Capiral, Gilmore

HadjiAbdulmadid, Rahmah

Mila, VercilliusJr

Podiotan, Sunshine

T**opic: Point of Sale System (POSS)**

1. **Vision:**

To increase the efficiency and output of a department store business by replacing traditional cash register with a modern web-based Point-of-Sale System.

1. **Mission:**

To provide a user-friendly Point-of-Sale system that keeps track of the items sold and the total sales of every transaction in a department store. The system should also be able to provide a detailed sales report and a transaction history.

**3. Objectives:**

● Within last week of January, users must be able to log in and out of the system with their respective role (e.g. Administrator logs in as Administrator)

● Within 2nd week of February, Administrator should be able manage the users of the system (can add, remove user from the system).

● Within 4th week of February, Transaction Module is done (Administrator manages item (can add, remove items) and clerk can add transaction).

● Within 3rd week of March, the system should be able to generate sales report.

4. **Feature List**

* Log-in
* Log-out
* Add User
* Remove User
* Add Transaction
* Void Transaction
* View Transaction
* Manage Items
* Add Item Category
* Edit Item Category
* Remove Item Category
* View Clerk Performance Report
* View Product Sales Report
* View Hourly Sales Report

**5. Feature Acceptance Criteria**

* Log-in

➢User will have an access to the system and will be redirected to homepage with log-out option.

* Log-out

➢User logs out to the system and will be redirected to homepage with log-in option.

* Add User
* Users are added.
* Remove User
* Users are removed.
* Add Transaction

➢List of purchased item/s with its payment is recorded to the transaction history.

* Void Transaction

➢Transaction is marked as void and is not removed from the history.

* View Transaction

➢ View the list of sold items and the total sales of every transaction.

* Manage Items
* Items and Item Category are added, removed or updated.
* View Clerks Performance Report
* Display the clerk’s performance.
* View Product Sales Report
* Display the product sales order by number of items sold and order by sales.
* View Hourly Sales Report
* Display the hourly sales.

**6. Roles**

6.1. Administrator

6.2. Auditor

6.3. Clerk

**7. Role Attributes**

**7.1. Administrator**

● Frequency of Use- Everyday

● Domain Expertise- Excellent

● Computer Expertise- Good

● General Goals- Speed (as few steps as possible) and convenience of use

**7.2. Auditor**

● Frequency of Use- Everyday

● Domain Expertise- Excellent

● Computer Expertise- Good

● General Goals- Speed (as few steps as possible) and convenience of use

**7.3. Clerk**

● Frequency of Use- Everyday

● Domain Expertise- Fair

● Computer Expertise- Low

● General Goals- Speed (as few steps as possible) and convenience of use

**8. Persona**

**8.1. Administrator**

Kevin is an employee of the department store who owns the new point-of-sale system. Before the introduction of the automated system, he had difficulties in managing the point of sales in the department store. It’s not easy for him to track the progress of the clerks and the auditors since he cannot be at all locations at the same time. Through the new POS system, he will be able to monitor their works more closely by just staying into one computer terminal.

**8.2. Auditor**

Andrew is also an employee of the department store who owns the new point-of-sale system. Before, he has to manually examine and validate all transactions made by the clerk with the inventory of the items in the department store. Sometimes, due to huge paper works, he is unable to complete the sales report on time. Since Andrew is a computer literate person as well as an expert in accounting, he is expecting that he can submit his report on time.

**8.3. Clerk**

Samantha is another employee of the department store. Before the automated point of sale system, she has to manually write all purchased items and calculate the total sales of every transaction. This may sometimes lead to mistakes. Now, she expects that she can avoid these mistakes with the help of this new point of sale system

**9.** **User Stories and Story Acceptance Criteria**

9.1. As an Administrator or an auditor or a clerk who already has an account, I want to log-in so that I will be able to perform my tasks.

●He is redirected to home page with log-out option when username and password entered are valid.

9.2. As an Administrator or an auditor or a clerk who already has logged in the Point of Sales System, I want to log-out so that the things I have done with my account remains secure.

●He is redirected back to home page with log-in option after log-out.

