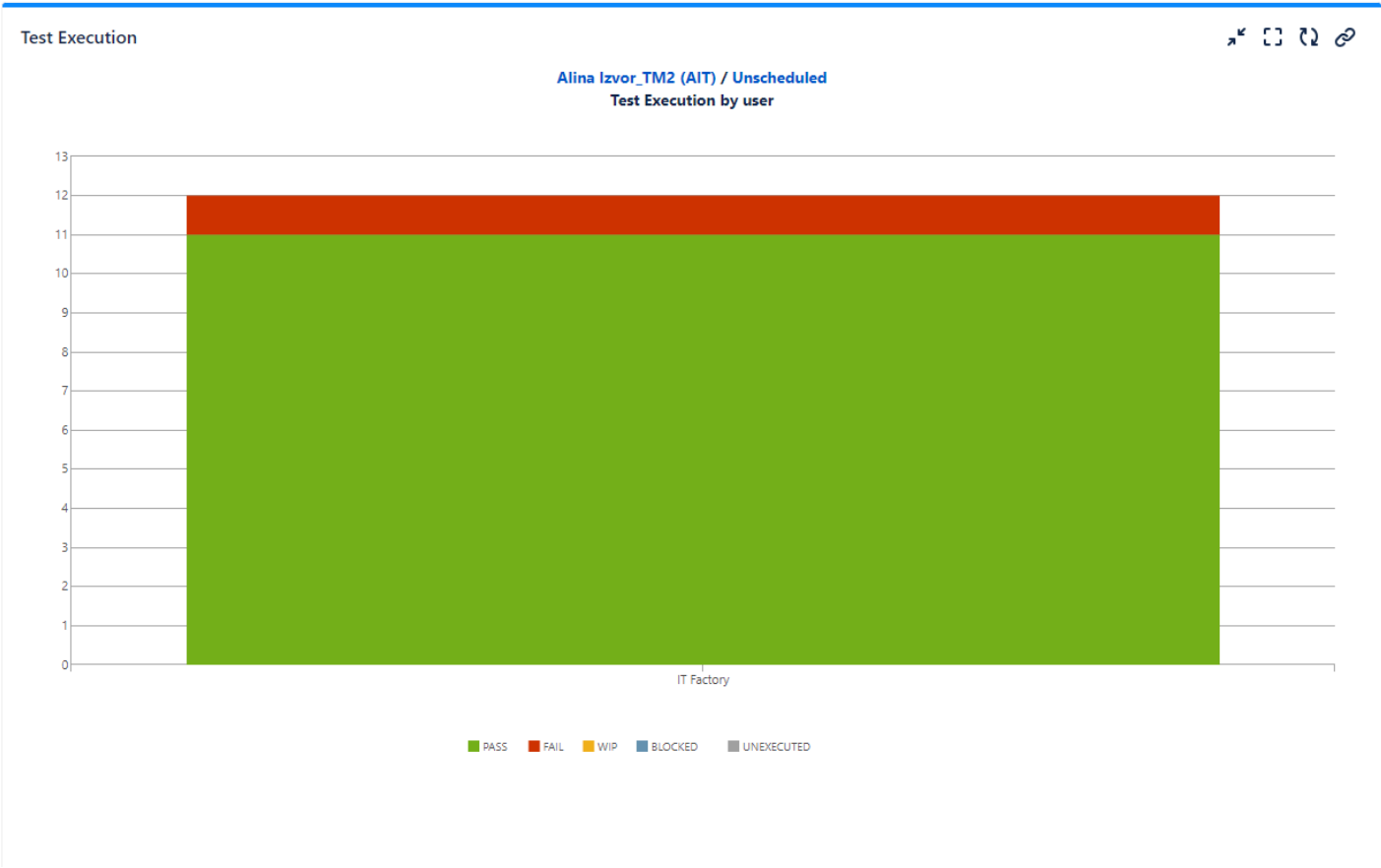
Issues

Showing of 1-3 of 3

Expand All

Requirements	Tests	Executions	Defects
<div><div>AIT-25</div><div>Return a Parcel</div></div>	<div>2 Tests</div>	2 Executions	None
	<div>AIT-39</div> <div>Verify Redirection to Return Instructions Page when Clicking on "Returnează un c...</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None
	<div>AIT-40</div> <div>Verify Redirection to Return Instructions for Different Methods when Clicking on H...</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None
<div><div>AIT-24</div><div>Find a Ship & Go Location</div></div>	<div>5 Tests</div> <div>2 DEFECTS</div>	6 Executions	2 Defects
	<div>AIT-32</div> <div>Verify Redirection to Ship & Go Page</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None
	<div>AIT-33</div> <div>Selecting Satu Mare, Romania from Valid City Input on www.cargus.ro</div>	Release 1.0 - Personal Actio...	<div>PASS</div> <div>AIT-34</div> <div>Incorrect Priority of Suggestions in "Gaseste o locatie Ship & Go" Feature</div>
	<div>AIT-35</div> <div>Testing "Adresa" Button for Closest Cargus Location Retrieval</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None
	<div>AIT-36</div> <div>Testing Zoom In and Zoom Out Features on Map View</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None
		Ad hoc	<div>PASS</div> None
	<div>AIT-37</div> <div>Verify Detailed Information when Selecting an Address from the List</div>	Release 1.0 - Personal Actio...	<div>PASS</div> <div>AIT-38</div> <div>Photo Not Displayed, Shows "Pudo Point" Message in Location Details</div>
<div><div>AIT-23</div><div>Track a Parcel by Tracking Number</div></div>	<div>4 Tests</div> <div>2 DEFECTS</div>	4 Executions	2 Defects
	<div>AIT-26</div> <div>Verify parcel tracking by valid tracking number</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None
	<div>AIT-27</div> <div>Verify error handling for invalid tracking number</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None
	<div>AIT-28</div> <div>Verify tracking with an empty tracking number field</div>	Release 1.0 - Personal Actio...	<div>FAIL</div> <div>AIT-30</div> <div>Incorrect redirection to tracking page when clicking "Urmărește" with an empty tra...</div>
			<div>AIT-29</div> <div>No Error Message Displayed When Clicking "Urmărește" with Empty Tracking Nu...</div>
	<div>AIT-31</div> <div>Verify the functionality of the "Urmărește" button</div>	Release 1.0 - Personal Actio...	<div>PASS</div> None

Test execution chart was generated and can be found below.



