

Test Suit Design

SUPERMARKET AUTOMATION SYSTEM (SAS)

KULKARNI BHUSHAN

12CS30016

VATSALYA CHAUHAN

12CS10053

1. INTRODUCTION

1.1 Objectives

The software test plan is aimed at verifying the functionality and correct working of every aspect and part of the software. The software should not cease to work correctly when it has been exposed to stress and all corner cases should be handled effectively.

1.2 Testing Strategy

Testing is the process of analysing a software item to detect the differences between existing and required conditions and to evaluate the features of the software item.

Specific test plan components include:

- Purpose for this level of test
- Tests
- Pass / Fail criteria
- Hardware/ software requirements
- Reported bugs

1.3 Scope

Testing will be performed at several points in the life cycle as the product is constructed. Testing is a very 'dependent' activity. As a result, test planning is a continuing activity performed throughout the system development life cycle. Test plans must be developed for each level of product testing.

2. TESTS

2.1 Features to be tested:-

All the use cases are thoroughly tested by white box testing and black box testing. The databases are checked after every use case and if they do not match with the expected outcome, they are reported to be failed.

2.2 Features not to be tested:-

- JDBC MySQL connector

2.3 Interface Testing

The software has been tested on machines with different configurations (for example computers with different operating systems like Windows or Linux) and the functionality of the interface has been verified.

2.4 Security Testing

Password validation system has been implemented for each user and checks are done at appropriate points of time to ensure consistency. Whenever any transaction is made in any account (be it salary/ mess etc.) the details of the transaction are stored in our logs and these logs show up in our account statement when the warden exercise his use case to generate account statements. This minimizes the possibility of financial fraud.

2.5 Performance Testing

Each of the use cases are tested with respect to their response times and are implemented in such a way that the response time is as small as possible. To achieve the number of SQL queries that are made while carrying out a particular use case is at most two.

2.6 Use Case Testing

The following use cases were checked to cover all **Corner Cases** as far as possible:-

1. Use Cases: Manager

1.1. Login

Description: Initiated when a user tries to access his account. The user is then Prompted to enter in their username and password in order to Proceed.

Input: username: manager

Password: jkl

Output: {FAILURE} Warning: please fill all the columns correctly.

Input: username: manager

Password: password

Output: {SUCCESS} Manager panel is displayed.

1.2. Change Password

Description: allows manager to change password.

Input: initial password: man

New password: password

Confirm new password: password

Press OK.

Output: {FAILURE} Warning: You entered wrong current password.

Input: initial password: m

New password: p

Confirm new password: password

Press OK.

Output: {FAILURE} Warning: New password and Confirm new password must be same.

Input: initial password: m

New password: password

Confirm new password: password

Press OK.

Output: {SUCCESS} password of manager is changed successfully.

1.3. Add Employee

Description: Allows the manager to hire new employee in the supermarket

Input: Name: mohit bansal

Username: mohit

Address : RK Hall

Phone no.: 12345

Password: password

Output: {FAILURE} Warning: Please fill all columns correctly. (because phone no. is not 10 digits long)

Input: Name: abc

Username: abc

Address:

Phone no.: 123454567890

Password: password

Output: {FAILURE} Warning: Please fill all columns correctly. (because address is not entered)

Input: Name: manav kedia

Username: manav

Address: Nehru hall

Phone no.: 123454567890

Password: password

Output: {FAILURE} Warning: Sales Clerk already exists.

Input: Name: Rahul gurnani

Username: rahul

Address: RP Hall

Phone no.: 9123456789

Password: fourth

Output: {SUCCESS} New Sales clerk added.

1.4. Remove Employee

Description: allows manager to remove an employee.

Input: name: rakesh

Username: r

Output: {FAILURE} Employee doesn't exist.

Input: name: rakesh

Username:

Output: {FAILURE} Warning: Enter all details.

Input: name: b

Username: b

Output: {SUCCESS} Do you really want to remove b? ->YES: b is removed from the job.

1.5. Change Item Price

Description: Manager can change item price.

Input: Click on Blank button (having no name written)

New price: 1.0

Output: {FAILURE} Warning: Please give ID first.

Input: Click on 'Munch' button

New price: 1.0.1.3

Output: {FAILURE} Warning: Input format is Incorrect.

Input: Type 'b6' in ID textfield.

New price: 475

Output: {SUCCESS} Price is changed.

Input: Click on 'charger' button

New price: 475

Output: {SUCCESS} Price is changed. New price is displayed in the details of 'Munch' item.

1.6. Add to Inventory

Description: to add new item or supply of existing item to inventory.

Input: ID: ab123

Quantity: 1.2.3

Profit/unit: 1.0

Output: {FAILURE} Warning: Input format is incorrect.