9.3. As an Administrator or an auditor or a clerk, I want to view all transactions saved by the system so that I can track how many transactions have been made so far.

●He can see the list and the total number of transactions being made.

9.4. As a clerk, I want to add transaction so that I will no longer list all items purchased and calculate payment manually.

●Transaction is automatically saved in the transaction history.

9.5. As an auditor, I want to void a transaction systematically so that it will no longer be included in the final sales report.

●Transaction is marked as void but is not deleted from the transaction history.

9.6. As an Administrator, I can manage items in my store so that I can update the list of items.

●List of all items are updated and additional items are added to the store.

**10. Use Cases**

10.1. Name: Log-in

Description: User logs in to the system.

Actor: Administrator, Auditor, Clerk

Pre-condition: User has an account.

Post-condition: User is redirected to the homepage of the system with a log-out option.

Main Course:

1. User enters username and password.

Exceptions:

1a. If either or both of username and password are blank,

* Display error message stating that user must fill up all required fields.
* Repeat step 1.

1b. If username and password did not match,

* Display error message stating username and password did not match.
* Repeat step 1.

2. User is redirected to home page of the system with log-out option.

3. Use case exits.

10.2. Name: Log-out

Description: User logs out to the system and redirected to the log in page.

Actor: Administrator, Auditor, Clerk

Pre-condition: User is logged in.

Post-condition: User is redirected back to home page with log-in option.

Main Course:

1. User clicks on log-out option of the system.

2. User is logged out to the system and is redirected to log-in page of the system.

3. Use case exits.

10.3. Name: View Transaction

Description: User views transactions in the system.

Actor: Administrator, Auditor and Clerk

Pre-condition: Transaction/s should be encoded.

Post-condition: A list of transaction is shown to user.

Main Course:

1. User clicks on the transaction link.

2. A list of transactions will be shown to the user.

Alternative:

2a. If the user is logged into the system as administrator of auditor.

* Display all the transaction made by the system.

2b. If the user is logged into the system as clerk.

* Display the transaction he made.

3. Use case exits.

10.4. Name: Add Transaction

Description: Clerk adds a transaction.

Actor: Clerk

Pre-condition: Clerk enters all data needed to add transaction.

Post-condition: Transaction is added to history.

Main Course:

1. Clerk enters the cashier number.
2. Clerk redirected to the add purchased item page.
3. Enters item barcode and quantity.

Exception:

3a. Invalid barcode

* + - * Display error message
      * Repeat step 3.

3b. Not enough items left to purchased

* Display error message
* Repeat step 3.

1. Use case exits.

10.5. Name: Void Transaction

Description: Auditor voids transaction(s)

Actor: Auditor

Pre-condition: Auditor should be logged in and choose transaction/s to be voided

Post-condition: Transaction is marked as void from the transaction history.

Main Course:

1. Auditor clicks the transaction link.
2. Auditor chose the transaction to be voided and clicks the void button.
3. The auditor is redirect to the transaction page and transaction is removed from the list

of transaction

4. Use case exits.

10.6. Name: Manage Items

Description: The Administrator manages items in the store.

Actor: Administrator

Pre-condition: The Administrator should be logged in to be able to manage items.

Post-condition: List of added/updated/removed items is shown.

Main Course:

1. Administrator selects option to be done (add item, edit, or remove item)

2. The system records the changes made.

3. The system will show the list of added/updated/removed items in the store.

4. Use case exits.

10.6.1. Name: Add Item Category

Description: Administrator adds item category

Actor: Administrator

Pre-condition: Administrator is on add item category page.

Post-condition: Item category is added to the inventory

Main Course:

1. Administrator fills up add item category form.
2. Administrator clicks “add” button.

Exception:

2a. If any required field is left blank.

* Error message will be shown.
* Repeat step 1.

2b. If name is duplicated (or used again),

* Redirect to the add item category page
* Repeat step 1.

1. Administrator is redirected back to the item category page and new item category is added to the list.
2. Use case exits.

10.6.2. Name: Remove Item Category

Description: Administrator removes item category from the list.

Actor: Administrator

Pre-condition: Administrator selects item category to be removed.

Post-condition: Item category is removed from the list.

