*Florida International University*

*School of Computing and Information Sciences*

Software Engineering Focus

Feature Document

User Story ID #701 Implement Placing Books on Shelf (Puzzle 3)

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**Project:** VR-Gaming to Broad Participation in CS

**Product Owner(s)**: Francisco Ortega

**Mentor(s)**: Francisco Ortega

**Instructor**: Masoud Sadjadi

**User Story Name: Implement Placing Books on Shelf (Puzzle 3)**

* Description: As a developer, I want to implement a function for the user to place books on a shelf in Unreal, so that the user can work on the puzzle.

Acceptance Criteria

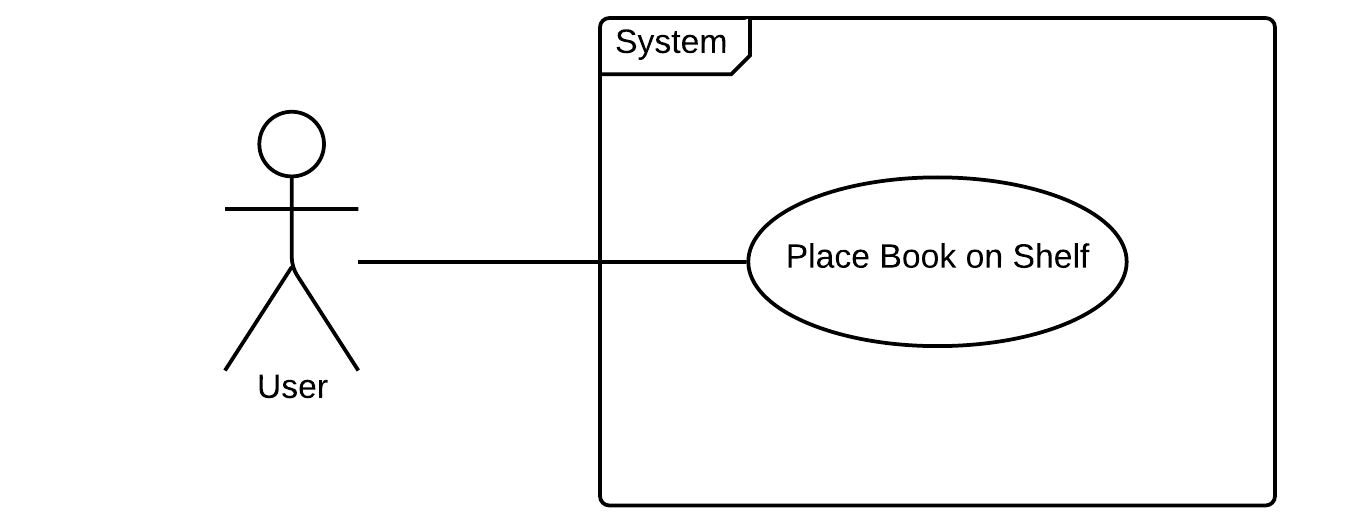
* Verify that the function recognizes when books are placed on the shelf.
* Verify that the function is keeping record of the book’s location on the shelf.
* Verify that the function checks the users solution once all the books have been placed on the shelf.
* Verify that once the puzzle is solved the user is notified and the system flags puzzle 3 as solved.

