**Team:** Tyler Scott Chris Rhoda

Jackson Markowski

Sean Moss

Title: Media Management System

#### **Project Summary:**

A media management system that will allow users to create an account, login, and manage different rentals or purchases of media. Media may include movies, books, music albums, etc. Administrators will be able to manage the inventory of media and the system will provide searching functionality to the user. A graphical user interface will be implemented to display the media management system to users.

#### **Project Requirements:**

There are no business requirements.

#### **User Requirements**

ID	Requirement	Topic Area	User	Priority
US-01	As a user, I want to be able to create an account.	Authentication	User	High
US-02	As a user, I want to be able to login into my account.	Authentication	User	High
US-03	As a user, I want to be able to logout of my account.	Authentication	User	High
US-04	As a user, I want to be able to rent media.	Rentals/Purchases	User	Medium
US-05	As a user, I want to be able to return my rented media before the deadline.	Rentals/Purchases	User	Medium
US-06	As a user, I want to be able to purchase media.	Rentals/Purchases	User	Medium
US-07	As a user, I want to be able to view my personal inventory.	Rentals/Purchases	User	Medium

US-08	As a user I want to be able to search the system inventory.	Rentals/Purchases	User	Medium
US-09	As an admin, I want to be able to add media to the system inventory.	Inventory Management	Admin	High
US-10	As an admin, I want to be able to remove media from the system inventory.	Inventory Management	Admin	High
US-11	As an admin, I want to be able to edit media in the system inventory.	Inventory Management	Admin	Medium
US-12	As a user, I want to add myself to a waitlist when media is not available to rent.	Rentals/Purchases	User	Low
US-13	As a user, I want to review/rate media.	Rentals/Purchases	User	Low
US-14	As a user, I want to be able to sell back purchased media.	Rentals/Purchases	User	Medium
US-15	As a user, I want to add money to my credit balance, to be used for renting or purchasing media.	Rentals/Purchases	User	Medium

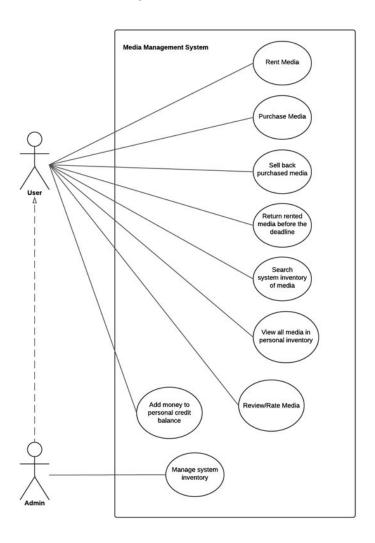
## **Functional Requirements**

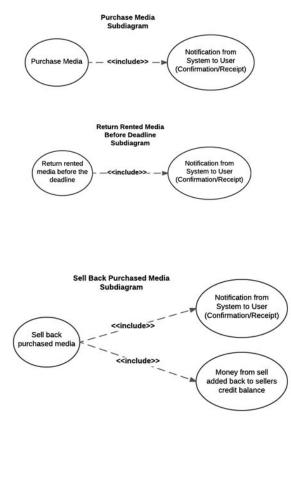
ID	Requirement	Topic Area	Priority
FR-01	When there is a waitlist for an unavailable media item, and the item is returned and becomes available, the system will automatically assign the item to the first person on the waitlist.	Inventory Management	Medium
FR-02	When the user rents, purchases, or returns media, the system will notify them through a digital receipt/confirmation.	Notifications	Low
FR-03	When media is rented by a user and the return deadline of that media occurs, if the user has not already returned the media, the system will automatically take the media out of the user's personal inventory.	Rentals/Purchases	Medium

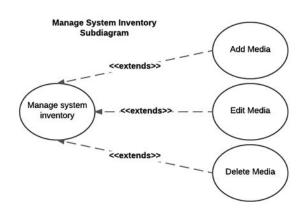
## **Non-Functional Requirements**

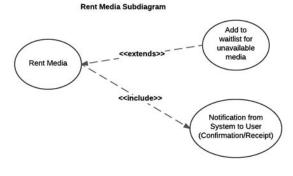
ID	Requirement	Topic Area	Priority
NFR-01	When querying the database for user credentials, user rentals/purchases, or inventory management tasks, data should be retrieved in under 5 seconds.	Performance	High
NFR-02	The system should always have accurate records of data, in particular with respect to renting media, so that users know exactly when media needs to be returned.	Reliability	Medium