Main Course:

1. Administrator clicks “remove" button.
2. Administrator is notified and redirected back to item category page with the item category being removed from the list.
3. Use case exits.

10.6.3. Name: Edit Item Category

Description: Administrator edits an item category.

Actor: Administrator

Pre-condition: Administrator selects item category to be edited.

Post-condition: Item category is updated.

Main Course:

1. Administrator clicks “edit” button.
2. Administrator fills up edit item category page.
3. Administrator clicks “update” button.
4. Administrator is redirected to item category page and changes are saved.
5. Use case exits.

10.6.4. Name: Add item

Description: Administrator adds item

Actor: Administrator

Pre-condition: Administrator is on add item page.

Post-condition: Item is added to the inventory

Main Course:

1. Administrator fills up add item form.
2. Administrator clicks “add” button.

Exception:

2a. If any required field is left blank.

* Error message will be shown.
* Repeat step 1.

2b. If barcode is duplicated (or used again),

* Display error message.
* Repeat step 1.

2c. If Administrator entered invalid field,

* Display error message.
* Repeat step 1.

1. Administrator is redirected to the item page with new item added to the list.
2. Use case exits.

10.6.5. Name: Remove Item

Description: Administrator removes item from the list.

Actor: Administrator

Pre-condition: Administrator selects item to be removed.

Post-condition: Item is removed from the list.

Main Course:

1. Administrator selects item to be removed.
2. Administrator clicks “remove" button.
3. Administrator is redirected to item page with the item being removed from the list.
4. Use case exits.

10.6.6. Name: Edit Item

Description: Administrator edits an item.

Actor: Administrator

Pre-condition: Administrator selects item to be edited.

Post-condition: Item is updated.

Main Course:

1. Administrator clicks “edit” button.
2. Administrator fills up edit form (barcode and category\_id are uneditable).
3. Administrator clicks “update” button.
   1. If there is any invalid input.
      1. Display error message.
      2. Repeat step 2.
4. Administrator is redirected to item page and changes are saved.
5. Use case exits.

10.7. Name: Add User

Description: Administrator add user/personnel (auditor/clerk)

Actor: Administrator

Pre-condition: Administrator

Post-condition: The new user is added to the users page.

Main Course:

1. Administrator enters users credentials and password.
2. Administrator clicks “add user” button.

2a. If any required field is left blank,

* Display error message.
* Repeat step 1.

1. Administrator is redirected to users page where new user is displayed.
2. Use case exits.

10.8. Name: Remove User

Description: Administrator removes user

Actor: Administrator

Pre-condition: Administrator must select user to be removed.

Post-condition: The user is removed from the users page.

Main Course:

1. Administrator selects user to be removed.
2. Administrator clicks “remove” button.
3. Administrator is redirected to user’s page and the user removed from the user’s page.
4. Use case exits.

10.9. Name: View Hourly Sales Report

Description: Administrator view hourly sales report of the system.

Actor: Administrator

Pre-condition: Administrator must enter the start date and end date.

Post-condition: Display the list of hourly sales.

Main Course:

1. Administrator enters the start date and end date.
2. Administrator clicks “generate” button.

Exception:

2a. Invalid date

* No graph is shown.
* Repeat step 1.

2b. if any required field is left blank

* + - * Display error message.
      * Repeat step 1.

1. Display the list of sales made by the system within the given date.
2. Use case exits.

10.10. Name: View Clerk Performance Report

Description: Administrator views the performance of the clerk.

Actor: Administrator

Pre-condition: Administrator must choose clerks name.

Post-condition: Display the performance of the clerk.

Main Course:

1. Display the performance of the clerk.
2. Use case exits.

10.11. Name: View Product Sales Report

Description: Display the top 5 product ordered by number of items sold and by sales.

Actor: Administrator

Pre-condition: The administrator should be logged in to the system.

Post-condition: Display the top 5 product of the system order by number of items sold and by sales.

Main Course:

1. Administrator clicks the product sales report link.
2. Displays two tables for product sales (1st table: order by number of items sold, 2nd table: order by sales).
3. Use case exits.

