# UAT Bug 1

# Name: Mina

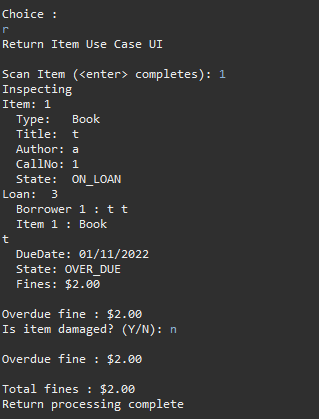
# Student ID: 11716113

# Assignment details: Debugging

# A4 Bug Report

## Bug 1: Incorrect calculation of fines.

Excessive fines are applied when the patron tries to pay fine.



Text

Description automatically generated

Bug 1 Solution

**Replication:** The fines for an overdue item are being applied and increased by a method that discharges the loan.

# Scenario 1: Over due Loan payment

## Scenario Description

* This scenario is made to test if the fines applied remain consistent throughout the return and payment process.
* The test is used to determine which part of the program is faulty and needs adjustment in order to function as intended
* This scenario is based on a patron’s need to return an over due item and pay the over due fees.

## Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| Version # | Date | Author | Description |
| 0.1 | 18/10/2022 | Mina Farag | Initial Draft |
| 1.0 | 18/10/2022 | Mina Farag | Initial Version |

## Test Scripts

The following scripts will cover this scenario:

* 1.1 Overdue Loan Case
* 1.2 Return item case
* 1.3 Paying fine case

## Use Case

* The use case covered by this scenario will be discharge of loan.

## Test Components/Requirements

This test scenario covers the following high-level test requirements (see scripts below for specific requirements covered by each test script):

* Patron
* Loan
* Item

## User Groups

* Actor/Patron

## Script 1: Overdue Loan Case

### Script Description

* Overdue fine is calculated incorrectly

### Testing Requirements

This test script covers the following specific testing requirements:

* A member cannot borrow when they have an overdue loan.
* A member must be charged the correct amount for having an overdue loan

### Setup

* Member has an overdue loan
* A member’s details must be input into the system
* The loan data must be input into the system
* An item must be input into the system
* The item returned after the due date

### Teardown

* Attempt to fix issue of incorrect loan charge

### Script Steps

| **Step #** | **Test Action** | **Expected Results** | **Pass/ Fail** |
| --- | --- | --- | --- |
| 1 | Patron attempts to return a previously borrowed item | Item condition must be inspected and results must increase or not affect total fine | Pass |
| 2 | Patron attempts to discharge overdue loan | Loan fines owed present the correct fine and correct payment is accepted | Fail |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |

### Test Data

|  |  |
| --- | --- |
| Step | Data |
| 1 | Member Id: 1 |
| 2 | Item Id: 1 |
| 3 | Loan Id: 1 |

### Test Execution

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date/Time | Tester | Test ID | Test Phase | Status |
| 3/11/2022 | JJ | 1 | Step 1 | Passed |
| 3/11/2022 | JJ | 1 | Step 2 | Fail |

Step 1 Result: Pass

<screenshots>

Text

Description automatically generated

**Screen shot displays correct fine applied for over due item after 2 days over the due date.**

Step 2 Result: Fail

Text

Description automatically generated

Owed fines is multiplied by 3 which is the incorrect amount of fines that the patron should be charged.

Version control:

A picture containing graphical user interface

Description automatically generated

**Commit of UATB1 doc to Version Control Repo**

**Simplification**

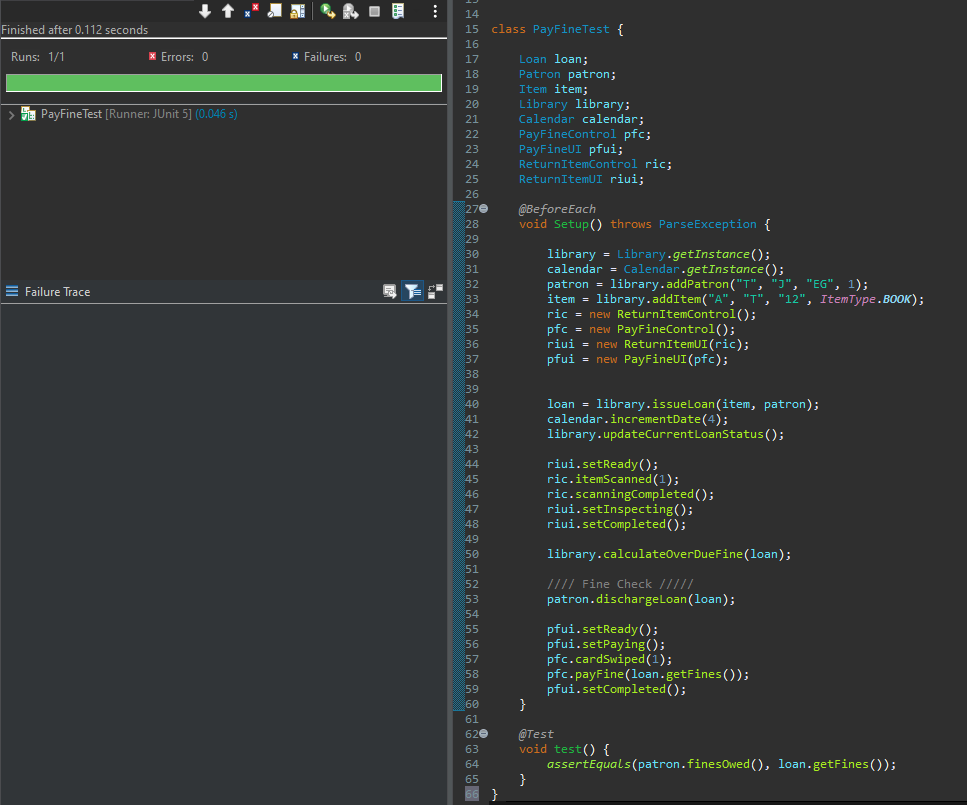
**H0: My guess is that the problem is to do with the issuing of fines and their calculation. Because the final fine returns the bug when attempting to pay, I am guessing that the problem resides within one of the methods that calculate the final fine or display it.**

**T0: I will be testing three methods being patron.dischargeLoan(), loan.discharge() and library.dischargeLoan().**

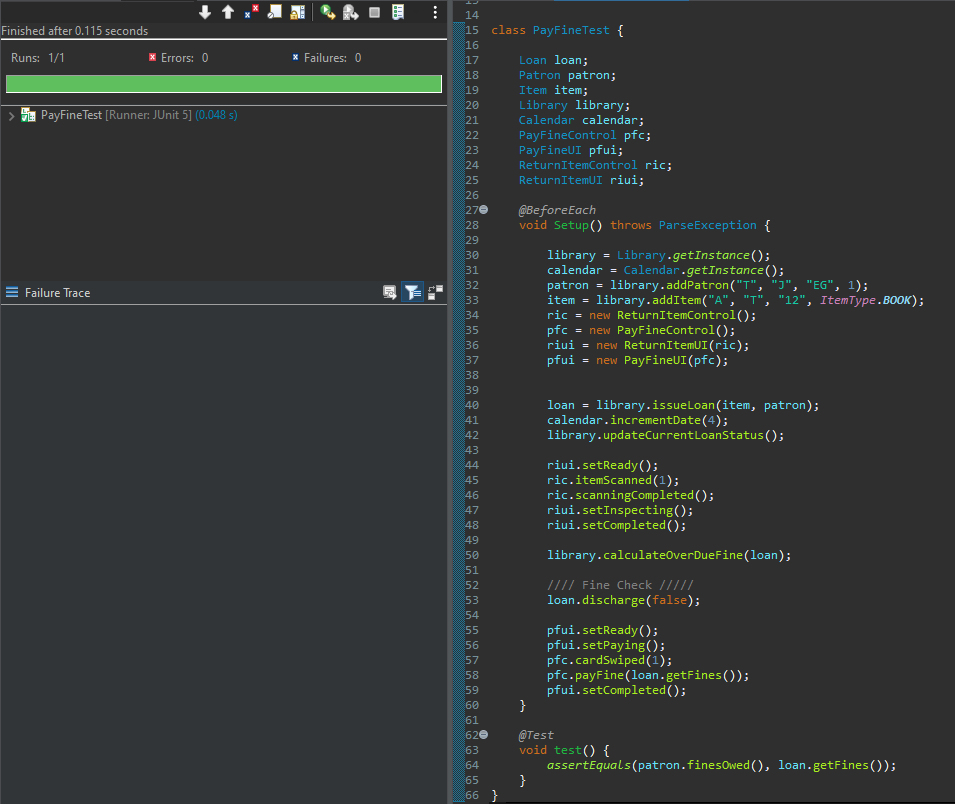
**R0: Below is the tests I have conducted on three methods that manage the loan output**

