Final Use-Case Elaboration

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SWDV-630: Object-Oriented Programming

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# Case: Register new salesperson

## Actors:

* + Supervisor

## Summary:

* + A supervisor grants a new salesperson access to the POS.

## Related Case:

* + Log in

## Normal Flow:

* + The supervisor logs in as administrator and initiates a new user registration.
  + The system prompt for the new user’s Personally Identifiable Information (PII).
  + Upon the supervisor confirming the submission, the system assigns a new salesperson number and login credentials.
  + The system updates the salesperson database.

## Exception Flow:

* + The system will alert the supervisor if required form fields have not been entered.
  + A salesperson cannot be registered without the required information.

## Assumptions:

* + The salesperson has turned in all required information.

## Test:

* + A supervisor registers a test salesperson.
  + A supervisor attempts to register a salesperson without the required fields.

# Case: Salesperson Log in

## Actors:

* + Salesperson

## Summary:

* + The salesperson will use this function to log into the register at the beginning of their shift. If this is a self-checkout register, the salesperson will use this function to authorize the sale of age-restricted items.

## Related Case:

* + Enter Item

## Normal Flow:

* + System displays keycard and password prompt
  + User enters credentials and submits
  + System authenticates credentials
  + Access to main salesperson GUI is granted or denied
  + Granted: the salesperson can begin a transaction

## Exception Flow:

* + If the access is denied, the system will prompt the sales person th try again (up to five times)
  + After five incorrect attempts the, register login will be locked out and supervisor will have to log in to reset it.

## Assumptions:

* + The salesperson has been assigned a key card.
  + The salesperson has entered a password in the system.
  + The salesperson has been assigned to a supervisor

## Test:

* + A registered salesperson logs in.
  + A supervisor locks out the register and uses their log in to reset it.

# Case: Enter Item

## Actors:

* + Salesperson
  + Customer

## Summary:

* + The user scans items as part of a sale, price check, return, or exchange.
  + The Items are added to the ledger of the selected transaction type.

## Related Case:

* + Execute Sale, Execute Return, Execute Exchange.

## Normal Flow:

* + A salesperson or customer enters the item to the transaction by
    - Scanning bar code.
    - Manually entering item code.
    - Selecting item hotkey on GUI.
  + The system displays the entered item on the screen showing description and price
  + If the item is age-restricted, the system will prompt a salesperson to verify the customer’s age.
  + The system adds the item to the transactions item list.
  + The system removes the item quantity from the inventory.

## Exception Flow:

* + If an item cannot be found the system will alert the user and ask to re-enter the item.
  + If after re-entering the item it cannot be found the item’s price may be manually entered via salesperson/supervisor login.

## Assumptions:

* + All items are inventoried.

## Test:

* + Begin a sale an enter an item via:
    - Scanning bar code.
    - Manually entering item code.
    - Selecting item hotkey on GUI.
  + Being a sale and enter a non-inventory item.

# Case: Process Payment

## Actors:

* + Salesperson
  + Customer

## Summary:

* + A user interacts with the system to provide funds via different payment methods in exchange for goods.

## Related Case:

* + Execute Sale

## Normal Flow:

* + The salesperson or customer chooses the payment method:
    - Cash
    - Debit
    - Credit
    - Store Credit
  + The system accepts the payment and unlocks the register for change or dispenses change.

## Exception Flow:

* + On debit/credit fail: the system indicates the payment method failure mode and prompts the user to select another method or cancel the transaction

## Assumptions:

* + None

## Test:

* + The user initiates a test sale and provides a payment for each method:
    - Cash
    - Debit
    - Credit
    - Store Credit

# Case: Execute Sale

## Actors:

* + Salesperson
  + Customer

## Summary:

* + Items entered are sold via the system.

## Related Case:

* + Enter Item(s)
  + Execute Exchange
  + Process Payment

## Normal Flow:

* + The salesperson or user begins a sale by entering an item to the transaction (sale is the default transaction type.
  + The system calculates a ${user selectable} Store Credit for every ${user selectable} spent on the sale (before taxes).
  + After a successful payment is processed the system saves the transaction to the transaction database.
  + The system updates the inventory database
  + The system prompts for a receipt selection:
    - None
    - Print
    - Email
  + If enabled, the system delivers a Store Credit Voucher via:
    - Print
    - Email

## Exception Flow:

* + If a valid payment method is not available or the sale is no longer desired, the sale will be cancelled before database changes are committed.

## Assumptions:

* + A sale transaction was selected at the system UI.
  + One or more items will be scanned or keyed-in.

## Test:

* + The user initiates a sale and enters items.
  + A test sale is conducted for every payment method available.
  + A test sale is initiated and cancelled.

# Case: Void Transaction

## Actors:

* + Salesperson
  + Supervisor

## Summary:

* + A transaction is no longer viable and must be cancelled. The user uses the system to void the current transaction.

## Related Case:

* + Execute Sale
  + Execute Return
  + Execute Exchange

## Normal Flow:

* + The salesperson commands the system to cancel the transaction.
  + The system updates the transactions’ status.
  + The system updates the inventory database as applicable.

## Exception Flow:

* + All transaction must be voidable.

## Assumptions:

* + None

## Test:

* + Initiate one of each transaction types and void (cancel) each.

