

Partial Testplan for a simple library system

The following testplan enumerates some of the valid and invalid paths your Cucumber features MUST test.

Please email me **urgently** any errors you find.

To keep the setups of tests to a minimum, be sure to set the maximum number of books to concurrently borrow (i.e., the loan limit) to 2 per user. Also, allow only 2 renewals.

1. Test **invalid** paths of use cases

Ti1 Add Redundant User

Create user u1

Attempt to create u1 again

Ti2 Add Item to non-existent title

Attempt to create a copy of title t1

Ti3 Add Redundant Title

Create title t1

Attempt to create t1 again

Ti4 Borrow same copy

Create users u1 and u2

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u2 try to borrow copy1 of t1

Ti5 Borrow renewed copy

Create users u1 and u2

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u1 renew copy1 of t1 within deadline

Have user u2 try to borrow copy1 of t1

Ti6 Borrow returned copy taken by other user

Create users u1 and u2

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u1 return copy1 of t1 within deadline

Have user u2 borrow copy1 of t1

Have user u1 request copy1 of t1

Ti7 Borrow over max limit

Create user u1

Create titles t1, t2, t3

Create copy1 of t1, copy1 of t2 and copy1 of t3

Have user u1 borrow copy1 of t1

Have user u1 borrow copy1 of t2

Have user u1 request copy1 of t3

Ti8 Borrow over max limit after return

Create user u1

Create titles t1, t2, t3

Create copy1 of t1, copy1 and copy2 of t2 and copy1 of t3

Have user u1 borrow copy1 of t1

Have user u1 borrow copy1 of t2

User u1 returns copy1 of t2

Have user u1 borrow copy1 of t3

Have user u1 try to borrow copy2 of t2

Ti9 Remove Non-existent Item

Create title t1

Create copy1 of t1

Attempt to remove a copy2 of t1

Ti10 Remove Borrowed Item

Create user u1

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Attempt to remove copy1 of t1

Ti11 Remove borrowed/renewed item

Create user u1

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u1 renew copy1 of t1 within deadline (ie no fees)

Attempt to remove copy1 of t1

Ti12 Remove title that still has a copy

[JP rule: all copies of a title must be removed before this title can be removed]

Create title t1

Create copy1 of t1

Attempt to remove t1

Ti13 Remove title that has borrowed copy

Create user u1

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Attempt to remove t1

Ti14 Remove title that has a copy

Create user u1

Create title t1

Create copy1 and copy2 of t1

Remove copy2 of t1

Attempt to remove t1 (not allowed since copy1 of t1 still exists)

Ti15 Remove Non-existent User

Attempt to remove u1 (ie without having created it)

Ti16 Renew Returned Item

Create user u1

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u1 return copy1 of t1 within deadline (ie with no fees)

Attempt to have u1 renew copy1 of t1

2. Test **valid** paths of use cases

Tv1 Add User

Create user u1

Tv2 Add User

Create user u1

Remove u1

Create user u1 again

Tv3 Add Title

Create title t1

Tv4 Add Title

Create title t1

Remove t1

Create title t1

Tv5 Add Item

Create title t1

Create copy1 of t1

Tv6 Add Item

Create title t1

Create copies 1, 2 and 3 of t1

Tv7 Add Item

Create title t1

Create copies 1, 2 and 3 of t1

Remove copy2 of t1

Create copies 2 and 4 of t1

Tv8 Borrow

Create users u1, u2

Create titles t1, t2

Create copies 1, 2 and 3 of t1

Create copies 1, 2 and 3 of t2

Have user u1 borrow copy1 of t1, copy3 of t2

Have user u2 borrow copy2 of t1, copy2 of t2

Tv9 Remove Item

Create titles t1, t2

Create copies 1, 2 and 3 of t1

Create copies 1, 2 and 3 of t2

Remove copy2 of t1

Remove copies 1 and 3 of t2

Tv10 Remove title (no copies involved)

Create title t1

Remove t1

Tv11 Remove User

Create user u1

Remove u1

Tv12 Remove title

Create user u1

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u1 return copy1 of t1 within the deadline

Remove copy1 of t1

Remove t1

Tv13 Renew Loan

Create user u1

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u1 renew copy1 of t1 within the deadline

Tv14 Renew Loan valid max times

Create user u1

Create title t1

Create copy1 of t1

Have user u1 borrow copy1 of t1

Have user u1 renew copy1 of t1 within the deadline (resetting the deadline)

Renew copy1 (within the new deadline) one other time

Have user u1 return copy1 of t1 in time

Tv15 Borrow

Create users u1, u2

Create titles t1, t2

Create copies 1, 2 and 3 of t1

Create copies 1, 2 and 3 of t2

Have user u1 borrow copy1 of t1, copy3 of t2

Have user u2 borrow copy2 of t1, copy2 of t2

Have user u1 return copy1 of t1, copy3 of t2 (within deadline)

Have user u2 return copy2 of t1 and copy2 of t2 (within deadline)

Have user u2 borrow copy1 of t1, copy3 of t2

Tv16 Renew when full

Create user u1

Create titles t1, t2

Create copies 1, 2 of t1

Create copies 1, 2 of t2

Have user u1 borrow copy1 of t1, copy2 of t2

Have user u1 renew copy1 of t1 (within deadline)

Have user u1 renew copy2 of t2 (within deadline)