Grocery Store Management System

Kaleb Moore

Herzing University

4/24/2022

IS342-8

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# Introduction

This product helps manage various operations in the grocery store. This includes processing customer checkouts, processing customer returns, customer service loyalty, and various backend operations. Some of these operations are inventory reports, daily reports, truck unloading tracking and delivery plans.

# Objectives

A certified software tester should test all critical systems to make sure they are functional. The project leader should verify that their team stays on track with the testing scope and pass any documentation to the project manager. The end objective is to verify that the system works without any major errors and that it functions how it should (Rice, 2022).

# Scope

Test the checkout operations clarifying that it takes both mobile and paper coupons for various price reductions. Testing to verify checkout accepts Visa, Mastercard, gift card, in-store credit, cash or check to pay for the customer’s balance. If a membership card is scanned or membership id provided, membership prices are applied. When items are returned if they have the receipt full payment is returned, if there is no receipt the lowest price of the year will be provided. Allow for users to input customer memberships and create new ones as well as track what items each individual member buys. Furthermore, this system will be tested to verify that various reports are created with correct information based on their purpose (Rice, 2022).

# Testing Strategy

## Features to be Tested:

* System accepts Visa, Mastercard, gift card, in-store credit, cash, and checks for payment
* Accepts coupons for price reduction
* Adds loyalty specials if customer is member
* Returns are either added to store credit or currency given to customer
* Inventory reports are giving the correct information
* Inventory from truck is being added to the total inventory of the store.

## Approach:

* + We will be inputting any necessary data, such as card number, coupon number and inventory numbers/amounts, to verify each action is being taken as planned.

## Item Pass / Fail Criteria:

* If the results returned are different from results expected, test cases fail

## Schedule:

* 20 hours total

## Assumptions and Dependencies:

* We assume that no fatal errors will occur (2022)

# Test Cases

## TC001

* 1. Summary: Verify Checkout operations accepts various coupons
  2. Prerequisites:
     1. User is authorized
     2. Coupon codes/barcodes obtained
  3. Test Procedure:
     1. Input items displayed for coupons
     2. Scan or input coupon barcodes
     3. View checkout summary screen
  4. Test Data:
     1. Items for coupons: Oranges, Nutty Butters, and waffles
     2. Coupon Codes: 1232121, 2234221, 5556543
  5. Expected Result:
     1. Item price will be reduced to coupon standards and new total shown on screen.
     2. Message “Invalid coupon” is displayed if coupon is already scanned or out of date.
  6. Actual Result:
  7. Status:

## TC002

* 1. Summary: Verify Checkout operations accepts various types of payment
  2. Prerequisites:
     1. Obtain Visa, Mastercard, Gift card numbers, and cash/checks
  3. Test Procedure:
     1. Input items for purchase
     2. Choose payment option
     3. Input card, cash or check
     4. Input pin number if needed
  4. Test Data:
     1. Price Totals: 2.00, 99, 100, 200, 202, 299
     2. Cards used: Mastercard, Visa, Gift card
     3. Cash/Checks: USD bills minimum 1 of each bill, checks from Huntington, Chase, KeyBank.
  5. Expected Result:
     1. Money transferred from card to store.
     2. Cash/check: reduces total to $0.00 and returns any change necessary.
     3. Message “insufficient funds” if cash or check does not meet required amount.
     4. Message “Card Declined” displayed if cards have insufficient funds.
  6. Actual Result:
  7. Status:

## TC003

* 1. Summary: Verify Checkout operations apply loyalty specials to members
  2. Prerequisites:
     1. User is a member
     2. Items scanned have loyalty specials
  3. Test Procedure:
     1. Input loyalty special items
     2. Scan membership card or input members phone number
     3. Go to Checkout screen
  4. Test Data:
     1. Items for coupons: Oranges, Nutty Butters, and waffles
     2. Loyalty reward prices: 3.99 – 2.99, 4.32 – 4.00, 15.49 – 13.20
  5. Expected Result:
     1. Item price will be reduced to loyalty standards and new total shown on screen.
     2. Message “Unable to find membership” displayed if members phone number is not found in their membership database.
  6. Actual Result:
  7. Status:

## TC004

* 1. Summary: Verify returns give correct amount of currency\instore credit back
  2. Prerequisites:
     1. Customer has Item that has been checked out of store
  3. Test Procedure:
     1. Input item to be returned
     2. Scan receipt if one is available
     3. If no receipt input no receipt
  4. Test Data:
     1. Items for returns: Oranges, Nutty Butters, and waffles
     2. Prices bought: 4.99, 6.99, 15.02
     3. Receipt given: yes, yes, No
     4. Lowest yearly prices: 3.99, 6.99, 13.99
  5. Expected Result:
     1. Items with receipts, balance taken away from store to customer or store credit added to customer’s account.
     2. No receipt, store credit is added to customer’s account for items lowest yearly price
  6. Actual Result:
  7. Status:

## TC005

* 1. Summary: Verify System is tracking loyalty members purchases
  2. Prerequisites:
     1. User is authorized
     2. Customer has loyalty account
  3. Test Procedure:
     1. Purchase item with test account
     2. Enter systems database to loyalty member’s table
     3. Verify items are added
     4. Print loyalty report showing trends counted by the system
  4. Test Data:
     1. Items for tracking: Oranges, Nutty Butters, and waffles
     2. Number of times bought: 22, 3, 15
  5. Expected Result:
     1. Item will be added to loyalty member’s table
     2. Loyalty trend report shows amounts of times visited, most common items bought, loyalty prices vs regular prices.
  6. Actual Result:
  7. Status:

## TC006

* 1. Summary: Verify inventory report is generated correctly
  2. Prerequisites:
     1. User is authorized
     2. Number of items that should be in store
  3. Test Procedure:
     1. Check out 15 items
     2. Generate inventory report
  4. Test Data:
     1. Items for checkout: Oranges, Nutty Butters, and waffles
     2. Amount Checked out: 4, 10, 1
  5. Expected Result:
     1. Items taken from store will be subtracted from inventory count
     2. Inventory report will display amount of product in store, amount that the store should have, trends for product consumption.
     3. Report is sent to the correct destination
  6. Actual Result:
  7. Status:

## TC007

* 1. Summary: Verify inventory is updated after truck
  2. Prerequisites:
     1. Truck order is inputted to system
  3. Test Procedure:
     1. Start truck scanning program
     2. Scan truck items
     3. Scan Truck invoice
     4. Submit scanned items
  4. Test Data:
     1. Items for coupons: Oranges, Nutty Butters, and waffles
     2. Item cases gained: 22, 56, 4
  5. Expected Result:
     1. Items scanned are added to a temporary database for the manager to review
     2. Scanned invoice compares what the invoice says they should have received compared to what was scanned.
     3. A notification will be given “There are missing/too many items scanned” if there are differences of items scanned and items on the invoice.
     4. When submitted, all item amounts are added to their respective amounts in store.
  6. Actual Result:
  7. Status:

(2022)

# GSMS Test Cases

## Case 1

I chose this test because if coupons are not being supported properly this can cause customer dissatisfaction and lead to reduced sales. Coupons should only reduce the one items price to the specific amount and if this is not being done it could cost the company money as well as throw off the systems daily reports.

## Case 2

This test was chosen to make sure that various payment types were accepted so that the system can different customer types. Furthermore, without this test some of these payment types may not work and will deny customers based on system errors rather than customer error. Having a system that can accept various payment types supports and encourages different customers to enter and buy from their store.

## Case 3

The loyalty test is used to ensure that the system can provide what the store is advertising and not cause customers dissatisfaction. The system should keep track of what loyalty sales are being used currently and when a loyalty member enters their identification then it should use the loyalty price rather than the regular price. Testing this is verifying that loyalty members are getting the correct price as well as verifying the system is not giving the loyalty prices instead of the regular prices to nonmembers.

## Case 4

This test is to verify customers that return items are receiving the correct currency or credit back based on their purchase. If there are errors with this portion of the system it could lead to customers gaining not enough or too much store credit leading to the company losing money. In addition, if there is no receipt scanned the system should take from the lowest price of the year rather than the current pricing to avoid customer complaints.

## Case 5

Testing the tracking of loyalty member’s purchases is important because the system could return false data which would then could cause the managers to make inaccurate decisions based on that data. Decisions based on inaccurate data could lead to the downfall of an organization so it is important to make sure that all data is as accurate as possible.

## Case 6

This test is to verify that the inventory report is giving accurate numbers of what is in the store. This allows managers to plan ahead and avoid item shortages. If the inventory report is producing inaccurate numbers, it could lead to the management order too much product, wasting money, or ordering not enough which would lead to a shortage and increase customer dissatisfaction. This is important because the store makes money selling products and without those products the store will have to shut down or fail somewhere else.

## Case 7

This test is to verify that items are being counted correctly by the system and to let the managers know if there are discrepancies with the invoice and what was received. If this is not working correctly, it will negatively affect the inventory report as well as truck orders. Making sure that systems, that count and report inventory, are working correctly is one of the most important areas to test due to how large their impact on the company is.

# Risks

* Delays in testing may require an additional 8 hours based on issues.

# Approvals

(Names and Dates)

# Resources

Rice, R. (2021). *What is a test plan? The Complete Guide for writing a Software Test Plan*. PractiTest. Retrieved April 22, 2022, from https://www.practitest.com/qa-learningcenter/best-practices/write-a-test-plan/

*Sample test plan document (test plan example with details of each field)*. Software Testing Help. (2022, April 3). Retrieved April 22, 2022, from https://www.softwaretestinghelp.com/test-plan-sample-softwaretesting-and-quality-assurance-templates/