**Use Case**

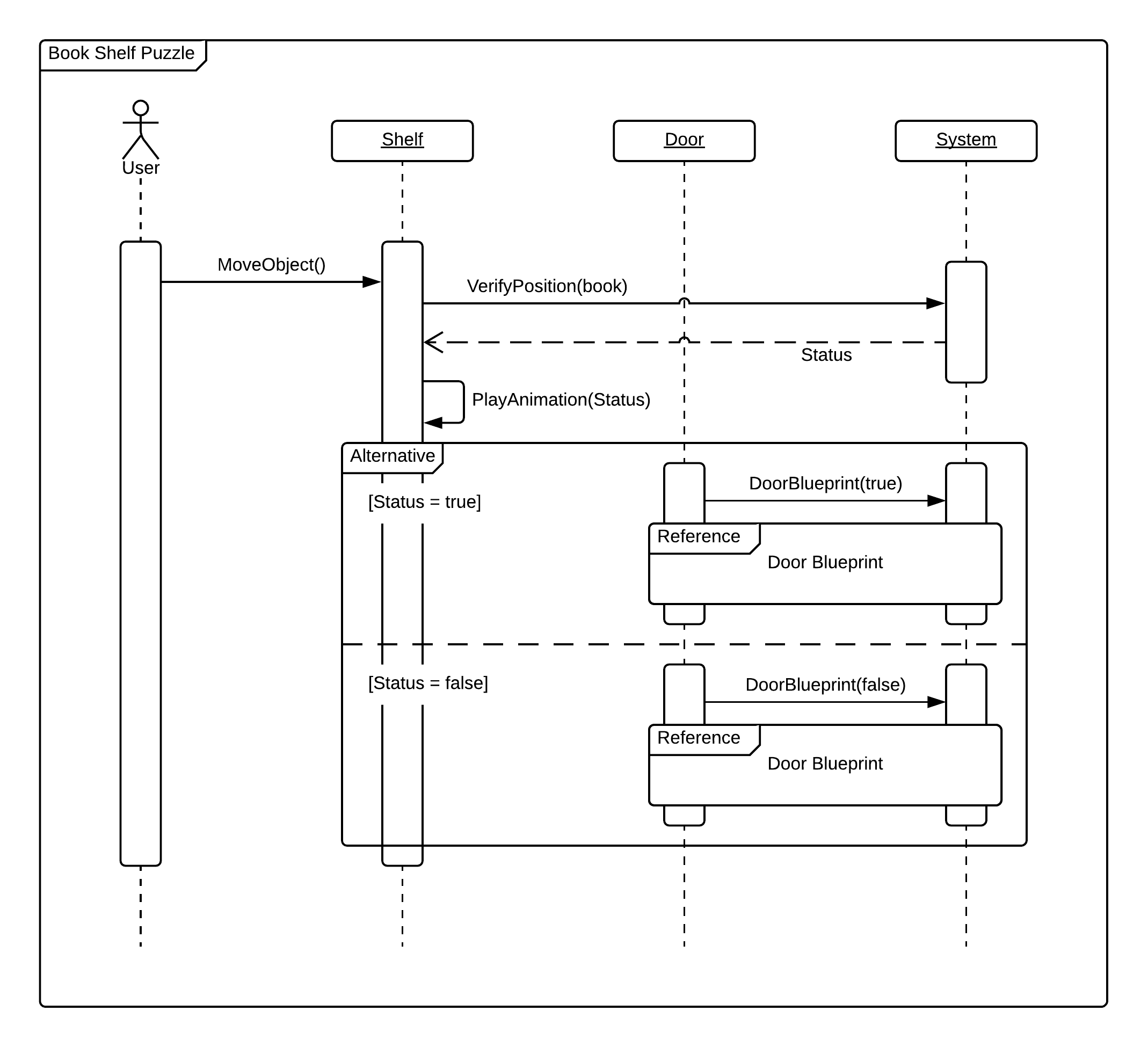
* Name: Place Book on Shelf
* Actor: User
* Preconditions: The user is able to move objects around and only books are movable.
* Description <Flow of events>:

1. The user grabs a book in the room.
2. The user places the book on the shelf.
3. The system verifies the location of the book on the shelf.
4. After all the books have been placed on the shelf, check the users solution.
5. An animation is played to notify the user of their current status.
6. Once the user solves the puzzle, notify the user and update the status for puzzle 3 in the system.