Input: ID: ab126

Quantity: 2

Profit/unit: 2

Output: {SUCCESS} supply was added.

Input: ID: calc

Quantity: 20

Profit/unit: 75

Output: Please enter name and unit price

Input: name: calculator

Unit price: 1000

{SUCCESS} Item added to inventory.

1.7. Show Sales Statistics

Description: Allows the manager to view the sales statistics

Input: Click on Sales Statistics button without clicking any of item button.

Output: {FAILURE} Warning: Please give ID first.

Input: ID: ab123

Click on Sales Statistics button.

Output: Give dates panel is displayed to enter the duration.

Input: dd/mmm/yyyy : 05/Jan/2014

dd/mmm/yyyy : 03/Jan/2014

Output: {FAILURE} Warning: Dates are improper.

Input: dd/mmm/yyyy : 01/Apr/2014

dd/mmm/yyyy : 16/May/2014

Output: {SUCCESS} Sales table is displayed.

Input: ID: Click on Item button 'munch'.

Click on Sales Statistics button.

Output: Give dates panel is displayed to enter the duration.

Input: dd/mmm/yyyy : 05/Jan/2014

dd/mmm/yyyy : 03/Jan/2014

Output: {FAILURE} Warning: Dates are improper.

Input: dd/mmm/yyyy : 01/Apr/2014

dd/mmm/yyyy : 16/May/2014

Output: {SUCCESS} Sales table is displayed.

1.8. See Inventory

Description: Allows the manager to view the details of items in inventory

Input: Click on See Inventory button.

Output: {SUCCESS} Inventory Details are displayed in table showing serial number, name, Unitprice and Available Quantity of each item.

1.9. Get Item Details

Description: Allows the manager to view the details of item.

Input: Click on Item button 'Dairymilk'

Output: {SUCCESS} item details name, ID, unitprice, available quantity and Profit/unit are displayed on The top of window in corresponding textfields.

1.10 Log Out

Description: The customer should have the option to logout from his account when he is not going to be active for some time.

Input: Click on Log out button.

Output: {SUCCESS} logged out.

2. Use Cases: Sales Clerk

2.1 Login

Description: Initiated when a user tries to access his account. The user is then Prompted to enter in their username and password in order to Proceed.

Input: username: manav

Password: f1

Output: {FAILURE} Warning: please fill all the columns correctly.

Input: username: manav

Password: first1

Output: {SUCCESS} Sales Clerk panel is displayed.

2.2. Add Supply

Same as 1.6

2.3. Change Password

Description: allows sales clerk to change password.

Input: initial password: f1

New password: password

Confirm new password: password

Press OK.

Output: {FAILURE} Warning: You entered wrong current password.

Input: initial password: first1

New password: p

Confirm new password: password

Press OK.

Output: {FAILURE} Warning: New password and Confirm new password must be same.

Input: initial password: first1

New password: password1

Confirm new password: password1

Press OK.

Output: {SUCCESS} password of clerk is changed successfully.

2.4. Register sales

Description: Sales clerk enters items ID and Quantity.

Input: ID: ab123

Quantity: 1.0.12

Output: {FAILURE} Warning: input format is incorrect

Input: ID: jami

Quantity: 3.5

Output: {SUCCESS} Item 'Munch' including unit price is added to the table showing sale. Total is updated by adding total price.

2.5. Print Receipt

Description: Allows the sales clerk to print the bill.

Input: Click on Print Receipt Button.

Output: {SUCCESS} Receipt containing entries in table is printed.

2.6. Log Out

Description: The customer should have the option to logout from his account when he is not going to be active for some time.

Input: Click on Log out button.

Output: {SUCCESS} logged out.

3. PASS / FAIL CRITERIA

3.1 Suspension Criteria

The test is considered suspended if any of the following is encountered:-

- The software crashes
- It results in wrong output

3.2 Approval Criteria

The test is considered suspended if any of the following is encountered:-

- The correct results are obtained
- The software does not much time to achieve the aforementioned criteria.

4. ENVIRONMENTAL REQUIREMENTS

4.1 Hardware

- Working internet connection
- MySQL should be installed on an appropriate server so that it can handle simultaneous request from various users.

4.2 Software

- Operating System: Windows/ Linux
- Java should be installed (preferably JDK 7)
- JDBC libraries should be included
- MySQL should be installed

5. BUGS REPORTED

- Change Item Price: If manager enters wrong ID of an item to change its price, program crashes, since Price changing facility is given by clicking button of corresponding item also, otherwise entering proper ID is expected.
- Show sale statistics: If manager enters wrong ID of an item to see statistics, program crashes, since this facility is given by clicking button of corresponding item also, otherwise entering proper ID is expected.
- Print Receipt: Even if table is empty, Receipt is printed, showing empty table.