# Case: Execute Return

## Actors:

* + Salesperson

## Summary:

* + A customer wishes to return an item. The salesperson will use the system to retrieve the corresponding sale and effect the return.

## Related Case:

* + Execute Sale

## Normal Flow:

* + The customer presents items to return and a receipt of the respective sale.
  + The salesperson enters the transaction/s code to retrieve it from the database.
  + The salesperson commands the system to initiate a return.
  + The system creates a return transaction with the selected items from the retrieved sale transaction.
  + The system prompts for a reason to return the item:
    - Not needed
    - Defective
  + The system updates the inventory database.
  + The system updates the transaction database.

## Exception Flow:

* + If a receipt is not provided, the item can be entered instead. If the item matches one that has been in the database, then the return can be executed.

## Assumptions:

* + The customer brings the items along with a receipt.

## Test:

* + A user initiates a test return with and without a receipt

# Case: Process Refund

## Actors:

* + Salesperson

## Summary:

* + A refund to the customer is executed when an item is returned or an exchange cannot be completed due to inventory limitations.

## Related Case:

* + Execute Return
  + Execute Exchange

## Normal Flow:

* + The salesperson initiates a refund from a Return transaction or an Exchange transaction that cannot be completed.
  + The system calculates the refund amount and prompts the salesperson for confirmation
  + Upon receiving conformation, the system either:
    - Unlocks the cash register
    - Processes a refund to the debit/credit card on file.

## Exception Flow:

* + If a refund cannot be executed on the debit/credit card used for the purchase, the system will issue a store credit voucher.

## Assumptions:

* + The customer has the debit/credit card used for the purchase at hand when requesting a refund.

## Test:

* + A user initiates a test sale then a test return and processes a refund against:
    - A cash sale return.
    - A debit sale return with the debit card at hand.
    - A debit sale return without the debit card at hand.

# Case: Execute Exchange

## Actors:

* + Salesperson

## Summary:

* + A customer wishes to exchange a purchased item for another identical or a similar one of equal price.

## Related Case:

* + Execute Sale

## Normal Flow:

* + The customer presents the items they will exchange and the receipt of the respective sale to the salesperson.
  + The salesperson retrieves the sale from the database and commands the item is exchanged.
  + The system initiates an Exchange transaction and adds the item’s code.
  + The system prompts for a reason to exchange the item:
    - Wrong size
    - Defective
  + The system updates the item inventory accordingly.
  + The system updates the transaction database.

## Exception Flow:

* + If the item cannot be exchanged, then a refund will be processed.

## Assumptions:

* + The item is still in stock

## Test:

* + A user initiates test sale then a test exchange.

# Case: Balance Register

## Actors:

* + Salesperson
  + Supervisor

## Summary:

* + At the end of the operation of the register the salesperson or supervisor wants a sales report from that terminal.

## Related Case:

* + Log in

## Normal Flow:

* + The salesperson or supervisor initiates a balance register command.
  + The system reports the history of transactions during operation to include:
    - Transaction timestamp
    - Transaction type
    - Transaction net total
    - Net total sales
  + The supervisor signs off on the register’s report or reports a discrepancy.
  + The register’s balance outcome is saved in the register balance database.

## Exception Flow:

* + If a sales report cannot be generated the system will be flagged as inoperable until the data can be retrieved.

## Assumptions:

* + A system can be commanded to balance the register a generate a sales report at any time.

## Test:

* + A user logs in as salesperson or supervisor and commands the register to generate a report.

# Case: Update Items Inventory

## Actors:

* + Salesperson
  + Supervisor

## Summary:

* + A user wishes to update the item inventory in the event of new or more item being available or existing items being decommissioned or recalled.

## Related Case:

* + Enter Items

## Normal Flow:

* + The salesperson logs in to the register.
  + The salesperson initiates an inventory update.
  + The system prompts for an item code.
  + The salesperson enters an item
  + The system prompts to update either:
    - Description
    - Quantity
    - Price
  + Upon the salesperson entering the update, the system will prompt for more changes or finish the update.
  + Upon the salesperson selecting finish, the system will update the appropriate record on the item database.

## Exception Flow:

* + If the item inventory database cannot be accessed from the POS terminal the system will be flagged as inoperable.

## Assumptions:

* + The system has access to the item’s inventory database

## Test:

* + A user enters a new item into the inventory.
  + A user updates the quantity, description or price of an existing item in the inventory.

# Case: Search Inventory

## Actors:

* + Salesperson
  + Customer

## Summary:

* + A user wishes to find the price, description or stock quantity of an item.

## Related Case:

* + Enter Items

## Normal Flow:

* + The salesperson or customer initiates an item search.
  + The system prompts the user to enter a keyword or search alphabetically.
    - If keywork is selected:
      * The system will match keywords with an item’s description.
    - If alphabetic search is selected:
      * items will be displayed alphabetically
      * navigation buttons will be displayed to skip the appropriate alphabet.
  + Once an item is selected, the system will display its:
    - Description
    - Price
    - In-stock quantity

## Exception Flow:

* + If an item cannot be found the user will be alerted and prompted to retry a different search or cancel the search.
  + The user can cancel the search at any time.

## Assumptions:

* + The user knows the nomenclature of the item they wish to search.

## Test:

* + A user searches multiple in-stock and out of stock items.