#### **Use Case Diagram:**









### **Use Case Documents:**

Use Case ID:	UC-01			
Use Case Name:	Create account			
Description:	User	can create an account.		
Actors:	User			
Pre-conditions:		has an available username. has a password.		
Post-conditions:	User	has an account accessible by ch	nosen username and password.	
Frequency of Use:	Once	e per user		
Flow of Events:				
		Actor Action	System Response	
	1	Click "Create Account" button on login screen.	System asks for user credentials including email, username, and password	
	2	User inputs email, username and password, then clicks "Create" button	System creates an account for the user.	
Variations:	<ul><li>2. User inputs a username that is already in use. The system responds by telling the user to pick another username.</li><li>2. User leaves a required field blank. The system responds by telling the user to fill in required fields.</li></ul>			
Notes and Issues:	None			
Developer Notes:	None	3		

Use Case ID:	UC-02
Use Case Name:	Login to account
Description:	User can login to their account.
Actors:	User

Pre-conditions:	User already has an account created.			
Post-conditions:	User is logged into their account and can view main menu.			
Frequency of Use:	Fred	uently throughout the day by u	isers.	
Flow of Events:				
		Actor Action System Response		
	1	User inputs username and password.	The system logs in the user, and displays main menu.	
Variations:	resp	• • • •	assword or username. The system nd then asks the user to input their	
Notes and Issues:	None			
Developer Notes:	_	n screen is first screen display u is displayed.	ed and upon successful login, main	

Use Case ID:	UC-03			
Use Case Name:	Logout of account			
Description:	User can logout of their account.			
Actors:	User			
Pre-conditions:	User is currently logged in.			
Post-conditions:	User is logged out of their account.			
Frequency of Use:	Frequently throughout the day by users.			
Flow of Events:				
	Actor Action System Response			
	1 User clicks "Logout" button The system logs the user out.			
Variations:	If the user exits the application while logged in, the system will automatically log them out before termination of the application.			
Notes and Issues:	None			

Developer Notes:	User clicks "Logout" button, system will switch to the login screen.
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	1			
Use Case ID:	UC-	UC-04		
Use Case Name:	Ren	t Media		
Description:	Use	r can rent media.		
Actors:	Use	r		
Pre-conditions:	Use		urrently viewing the system inventory	
Post-conditions:		r has access to the media file ess they choose to return it e	e for a certain number of days early).	
Frequency of Use:	Fred	quently throughout the day by	/ users.	
Flow of Events:				
		Actor Action	System Response	
	1	Select the media to rent	Display rent price and the number of copies available for the media and media information such as title and description.	
	2	Click "Rent Media" button	System decrements the number of available copies, decrements amount of money for rental from user's account balance, moves media into user inventory. Also, the system sends confirmation to notify user.	
Variations:	<ol> <li>User doesn't have enough money. The system responds by informing the user that they do not have enough money.</li> <li>The system inventory is 0. The user is notified that there isn't a media file currently available, and is asked if they want to be put on a waitlist. If they are put on waitlist, they are notified that they have been put on waitlist.</li> </ol>			
Notes and Issues:	Non	e		
Developer Notes:	Non	e		

Use Case ID:	UC-05			
Use Case Name:	Return Rented Media Before Deadline			
Description:	User	can return their rented	media before the return deadline.	
Actors:	User			
Pre-conditions:	User	has rented media curre	ently in their inventory.	
Post-conditions:	User	no longer has the med	ia file they rented in their inventory.	
Frequency of Use:	Thro	ughout the day by users	s with rented media.	
Flow of Events:				
		Actor Action	System Response	
	1	User selects the rented media file they want to return in personal inventory.	System shows the return deadline and a button for returning the media early.	
	2	User clicks "Return Rented Media" button.	The system increments number of files available for the media, notifies next user on waitlist (if one exists), and deletes the media item from the user's inventory. Also, the system sends confirmation to notify user.	
Variations:	None			
Notes and Issues:	None			
Developer Notes:	None			

Use Case ID:	UC-06
Use Case Name:	Purchase Media
Description:	User can purchase a media item, keeping the item permanently in personal inventory.
Actors:	User