**11. Test Cases**

**11.1. Log-in**

            Given (Setup)

                            User has an account. (Initial state)

                            User has the following data. (Initial state)

|  |  |
| --- | --- |
| Username | admin1 |
| password | admin1\_password |

            When (Trigger)

                            User clicks log-in button.

            Then (Verify)

                            User is redirected to home page of the system with log-out option. (Final state)

|  |
| --- |
| LOGOUT |
| HOMEPAGE |

**11.1.1. Log-in (Exception 1)**

            Given (Setup)

                            User has an account. (Initial state)

                            User has the following data. (Initial state)

|  |  |
| --- | --- |
| Username | admin1 |
| Password | Jkshdfks |

            When (Trigger)

                            User clicks log-in button.

            Then (Verify)

                            An error message will be shown stating username and /or password did not match.

Error! Username and password did not match.

|  |  |
| --- | --- |
| Username |  |
| Password |  |

**11.1.2. Log-in (Exception 2)**

            Given (Setup)

                            User has an account. (Initial state)

                            User has missing username/password. (Initial state)

|  |  |
| --- | --- |
| Username | admin1 |
| Password |  |

            When (Trigger)

                            User clicks log-in button.

            Then (Verify)

                            An error message will be shown stating that some required field is/are missing.

                            User is asked to fill-up required data.

Don’t leave any blank. Username and password are required.

|  |  |
| --- | --- |
| Username |  |
| Password |  |

**11.2. Log-out**

            Given (Setup)

User is logged in to the system. (Initial state)

            When (Trigger)

                            User logs-out.

            Then (Verify)

                            User is redirected to home page with log-in option.

|  |
| --- |
| LOG-IN |
| HOMEPAGE |

**11.3. View Transaction**

Given (Setup)

                        Auditor is logged into the system.

            When (Trigger)

                            Auditor clicks “Transaction” link.

            Then (Verify)

                            A list of purchased items will be displayed.

**11.4. Add Transaction**

            Given (Setup)

Clerk has the following data.

|  |
| --- |
| Cashier number |
| 1 |

|  |  |
| --- | --- |
| Item barcode | Quantity |
| 4809189220213 | 4 |

            When (Trigger)

                            Clerk clicks “add transaction” button.

Then (Verify)

              Transaction is added to the history of POSS. (final state of the system)

**11.4.1. Add Transaction (Exception 1)**

Given (Setup)

Clerk enters invalid item barcode.

|  |
| --- |
| Cashier number |
| 1 |

|  |  |
| --- | --- |
| Item barcode | Quantity |
| 480918aaaaa213 | 4 |

            When (Trigger)

Clerk clicks “add transaction“ button.

Then (Verify)

            Error message will be displayed.

Clerk is given an option to enter again the data.(final state)

|  |  |
| --- | --- |
| Item Id | Quantity |
|  |  |

**11.4.2. Add Transaction (Exception 2)**

Given (Setup)

Clerk enters item barcode with not enough items to purchase.

|  |
| --- |
| Cashier number |
| 1 |

|  |  |
| --- | --- |
| Item barcode | Quantity |
| 480918aaaaa213 | 4 |

            When (Trigger)

Clerk clicks “add transaction“ button.

Then (Verify)

            Error message will be displayed.

Clerk is given an option to enter again the data.(final state)

|  |  |
| --- | --- |
| Item Id | Quantity |
|  |  |

**11.5. Void Transaction**

Given (Setup)

                        Auditor has the following data.

|  |  |  |  |
| --- | --- | --- | --- |
| Timestamp | Cashier Number | Creator | Options |
| 2014-03-24 02:18:28 | 1 | Clerk1 | void | view invoice |

When (Trigger)

                            Auditor clicks “void” button.

Then (Verify)

                            Transaction is removed from the list of transaction.

