
Phase 10: Rental Management System Enhancements and Fixes

I. Overview

Phase 10 of the Rental Management system development will focus on **improving the robustness and user experience** of the "Create Rental" process. This includes addressing key limitations, particularly in **inventory checking** and **error handling**, and ensuring data integrity.

II. Objectives

1. **Resolve the "No Copies Available" Rental Creation Failure:** Implement mandatory, accurate inventory checks *before* attempting to create a rental record to prevent failures like the one seen with "The Life of Pi."
2. **Improve Error Handling and User Feedback:** Replace generic system errors with clearer, more actionable error messages for common issues.
3. **Enhance Data Management and Visibility:** Ensure new and updated records are handled smoothly without unexpected interruptions.

III. Detailed Breakdown of Tasks and Implementations

3.1 Test sequence

Create a Book record (Title, Author, Copies_Available = 1).

Create a Student.

Use the LWC form to create a Rental (select Book & Student, set Rent Date = today, Due Date = today + 7).

After insert, verify Book status becomes Rented and Copies_Available decreased by 1.

Update Rental → set Status = Returned. Verify Book status becomes Available and Copies_Available incremented.

Create Rental with Due Date before Rent Date to confirm validation rule triggers.

Create multiple rentals to test bulk behavior and error messages.

3.2 Run Apex tests

Setup → Apex Test Execution → run RentalTriggerHandlerTest → ensure all tests pass and coverage adequate.

Rental Management

Create Rental

Book: Clean Code

Student: Shau

Rent Date: Sep 25, 2025

Due Date: Sep 26, 2025

Create Rental

Rental Management

Create Rental

An error occurred while trying to update the record. Please try again.
No copies available for this book.

Book: THE Life Of Pie- AutoCreated

Student: Arnav - AutoCreated

Rent Date: Sep 25, 2025

Due Date: Sep 26, 2025

Create Rental

Students

Recently Viewed

NewImportChange OwnerAssign Label

15 items • Updated a few seconds ago

Search this list...

Student Name

1 Bundu

2 Sunita - AutoCreated

3 Arnav - AutoCreated

4 Shital - AutoCreated

5 Harsh - AutoCreated

6 Shital - AutoCreated

7 Shital - AutoCreated

8 Vivek - AutoCreated

9 Sarang - AutoCreated

10 Sarang - AutoCreated

11 Test Student - AutoCreated

12 Jaya

13 Test Student - AutoCreated

14 Test Student - AutoCreated

Sales

Home

Students Old

Opportunities

Leads

Rental Management

Tasks

Files

Accounts

Contacts

Campaigns

Dashboards

Reports

More

Rental Management

Rental Created

Rental created (Id: a04gl000009jowwPQAQ)

Sales

Home

Students Old

Opportunities

Leads

Rental Management

Tasks

Files

Accounts

Contacts

Campaigns

Dashboards

Reports

More

Rental Management

Rental Created

Rental created (Id: a04gl000009jowmnQAA)

Create Rental

Book

Clean Code

Student

Shau

Rent Date

Sep 25, 2025

Due Date

Sep 26, 2025

Create Rental

Sorry to interrupt

This page has an error. You might just need to refresh it. First, would you give us some details?
(We're reporting this as error ID: 720999409)

What was going on right before this error happened?

Technical Stuff

OK

Books

Recently Viewed

NewImportChange OwnerAssign Label

15 items • Updated a few seconds ago

Search this list...

Book Name

1 The Earth

2 THE Umberala - AutoCreated

3 THE Life Of Pie- AutoCreated

4 THE MONK - AutoCreated

5 Struggle of Comman Man BOOK - AutoCreated

6 THE Destiny - AutoCreated

7 THE MONK - AutoCreated

8 THE MONK - AutoCreated

9 LIFE BOOK - AutoCreated


10 LIFE BOOK - AutoCreated

11 LIFE BOOK - AutoCreated

12 Test Book

13 Test Book - AutoCreated

14 Test Book - AutoCreated



Rental
RENT-0029



Related

Details


Rental Name

RENT-0029


Owner


[Harsh Kohale](#)



Book

[The Earth](#)



Student

[Bundu](#)



Rent Date

9/25/2025


Due Date

9/26/2025


Status

Active


Fine Amount




Notes




Created By


[Harsh Kohale](#), 9/25/2025, 6:41 AM

Last Modified By


[Harsh Kohale](#), 9/25/2025, 6:41 AM

 To Do List

IV. Success Criteria

- Users are **prevented** from attempting to rent a book with zero available copies.
- The system provides a **clear, informative error message** when a book is unavailable.
- The "Sorry to interrupt" error is **eliminated** after a successful rental creation.
- The available copy count on the Book record is **always accurate** post-rental.
- Successful rental creation navigates the user **smoothly** to the new Rental Detail page or a clean form.

V. Tools and Technology

- **Platform:** Salesforce (Based on UI appearance)
- **Tools:** Salesforce Apex Triggers, Validation Rules, Lightning Web Components (LWC) or Aura Components for UI/Controller logic.
- **Personnel:** Developer, QA Analyst, System Administrator.