Pre-conditions:	User	User is logged in.		
Post-conditions:	The	The media file is in user's personal inventory permanently.		
Frequency of Use:	Freq	uently throughout the day b	by users.	
Flow of Events:		1		
		Actor Action	System Response	
	1	Select the media item that user wants to buy	System displays the selected media item's relevant information (title, description, etc.), and an option to buy.	
	2	Select "Buy" media option	The system decrements the appropriate amount of money from user, and includes that media file in the user's personal inventory. Also, the system sends confirmation to notify user.	
Variations:	2. User doesn't have enough money. The system responds by notifying the user that they do not have enough money to purchase the item.			
Notes and Issues:	None			
Developer Notes:	need	There are unlimited copies to buy for an available media. We do not need an inventory count for purchasable media. Purchasable media is separate from rentable media.		

Use Case ID:	UC-07		
Use Case Name:	View Personal Media Inventory		
Description:	User can view their media within their personal library, that they currently own/rented.		
Actors:	User		
Pre-conditions:	User is logged in.		
Post-conditions:	System is in the same state as before use-case US-07 (no post-condition).		

Frequency of Use:	Fred	Frequently throughout the day by users.		
Flow of Events:				
		Actor Action	System Response	
	1	User clicks "Personal Inventory" button	System displays user's personal inventory	
Variations:	Non	None		
Notes and Issues:	Non	None		
Developer Notes:	Non	None		

Use Case ID:	UC-	UC-08		
Use Case Name:	Sea	Search System Inventory		
Description:	Use	User can search personal/system inventory based on the title.		
Actors:	Use	r		
Pre-conditions:	Use	r is logged in.		
Post-conditions:	-	System is in the same state as before use-case US-08 (no post-condition).		
Frequency of Use:	Fred	Frequently throughout the day by users.		
Flow of Events:				
		Actor Action	System Response	
	1	User types in search criteria in search field on system inventory screen and clicks the "Search" button.	System searches for and displays media that matches search criteria.	
Variations:	No media files match criteria in the system. System responds by			
	notif	notifying the user that no matches were found.		
Notes and Issues:	Non	None		
Developer Notes:	Non	е		

Use Case ID:	UC-	UC-09		
Use Case Name:	Add	Add Media to System Inventory		
Description:	Adm	Admin can add new media to the system inventory.		
Actors:	Adm	in		
Pre-conditions:		user of the application has adm ed in. The user currently has the	•	
Post-conditions:	The	system inventory contains the r	new media.	
Frequency of Use:	Pote	entially multiple times per day by	admins.	
Flow of Events:		T		
		Actor Action	System Response	
	1	Admin selects the control for adding media to the inventory.	The system opens the window for providing information on the new media to add.	
	2	Admin enters information about the media.	The information window updates the fields to indicate the changes.	
	3	Admin selects the control for confirming media addition.	The system validates the information provided in the fields. If the information is valid, the media is added to the library system, and the new media window is closed.	
Variations:	<ol> <li>Some information provided for the new media is invalid, and the window reports this information and allows the admin to continue to edit the information.</li> <li>There already exists media with the same details in the system, the system will report this issue and not add the media.</li> <li>The admin cancels adding the media, and it is not added.</li> </ol>			
Notes and Issues:	Non	e		
Developer Notes:	Non	e		

Use Case ID:	UC-	UC-10		
Use Case Name:	Rem	Remove Media from System Inventory		
Description:	Adm	in can remove existing media to	the system inventory.	
Actors:	Adm	in		
Pre-conditions:		user of the application has admed in. The user currently has the	-	
Post-conditions:		media selected by the admin fo system.	r deletion has been removed from	
Frequency of Use:	Pote	ntially multiple times per day		
Flow of Events:				
		Actor Action	System Response	
	1	Admin selects the control for removing media from the inventory.	The system opens the window that provides a searchable list of media to remove.	
	2	Admin selects the media from the list to remove.	The list indicates in some fashion that the media has been selected for removal.	
	3	Admin selects the control for confirming media removal.	The system checks if the media marked for removal is currently checked out, then removes the media from the inventory.	
Variations:	<ol> <li>The media marked for removal is currently checked out by users. In this case, the admin gets a warning that the media is checked out. From here, the admin can cancel or confirm the removal.</li> <li>The admin cancels the removal, and the media remains in the inventory.</li> </ol>			
Notes and Issues:	None	9		
Developer Notes:	None	e		

