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| **Use Case ID:** | **UC1** | | |
| **Use Case Name:** | **Rent Video** | | |
| **Created By:** | Mj Miller | **Updated By:** |  |
| **Date Created:** | 28 October 2004 | **Date Updated:** |  |
| **Actors:** | Owner, Clerk | | |
| **Description:** | The *rent video* use case describes the interaction between a customer, the clerk, and the inventory control system. In particular the action of renting a video from the store. | | |
| **Preconditions:** | The video item has been recorded in the inventory and has been assigned an item identifier. | | |
| **Post-conditions:** | The inventory is updated to show that the rented items are indeed rented. The rental information includes the expected return date (the due date) and the custom renting the items. The rental transaction is recorded along with the transacting clerk and the customer / member. | | |
| **Normal Flow:** | **Rent Video**   1. The customer approaches the counter with the desired rental items. 2. The clerk requests a new transaction from the system. 3. The system prompts the clerk for the clerk’s identifier. 4. The clerk enters a correct ID. 5. The system validates the clerk’s ID. 6. The system prompts the clerk for the customer’s number. 7. The clerk enters the customer in-good-standing telephone number. 8. The system validates the customer’s ability to rent items. 9. The system prompts the clerk with an option to enter an item number or to locate inventory. 10. The clerk enters a correct, available item number. 11. The system adds the item to the transaction and updates inventory indicating that the item is unavailable. 12. Steps 9 through 11 repeat until all items have been entered. 13. The clerk indicates to the system that the item selection is complete. 14. The system presents the clerk with the total rental price. 15. The clerk collects payment from the customer. 16. The clerk records the payment. 17. The system prints a receipt. 18. The clerk explains the receipt to the customer (due dates per video). | | |
| **Alternate Flow(s):** | **Alternate flow AF-1**  4.1 The clerk enters an incorrect personal ID  The system prompts the clerk for an ID and resumes normal flow at 3.  **Alternate flow AF-2**  7.1 The clerk enters an invalid customer number  The system prompts the clerk for the customer ID and resumes flow at 6.  **Alternate flow AF-3**  10.1 The clerk enters an invalid item number  The system prompts the clerk for the customer ID and resumes flow at 9. If the item number was incorrectly entered three times the system prompts the clerk to locate inventory. When found the item number is used for the transaction. | | |
| **Exceptions:** | The incorrect video is in the box.  The clerk locates inventory and if a copy of the item is available in-store, the clerk locks the terminal and retrieves the video for the customer.  If inventory is not available the customer decides the appropriate action (continue transaction without that video, cancel transaction, continue transaction with a different video).  The customer is not a member.  The system prompts the clerk to Create membership  The customer has past-due rentals.  The system stops the current transaction until the clerk collects the calculated past-due balance and appropriate fees.  The video identifier is not on the video.  The clerk locates inventory. If a copy of the video is available, the clerk locks the terminal and retrieves the copy. The original video is placed behind the counter and the owner later corrects inventory or creates inventory. If there is only one copy of the video in inventory, the inventory item number is used to complete the transaction. If the item is not found as a result of locating inventory the clerk quick creates inventory for the item allowing the customer to continue the purchase.  The system crashes during the transaction.  The clerk continues to process the transaction but uses the backup paper-based process.  The system runs out of paper while printing the receipt.  The system notifies the clerk that the printer has run out of paper and pauses waiting for the clerk to refill the printer. When the clerk has added paper, the system reprints the receipt.  The customer cancels the transaction.  The clerk requests the system to cancel the transaction. The system returns all items to inventory | | |
| **Includes:** |  | | |
| **Priority:** | High | | |
| **Frequency of Use:** | Approximately 100 customers per day. X% of those customers are only renting items. Y% of those customers are only returning items. Z% of those customers are both renting and returning items (and those items typically are different). | | |
| **Business Rules:** | *[Typically these would be in a separate document and referenced here]*  The system must maintain information about the clerk performing the transaction.  On completion of a rental the customer is given a receipt showing:   * The name(s) and type(s) of video(s) rented * The due date for each video * The total transaction cost with the taxes indicated on a separate line * The first name and last initial of the clerk performing the transaction. * The clerk’s unique identifier (because names are not unique).   Clerk ID numbers are 6 digits  Customers with past-due amounts are not allowed to rent videos until the account’s outstanding balance is closed.  Member / customer numbers are 10 digits. The typical customer number is the customer’s phone number.  The customer must provide a valid phone number and address.  The customer should always be allowed to rent a video that doesn’t exist in the inventory system (if it’s on the shelf) assuming all other business rules are met.  All transactions are cash-only. The store does not accept credit or debit cards, checks, or foreign currency. | | |
| **Special Requirements:** |  | | |
| **Assumptions:** | Videos are stored on the shelf in their cases. The videos are not stored behind the counter.  All transactions are video rentals.  Assume that only single people rent from this store or that only one family member at a given phone number will rent. This is easy to extend but the customer has not indicated that it’s a requirement today.  Assume that different video formats are priced differently and that they have different rental periods.  A newly purchased video might be in inventory, but might not be available for rental. A lost, stolen, or destroyed video is not available for rent, but existed at one time so we can still see its history.  Assume that a returned video is on the counter and not recorded as returned until the clerk checks the video in. Thus inventory searches will show that the video is unavailable. A clerk may check the counter “inventory” and rent the item but only after checking in video. | | |
| **Notes and Issues:** | Investigate a bar code reader to reduce data input errors. These devices are low cost and should help reduce the customer wait time. | | |