Test Cases Creation and Execution:

- Total Tests Created: 11
- Total Tests Executed: 11
- Execution Rate: 100%

Coverage of Requirements:

- Percentage of Requirements Covered: Approximately 100% of the requirements in scope were covered by the test cases.
- Untested Functionalities: All functionalities were tested as per the defined scope; no functionalities were left untested.

Defects and Impact:

- Total Defects Found: 4
 - AIT_29: No error message displayed when clicking "Urmărește" with an empty tracking number field.
 - AIT_30: Incorrect redirection to the tracking page when clicking "Urmărește" with an empty tracking number field.
 - AIT_34: Incorrect priority of suggestions in the "Gaseste o locatie Ship & Go" feature.
 - AIT_38: Photo not displayed, shows "Pudo Point" message in location details.
- Impact on Production Release: The identified bugs are minor and do not significantly impact the core functionalities of tracking parcels, finding Ship & Go locations, and managing returns. These bugs can be fixed in subsequent releases without delaying the product launch.

Product Risks and Mitigation:

- Identified Product Risks:
 - Errors in tracking parcels (Mitigation: Detailed testing and validation of the tracking functionality).

- Incorrect functionalities of the map for Ship & Go locations (Mitigation: Functional testing and validation of location data).
- Issues in the parcel return process (Mitigation: Detailed testing of the return flow and verification of all possible scenarios).

Recommendations for Launch:

- **Proceed with Launch:** Given that the identified defects are minor, it is recommended to proceed with the product launch. However, it is crucial to prioritize fixing the defects in the next iteration.
- **Post-Launch Monitoring:** Implement post-launch monitoring to quickly identify and address any unforeseen issues.

Lessons Learned:

- **Comprehensive Test Planning:** Ensure detailed test planning and requirement analysis to cover all possible scenarios, including edge cases.
- **Early Defect Detection:** Early detection and reporting of defects can help mitigate risks and reduce the impact on project timelines.
- **Continuous Stakeholder Involvement:** Engage stakeholders continuously throughout the testing process to accommodate any changes in requirements efficiently.

By following these recommendations and lessons learned, future projects can benefit from a smoother testing process and more efficient defect management.