Use Case ID:	UC-	UC-11		
Use Case Name:	Edit	Edit Media in System Inventory		
Description:	Adm	Admin can edit the details of existing media in the system inventory.		
Actors:	Adm	in		
Pre-conditions:	I	user of the application has admed in. The user currently has the	-	
Post-conditions:		media edited by the admin has ntory.	its details updated in the	
Frequency of Use:	Pote	ntially multiple times per day by	admin.	
Flow of Events:				
		Actor Action	System Response	
	1	Admin selects the control for editing media information in the inventory.	The system opens the window that provides a list of media currently in the system.	
	2	Admin selects the media to edit from the list of media.	The system brings up an info window similar to that of adding media, but the info fields are already populated with the media information.	
	3	Admin enters information about the media.	The information window updates the fields to indicate the changes.	
	4	Admin selects the control for confirming media addition.	The system validates the information provided in the fields. If the information is valid, the media is updated.	
Variations:	<ol> <li>Some information provided for the new media is invalid, and the window reports this information and allows the admin to continue to edit the information.</li> <li>There already exists media with the same details in the system, the system will report this issue and not add the media.</li> <li>The admin cancels adding the media, and it is not added.</li> </ol>			

Notes and issues:	None
Developer Notes:	None

Use Case ID:	UC-1	UC-12		
Use Case Name:	Add t	Add to Waitlist for Unavailable Rentable Media		
Description:		User is able to add themselves to a waitlist for a rentable media item when it is unavailable		
Actors:	User			
Pre-conditions:	User	User is logged in. User is viewing information page for a specific rentable media. There are 0 copies available for the specific rentable media.		
Post-conditions:	User	User is put on a waitlist.		
Frequency of Use:	Frequently throughout the day by users.			
Flow of Events:				
		Actor Action	System Response	
	1	User selects "Rent Media" option on a rentable media item.	System informs user that there are no copies currently available, and asks the user if they want to be put on a waitlist.	
	2	User selects the option to be put on the waitlist.	System adds user to waitlist queue, and notifies user that they have been added to the queue.	
Variations:	2. User decides not to be put on weitlist			
Notes and Issues:	None	User decides not to be put on waitlist.		
Developer Notes:	None			

Use Case ID:	UC-	UC-13			
Use Case Name:	Revi	Review/Rate Media			
Description:	User	is able to write a review and ra	te a media item.		
Actors:	User				
Pre-conditions:	User	is logged in and has selected a	a media item		
Post-conditions:		ew/Rating is added to the collectia item.	ction of reviews for the specific		
Frequency of Use:	Freq	Frequently throughout the day by users.			
Flow of Events:					
		Actor Action System Response			
	1	User selects "add review" in media file selected view	System displays create review screen		
	2	User enters a rating from 1 to 5 and enters a text review then hits submit	System adds the review to the media file		
Variations:		User attempts to "add review" on item they already reviewed.      System notifies user and doesn't allow another review to be added			
		2. User leaves either the rating or review text blank. System notifies users of missing information and allows them to re-enter review/rating.			
Notes and Issues:	None	None			
Developer Notes:	None	9			

Use Case ID:	UC-14
Use Case Name:	Sell Back Purchases
Description:	User is able to sell back a media item that they have previously purchased.
Actors:	User
Pre-conditions:	User has purchased media currently in their inventory.

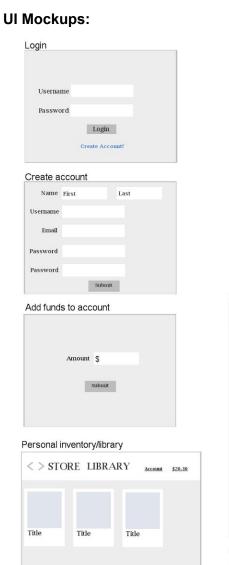
Post-conditions:	User no longer has the media file they purchased in their inventory.			
Frequency of Use:	Frequently throughout the day by users.			
Flow of Events:				
		Actor Action System Response		
	1	User selects the purchased media file they want to sell in personal inventory.	System shows the sell price and a button for selling the media.	
	2	User clicks "Sell Media" button.	The system deletes the media item from the user's inventory and adds the sell price amount to the user's account. Also, the system sends confirmation to notify user.	
Variations:	2. User decides not to sell media and cancels out of the action.			
Notes and Issues:	None			
Developer Notes:	None			