**(Screenshots)**

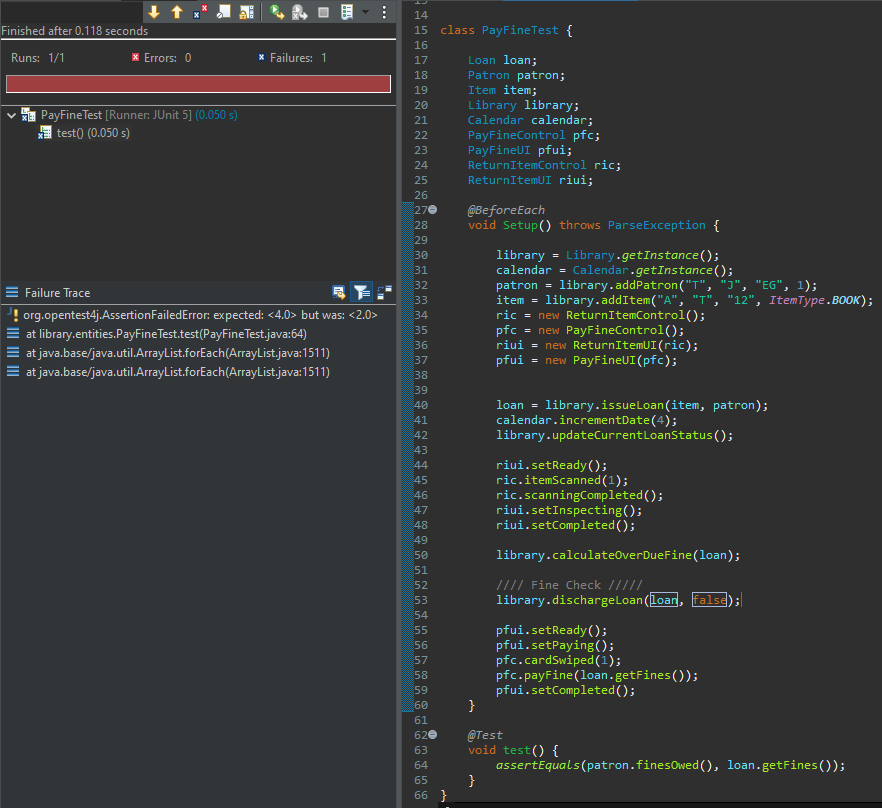
**Testing patron.dischargeLoan() method (Expected that patron.finesOwed() and loan.getFines() must both be equal to $2) PASS**



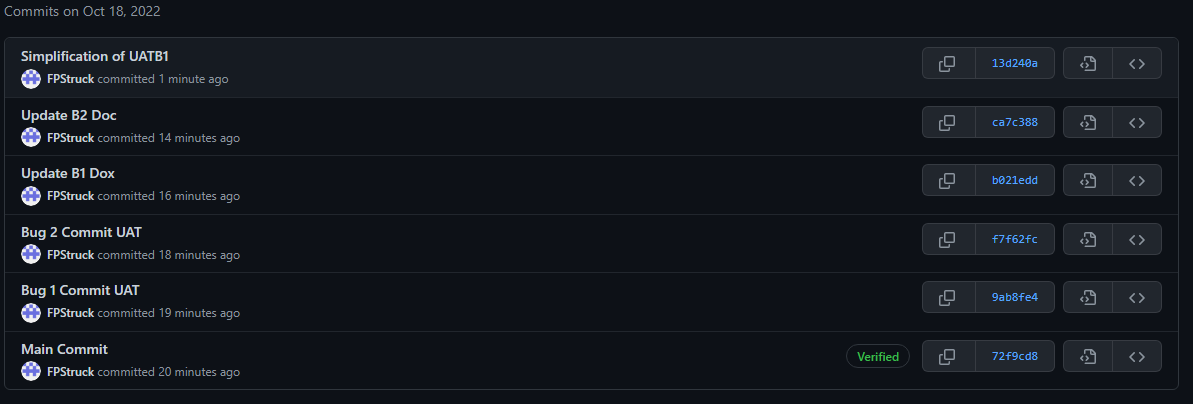
**Testing loan.discharge() method (Expected that patron.finesOwed() and loan.getFines() must both be equal to $2) PASS**



**Testing library.dischargeLoan() method (Expected that patron.finesOwed() and loan.getFines() must both be equal to $2) FAIL: Patron is charged $4 when they should only have to pay $2**



Version control:



**Commit of UATB1 doc to Version Control Repo**

**Tracing**

**H0:**

**T0:**

**R0:**

**Test screenshots of the buggy code**

Version control: Provide screenshots of commits

**Resolution**

**H0:**

**T0:**

**R0:**

**Test screenshots with correct code**

Version control: Provide screenshots of commits