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**ITC515: Professional Programming Practice**

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**Assessment 4 – Debugging: Replication (Bug1)**

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Contents

[Scenario Description 3](#_Toc53783848)

[Version Control 3](#_Toc53783849)

[Test Scripts 3](#_Toc53783850)

[Use Case 3](#_Toc53783851)

[Test Components/Requirements 3](#_Toc53783852)

[User Groups 3](#_Toc53783853)

[Script #1.1: calculate fines with no overdue loan – success 4](#_Toc53783854)

[Script Description 4](#_Toc53783855)

[Testing Requirements 4](#_Toc53783856)

[Setup 4](#_Toc53783857)

[Teardown 4](#_Toc53783858)

[Script Steps 4](#_Toc53783859)

[Test Execution 5](#_Toc53783860)

[Script #1.2: calculate fines with overdue loan – Failure 5](#_Toc53783861)

[Script Description 5](#_Toc53783862)

[Testing Requirements 5](#_Toc53783863)

[Setup 5](#_Toc53783864)

[Teardown 5](#_Toc53783865)

[Script Steps 6](#_Toc53783866)

[Test Execution 6](#_Toc53783867)

[Screenshot 7](#_Toc53783868)

## Scenario Description

* System check already Borrow Book not Borrow again with valid unrestricted Borrower
* Display the Proper calculation fines
* Fines Per day is $1.00 if user delay two days returning the book display Fines $2.00

## Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| Version # | Date | Author | Description |
| 0.1 | 16/10/2020 | Sonal | Initial Draft |
| 1.0 | 23/10/2020 | Sonal | Initial Version |

## Test Scripts

The following scripts will cover this scenario:

* 1.1 calculate fines with no overdue loan– success
* 1.2 calculate fines with overdue loan - failure

## 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 Can Borrow book without help of librarian
* Available Book can Borrow the book

## User Groups

* Return Book

## Script #1.1: calculate fines with no overdue loan – success

### Script Description

* Swipe card of an unrestricted borrower, and attempt to borrow an available book
* Swipe card again to confirm the loan appears
* Find the bug of calculation of fine

### Testing Requirements

This test script covers the following specific testing requirements:

* Already added Book data and Patron data and Available Book Can be Scanned
* In Calendar add two day for due date testing

### Setup

* Patron have Valid Card
* This book Have not borrowed book with another member.
* After Add three more day in calendar
* Return the book properly

### Teardown

* Book is added to Patron Borrow Book List
* Book status is Changed
* Display fines in Patron List

### Script Steps

| **Step #** | **Test Action** | **Expected Results** | **Test Data** | **Pass/ Fail** |
| --- | --- | --- | --- | --- |
| 1 | Run the Program | See The list Already Book and Patron data List |  | P |
| 2 | Enter Choice for Borrow Book | Ask for Patron Swipe Card | L | P |
| 3 | Enter Patron Id | Ask for Scan Book | 1 | P |
| 4 | Scan Book (Enter Book Id) | See the Book Detail |  | P |
| 5 | Enter Enter key | See Final Borrow Book List | enter | P |
| 6 | Enter confirmation of Borrow Book | Display Borrow Book slip | Y | P |
| 7 | Enter for Exit | Display Main Menu | E | P |
| 9 | Enter choice for Loan List | Added this Book of Patron:1 Loan List | LL | P |
| 10 | Enter choice for increment day and enter days | Display current date as after two date | T,2 | P |
| 11 | Enter choice for list patrons | See the Patron one has no fines | LM | P |
| 11 | Enter Choice for returning book | Ask foe scan book | R | P |
| 12 | Enter Book Id | Retuning complete and display no fines I | 1 | P |

### Test Execution

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date/Time | Tester | Test ID | Test Phase | Status |
| 15/10/2020 7:36PM | Sonal | 1 | System Cycle 1 | Failed |

## Script #1.2: calculate fines with overdue loan – Failure

### Script Description

* Swipe card of an unrestricted borrower, proper display of fines as per day

### Testing Requirements

This test script covers the following specific testing requirements:

### Setup

* Patron have Valid Card
* This book Have not borrowed book with another member.
* No Scripts required for run before this script
* After Borrow Book set current day as after one day of due date of book

### Teardown

* Book is not again added to Patron Borrow Book List
* Book status is Changed
* Fines is added in Patron Fines Values

### Script Steps

| **Step #** | **Test Action** | **Expected Results** | **Test Data** | **Pass/ Fail** |
| --- | --- | --- | --- | --- |
| 1 | Run the Program | See The list Already Book and Patron data List |  | P |
| 2 | Enter Choice for Borrow Book | Ask for Patron Swipe Card | L | P |
| 3 | Enter Patron Id | Ask for Scan Book | 1 | P |
| 4 | Scan Book (Enter Book Id) | See the display Error Message: Book Cannot borrow and ask again for scan book | 1 | P |
| 5 | Enter key | Display message for Borrowing Book Cancelled and see main menu | enter | P |
| 9 | Enter choice for Loan List | Not Added again this Book of Patron:1 Loan List | LL | P |
| 10 | Enter choice For Increment Day | Ask for number of days | T | P |
| 11 | Enter number of days | Display the day by whatever you day after | 3 | P |
| 12 | Enter the Loan List option | Check Loan is overdue | LL | P |
| 13 | Enter the list for Patron List | See Patron Fines as per day calculation | LM | F |
| 14 | Enter option for returning book | Ask for Scan Book | R | P |
| 15 | Enter Book id | Disply Book status is ovedue and fine as $1.00 | 1 |  |

### Test Execution

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date/Time | Tester | Test ID | Test Phase | Status |
| 215/10/2020 7:36PM | Sonal | 1 | System Cycle 1 | Failed |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Data Table** | | | | | |
|  | **1** | **2** | **3** | **4** | **5** |
| Book | 1 |  |  |  |  |
| Patron | 1 |  |  |  |  |

# Screenshot

: for Finding Bug of Incorrect calculation of incorrect bug:

**First Step: run the Programme**

Graphical user interface, text, application

Description automatically generated

Step 2: Add Patron and Book data

Graphical user interface, text, application, email

Description automatically generated

**Step4: Borrow Book:**

Graphical user interface, text, application

Description automatically generated

**Step5: take out loan of Book1: patron1**

Graphical user interface, text, application

Description automatically generated

**Step 6: Set current as after Three day**

Graphical user interface, application

Description automatically generated

Step 7: check one loan is overdue:

Graphical user interface, text, application, email

Description automatically generated

Step 8: Return the book and display the fine but no display fine value find out bug

Graphical user interface, text, application, email

Description automatically generated