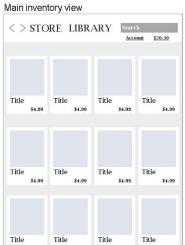
Use Case ID:	UC-15		
Use Case Name:	Add Funds to Credit Balance		
Description:	User is able to add money to credit balance. This will allow them to continue buying or renting media.		
Actors:	User		
Pre-conditions:	User is logged into their account.		
Post-conditions:	User's credit balance has the updated amount of money, equal to the previous amount plus the added amount.		
Frequency of Use:	Potentially a couple times a week by users.		
Flow of Events:			
	Actor Action	System Response	

	1	User presses button to add funds to user account.	System opens credit balance screen and prompts for amount to be added.
	2	User enters amount to be added and clicks the "Submit" button.	The system prompts the user with a confirmation window.
	3	User presses "Confirm" button on the confirmation window.	System closes the confirmation window, user account is updated with the new amount of user funds.
Variations:	2. Or 3. At any time, the user cancels the funds transfer. The user's funds are not updated.		
	2. User enters a bogus amount to be added (negative, contains characters, etc.). The system notifies the user of an incorrect amount and prompts the user for an amount again.		
Notes and Issues:	None		
Developer Notes:	None		

#### **Data Storage:**

We are planning on using a relational database to store our data. This can be achieved through Hibernate. Since we are planning on using an MVC architecture, the model (M) of MVC will contain our database and relationships (foreign keys). Also, since Hibernate allows us to use Java classes in place of database tables, the class diagram can be used to reference attributes/entities that will exist in our relational database.



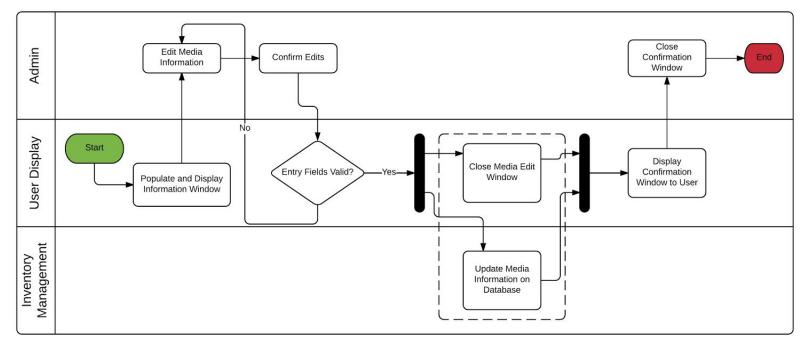


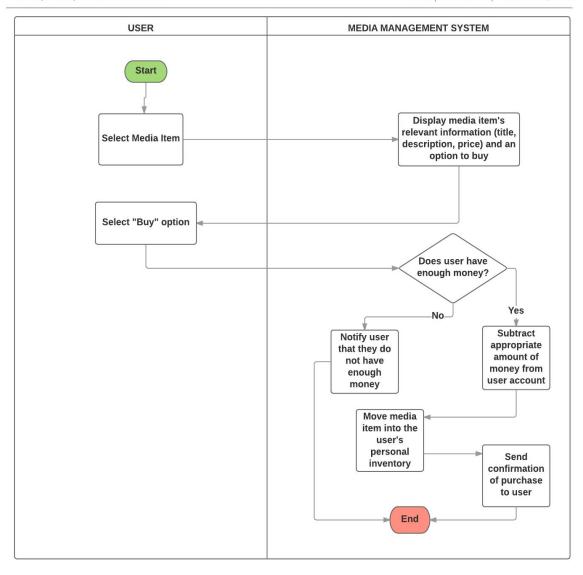




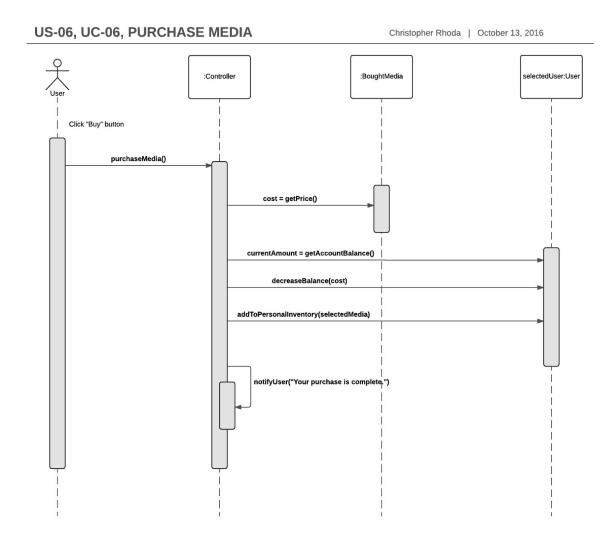
# UC-11: Admin Edit Media in System Inventory