**11.6 Manage Inventory**

**11.6.1. Add Item Category**

Given (Setup)

Administrator has the following data.

|  |  |
| --- | --- |
| Category Name | Kitchen Utensils |
| Description | knife, plate, spoons, forks, bowls, glasses, pots |

When (Trigger)

Administrator clicks add button

Then (Verify)

Administrator is redirected to items page showing the newly added item category.

|  |  |
| --- | --- |
| Category Name | Description |
| Frozen Foods | anything frozen, including ice cream, vegetables, fruits, etc |
| Health & Beauty | pharmacy items, shampoo, toothpaste |
| Kitchen Utensils | knife, plate, spoons, forks, bowls, glasses, pots |

**11.6.1.2. Add Item Category (Exception1)**

Given (Setup)

Administrator has the following data.

|  |  |
| --- | --- |
| Category Name |  |
| Description | knife, plate, spoons, forks, bowls, glasses, pots |

When (Trigger)

Administrator clicks add button.

Then (Verify)

Error message will be shown. Administrator is requested to fill in all required fields.

|  |
| --- |
| Please fill out this field! |

**11.6.2. Remove Item Category**

Given (Setup)

Administrator selects item to be removed.

When (Trigger)

Administrator clicks remove button.

Then (Verify)

Item category is deleted from the list and Administrator is redirected to item category page.

**11.6.3. Edit Item Category**

Given (Setup)

Administrator has the following data.

|  |  |
| --- | --- |
| Category Name | Health and Beauty |
| Description | pharmacy items, shampoo, toothpaste |

When (Trigger)

Administrator replaces category name from “Health and Beauty” to “Health and

Personal Hygiene” and clicks update button.

Then (Verify)

Administrator is redirected to item category page showing the list of item categories including the edited category.

|  |  |
| --- | --- |
| Category Name | Description |
| Dairy | milk, eggs, cheeses, etc. |
| Frozen Foods | anything frozen, including ice cream, vegetables, fruits, etc |
| Health & Personal Hygiene | pharmacy items, shampoo, toothpaste |

**11.6.3.1. Edit Item Category (Exception1)**

Given (Setup)

Administrator has left a blank field.

When (Trigger)

Administrator clicks update button.

Then (Verify)

An error message is shown. Administrator is requested to fill up blank field again.

|  |
| --- |
| Please fill out this field! |

**11.6.4 Add Item**

            Given (Setup)

                            Clerk is in the add item page.

Clerk has the following data.

|  |  |
| --- | --- |
| Barcode | 8488761126514 |
| Item Name | Datu Puti Suka |
| Item Price | 6.50 |
| Quantity | 50 |
| Description | Datu Puti Suka Budget Pack! |
| Label | 100mL |
| Category Name | Condiments |

    When (Trigger)

Administrator clicks “add” button.

Then (Verify)

Administrator is redirected to items page which will show the newly added item.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Label | Category Name | Option |
| Gardenia Loaf Bread | 1L | Bread/Bakery | DELETE | EDIT |
| Selecta Ice Cream | 6pcs/half dozen | Frozen Foods | DELETE | EDIT |
| Datu Puti Suka | 100mL | Condiments | DELETE | EDIT |

**11.6.4.1. Add Item (Exception 1)**

Given (Setup)

Administrator left a blank field.

|  |  |
| --- | --- |
| Barcode |  |
| Item Name | Eskinol Facial Cleanser |
| Item Price | 30.25 |
| Quantity | 50 |
| Description | New Eskinol Facial Cleanser Pimple fighting! |
| Label | 60Ml |
| Category Name | Health and Beauty |

When (Trigger)

Administrator clicks add button

Then (Verify)

Error message will be shown.

|  |
| --- |
| Please fill out this field! |

**11.6.4.2. Add Item (Exception3)**

Given (Setup)

Administrator input invalid field.

|  |  |
| --- | --- |
| Barcode | 4817721bbnn |
| Item Name | Eskinol Facial Cleanser |
| Item Price | 30.25 |
| Quantity | 50 |
| Description | New Eskinol Facial Cleanser Pimple fighting! |
| Label | 60mL |
| Category Name | Health and Beauty |

When (Trigger)

Administrator clicks add button

Then (Verify)

Administrator is redirected back to add item page.

**11.6.5 Remove Item**

Given (Setup)

Administrator selects item “Shampoo” to be removed from the list.

When (Trigger)

Administrator clicks remove button.

Then (Verify)

Administrator is redirected to items page and item is removed from the list.