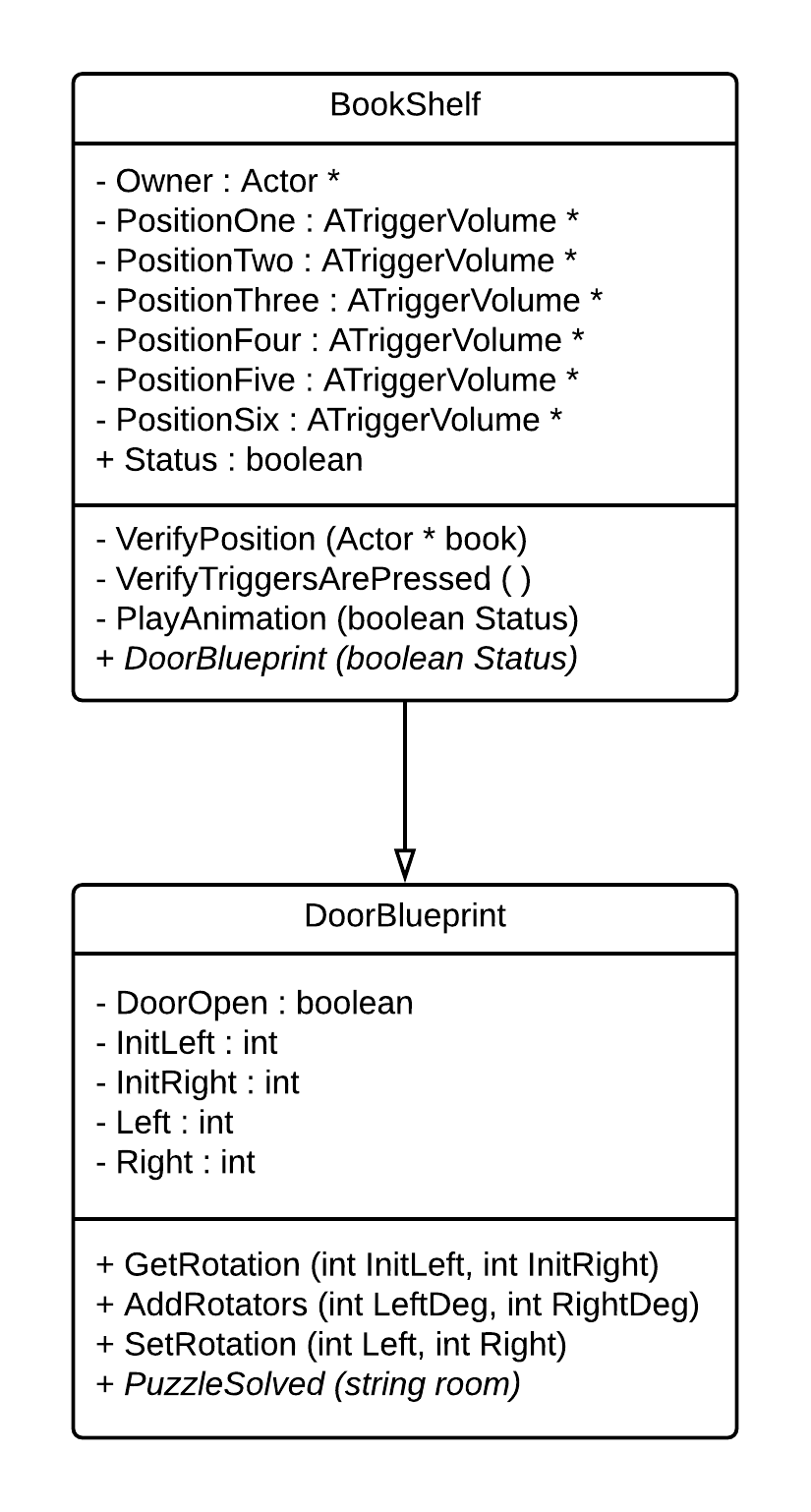
**Use Case Diagram**



**Sequence Diagram**



**Class Diagram**

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**Unit Test**

* Test case ID: verify\_trigger\_volume\_is\_assigned
* Description/Summary of Test: Makes sure there the trigger volume is not null.
* Pre-condition: N/A
* Expected Results: System notifies user that trigger volume is not active.
* Actual Result: System notifies user that trigger volume is not active.
* Status (Fail/Pass): Pass
* Test case ID: verify\_trigger\_volume\_is\_pressed
* Description/Summary of Test: Makes sure there is an object in the trigger volume.
* Pre-condition: Trigger volume is created and active.
* Expected Results: System notifies user that trigger volume is pressed.
* Actual Result: System notifies user that trigger volume is pressed.
* Status (Fail/Pass): Pass
* Test case ID: verify\_correct\_book
* Description/Summary of Test: Makes sure the current placed book matches the trigger volume.
* Pre-condition: Book has been placed on the trigger volume.
* Expected Results: System notifies correct book has been placed.
* Actual Result: System notifies correct book has been placed.
* Status (Fail/Pass): Pass
* Test case ID: verify\_incorrect\_book
* Description/Summary of Test: Notify user in case the current placed book does not match the trigger volume.
* Pre-condition: Book has been placed on the trigger volume.
* Expected Results: System notifies incorrect book has been placed.
* Actual Result: System notifies incorrect book has been placed.
* Status (Fail/Pass): Pass
* Test case ID: play\_animation
* Description/Summary of Test: Displays animation of success or fail to user once all trigger volumes have been pressed.
* Pre-condition: All trigger volumes have been activated.
* Expected Results: System notifies user by spawning a particle system animation.
* Actual Result: System notifies user by spawning a particle system animation.
* Status (Fail/Pass): Pass

**Visual User Guide** 