Sean Moss

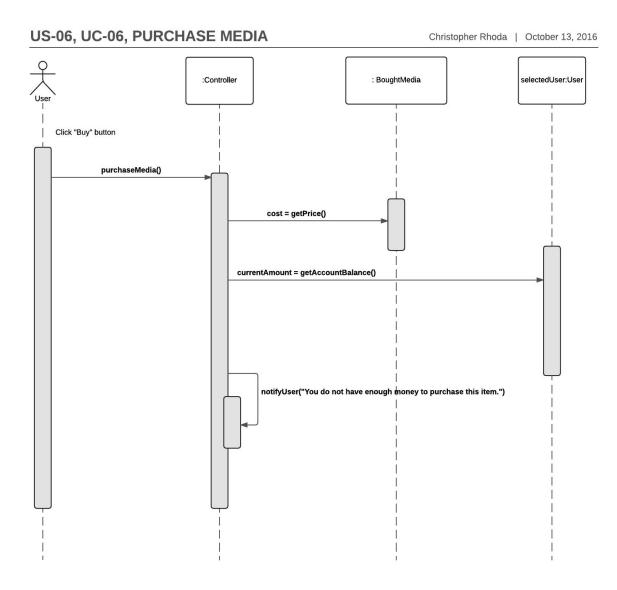




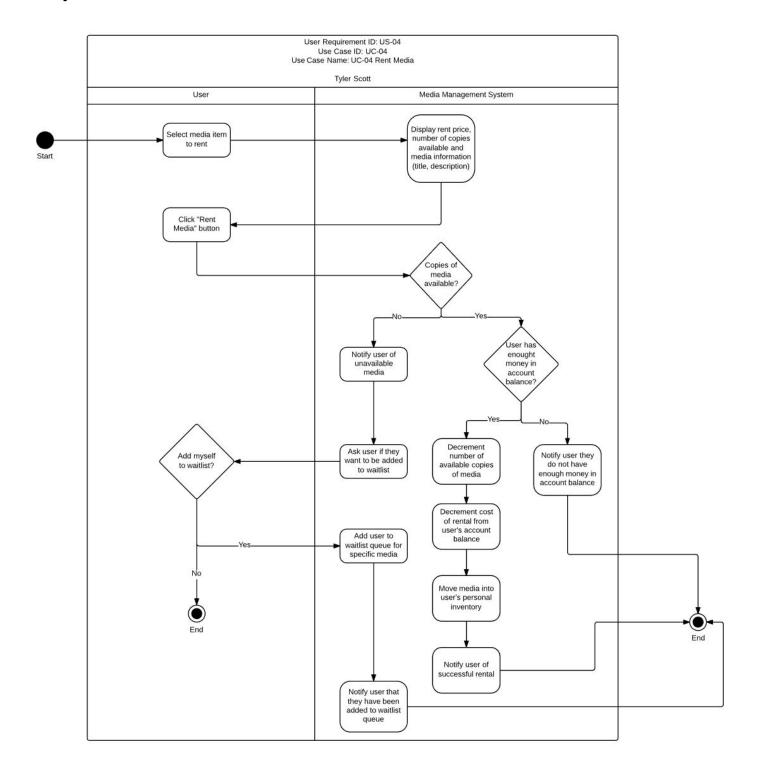
This sequence diagram is specific to the case where the user has enough money to purchase the media item (currentAmount >= cost).



This sequence diagram is specific to the case where the user doesn't have enough money in their account to cover the purchase of the media item (currentAmount < cost).