**11.6.6. Edit Item**

Given (Setup)

Administrator changes price from “6.50” to “7.25”.

|  |  |
| --- | --- |
| Barcode | 8488761126514 |
| Item Name | Datu Puti Suka |
| Item Price | 7.25 |
| Quantity | 50 |
| Description | Datu Puti Suka Budget Pack! |
| Label | 100mL |
| Category Name | Condiments |

    When (Trigger)

Administrator clicks “update” button.

Then (Verify)

Item is updated and Administrator is redirected to items page which will show the newly updated item. (Final state of the system)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Label | Category Name | Option |
| Gardenia Loaf Bread | 1L | Bread/Bakery | Remove | edit |
| Selecta Ice Cream | 6pcs/half dozen | Frozen Foods | Remove | edit |
| Datu Puti Suka | 100mL | Condiments | Remove | edit |

**11.6.6.1 Edit Item (Exception1)**

Given (Setup)

Administrator left a blank field.

|  |  |
| --- | --- |
| Barcode | 8488761126514 |
| Item Name | Datu Puti Suka |
| Item Price | 7.25 |
| Quantity | 50 |
| Description | Datu Puti Suka Budget Pack! |
| Label |  |
| Category Name | Condiments |

When (Trigger)

Administrator clicks update button.

Then (Verify)

An error message is shown and Administrator is requested to fill in blank field.

|  |
| --- |
| Please fill out this field! |

**11.6.6.2. Edit Item (Exception2)**

Given (Setup)

|  |  |
| --- | --- |
| Barcode | 8488761126514 |
| Item Name | Datu Puti Suka |
| Item Price | 7.25dasfd |
| Quantity | 50 |
| Description | Datu Puti Suka Budget Pack! |
| Label | 100mL |
| Category Name | Condiments |

When (Trigger)

Administrator clicks “update” button.

Then (Verify)

Invalid syntax error is displayed.

**11.7. Add User**

Given (Setup)

The administrator enters the following data.

|  |  |  |  |
| --- | --- | --- | --- |
| Username | Password | Confirm Password | Role |
| Shinetots | \*\*\*\*\* | \*\*\*\*\* | Auditor |

When (Trigger)

The administrator clicks the “add” button.

Then (Verify)

The user is successfully added to the system.

**11.7.1 Add User (Exception 1)**

Given (Setup)

The administrator enters the following data.

|  |  |  |  |
| --- | --- | --- | --- |
| Username | Password | Confirm Password | Role |
| Shinetots | \*\*\*\*\* |  | Auditor |

When (Trigger)

The administrator clicks the “add” button.

Then (Verify)

Display an error message.

**11.7.2 Add User (Exception 2)**

Given (Setup)

The administrator enters the existing data.

|  |  |  |  |
| --- | --- | --- | --- |
| Username | Password | Confirm Password | Role |
| admin1 | \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* | \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* | Admin |

When (Trigger)

The administrator clicks the “add” button.

Then (Verify)

Display an error message.

**11.8. Remove User**

Given (Setup)

Administrator selects the user “Kuroko” to be removed from the list.

When (Trigger)

Administrator clicks “remove” button.

Then (Verify)

Administrator is redirected to the users page and user is removed from the list.

**11.9. View Hourly Sales Report**

Given (Setup)

The administrator has the following data.

|  |  |
| --- | --- |
| 03/13/2014 | 03/20/2014 |

When (Trigger)

The administrator clicks the “generate” button.

Then (Verify)

Display the graph and table of hourly sales report.

**11.10. View Clerk Performance Report**

Given (Setup)

The administrator is in the clerk performance report page.

When (Trigger)

The administrator clicks the “Kuroko No Basuke”.

Then (Verify)

The system display the transactions made by the clerk.

|  |  |
| --- | --- |
| Date Created | Total Transaction |
| 03-24-2014 | Php 458.5 |
| 03-23-2014 | Php 1064.95 |
| 03-04-2014 | Php 1700.1 |
| 02-24-2014 | Php 2826.25 |

**11.11. View Product Sales Report**

Given (Setup)

The administrator is logged into the system.

When (Trigger)

The administrator clicks the “Product Sales” link.

Then (Verify)

Display the two tables 1st – products order by number of items sold, 2nd- products order by sales.