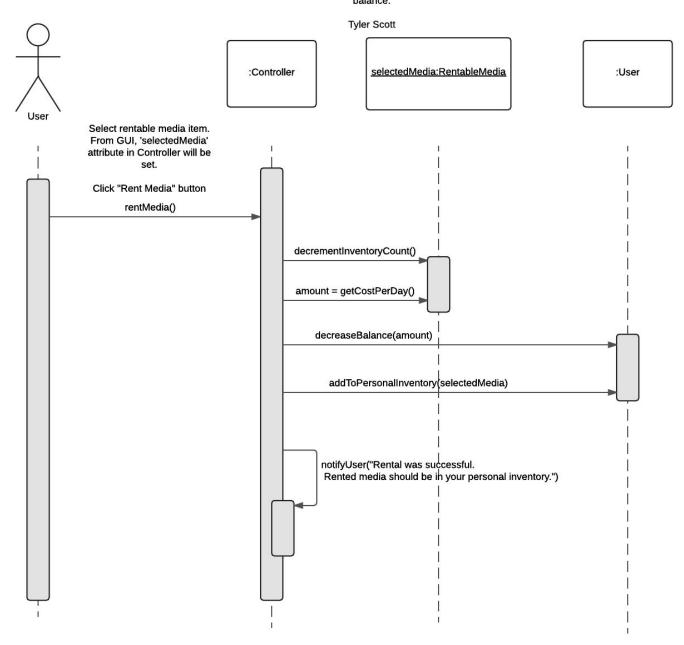


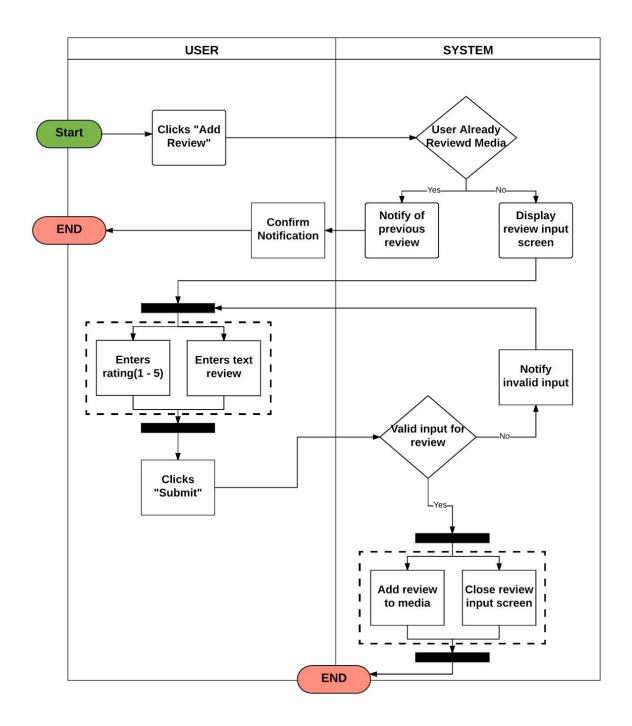
### **Tyler Scott**



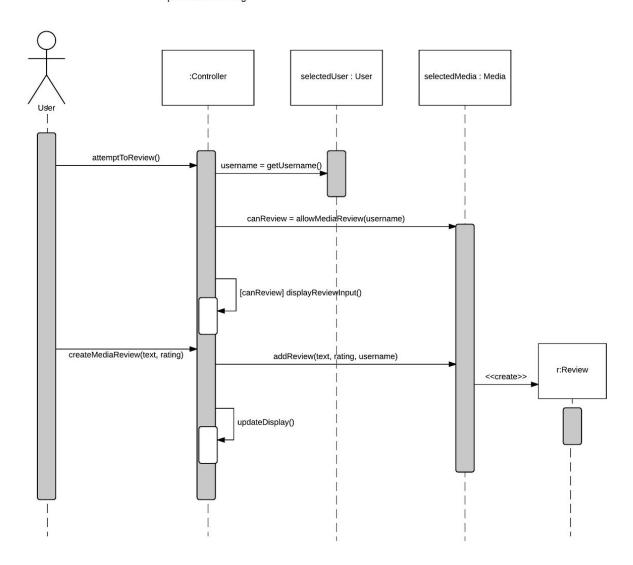
#### User Requirement ID: US-04 Use Case ID: UC-04 Use Case Name: UC-04 Rent Media

This sequence diagram is describing renting media, where there are copies of the media available and the user has enough money in their account balance.





User adding a review/rating to a media item they have not reviewed before. Prior to diagram the user has already selected a media item they plan on reviewing



#### **Class Diagram:**

