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| **FPT UNIVERSITY** |
| Capstone Project Document |

**SMART MEDICINE DICTIONARY**

Report #1 - Introduction

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| |  |  | | --- | --- | | **Smart Medicine Dictionary** | | | **Group Members** | |  |  | | --- | --- | | Lê Thị Xuân | 01913 | | Phạm Huy Khôi | 01888 | | Phạm Minh Tú | 01770 | | Phạm Hà Hải | 01727 | | Ngô Hà Thu | 01522 | |  |  | | | **Supervisor** | Mr. Nguyễn Văn Sang | | **Project code** | SMD |   - Hanoi, 8/2013- |

**Table of Contents**

[5 SOFTWARE TESTING 3](#_Toc364102440)

[5.1 INTRODUCTION 3](#_Toc364102441)

[5.1.1 Purpose 3](#_Toc364102442)

[5.1.2 System Overview 3](#_Toc364102443)

[5.2 TEST PLAN 4](#_Toc364102444)

[5.2.1 Scope of testing 4](#_Toc364102445)

[5.2.2 Requirement for testing 4](#_Toc364102446)

[5.2.3 Test strategy 5](#_Toc364102447)

[5.3 TEST CASES 10](#_Toc364102448)

[5.4 CHECKLIST 10](#_Toc364102449)

[5.4.1 Check list about Home page 22](#_Toc364102450)

[5.4.2 Check list about validation 22](#_Toc364102451)

[5.4.3 Submission check list 23](#_Toc364102452)

[5.5 TEST LOGS 25](#_Toc364102453)

[5.5.1 Defect logs 25](#_Toc364102454)

[5.5.2 Test report 25](#_Toc364102455)

# SOFTWARE TESTING

## INTRODUCTION

### Purpose

The purpose of this document is to plan all the activities needed to perform testing for the system including test strategy and test control. This document also defines scope, requirements, and constraints, risks of testing stages.

### System Overview

SMD is an online system that can run in both web application and Android devices so it is flexible and convenient to use every time and everywhere that can connect to the internet. The system is divided into multiple modules for each specific kind of user. The combination of these modules makes the workflow of the whole system become unified, so that it can work fluently

* **On web module**, that system provides these main functions:
  + **Manage medicine information**

System just allows user who logins as Administrator have permission to manage medicine information. So that they can search/ add new/ edit/ delete/ restore medicine information as they want.

With normal user, they only have permission in add new medicine into the selling list of their pharmacy

* + **Manage pharmacy information**

Administrator user will also have permission to manage pharmacy information. They can accept or reject or delete every pharmacies information which has problem

Normal user can only apply their own pharmacy into system after being accepted by admin

* + **Search medicine**

Everyone who uses that system can make search with medicine information.

* + **Search pharmacy**

Everyone who uses that system can make search with pharmacy information.

* + **Find the nearest pharmacy**

Everyone who uses that system can easily find out the pharmacy that is near by their location by input their position

* + **View news**

Everyone who uses that system can up to date with medical information through that software

* **Mobile module** has these main functions:
  + **Search medicine**

Everyone who uses that system can make search with medicine or pharmacy information.

* + **Find the nearest pharmacy**

Everyone who uses that system can easily find out the pharmacy that is near by their location by accessing their mobile GPS satellite

* + **Diary**

This feature just runs on mobile version. User can save their medicine taking schedule to be alarmed on time

## TEST PLAN

### Scope of testing

The scope of testing in the project include:

* **Stages of testing**: the team has responsibility to conduct Unite testing, Integration testing and System testing
* **Types of testing**: The test team have to test functional and user interface testing
* **Range of testing**: Team performs testing all functions defined in the SRS based on the approved version. Test cases of each function are defined in the Test cases document that will be tested to determine if they meet the requirements and intermediate result will also be checked according to the SRS

### Requirement for testing

#### Test items

|  |  |  |
| --- | --- | --- |
| **No** | **Group of functions** | **Functions** |
| Mobile module | | |
|  | Mobile module | Search medicine |
|  | View Medicine Details |
|  | Find the nearest pharmacy |
|  | Pharmacy detail information |
|  | Medical Diary |
| Web module | | |
|  | Search medicine | Search medicine |
|  | Medicine advance search |
|  | Search pharmacy | Pharmacy advance search |
|  | Find the nearest pharmacy |
|  | News | View News |
|  | Add News |
|  | Edit News |
|  | Delete News |
|  | Account control | Register |
|  | Login |
|  | Logout |
|  | <Pharmacy user> Change information |
|  | <Pharmacy user> Change password |
|  | <Pharmacy user> Add new selling medicine |
|  | <Pharmacy user> Remove selling medicine |
|  | Manage pharmacy information | Search registered pharmacy |
|  | Accept registered pharmacy |
|  | Deny registered pharmacy |
|  | Delete pharmacy |
|  | Manage medicine information | Search medicine |
|  | Add new medicine |
|  | Copy new medicine |
|  | Edit medicine |
|  | Delete medicine |
|  | Restore medicine |

#### Acceptance Test Criteria

* System does not have customers to perform acceptance test.

#### Constraints

* Duration of testing is from 30-Jul to 10-Aug
* Testing team only has 2 members
* The program has many functions so the number of line code is also, lead to have more number of test cases.

#### Risk list

The project could face with some risks:

* Tester has not familiar with Android OS so that the progress testing is slower than plan, team may not keep the deadline as plan
* Test devices may go off
* Lack of time and resources for testing

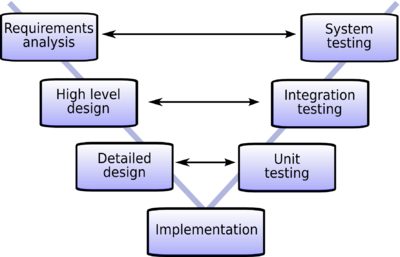
### Test strategy

#### Test policy

* “Test without good faith”
* “Find bugs as soon as possible and always make sure they have been fixed”
* “No outstanding high severity faults”
* “Ensuring the product covers key features and attributes requirements”

#### Test model

Using V-Model to implement testing process



**Figure 5-1:** V-Model to implement testing process

Due to scope of SMD project and project must always fulfill user requirements. With V-Model, software development is separated into two appropriate phases’ groups: development and testing. Testing phase is carried out simultaneously from the early of project, the requirement specification phase. Therefore, tester could study and understand the entire requirement as well as business of project

Moreover, there are many variations among planning, design and implementation during the whole project. To catch up with all changes and ensure logic as well as business, V-model is chose as a solution to help testers control and follow the actual workflows.

This testing is executed to ensure that all requirements mentioned in SRS, included both functional requirements and non-functional requirements which are implemented correctly.

* **Technique:**
* **Integration test**: Base on requirement in SRS and validation in database, test team will test as black box testing method to check if the input and output display as expected and does that flow work fluently
* **System** **testing**: Based on requirements in SRS, test team will create scenarios for system testing (ST) to ensure project’s business. In ST, tester will create test cases based on these scenarios and run to verify functional and non-functional requirements.
* **Completion criteria:**
* All planned test cases have been executed compared with expected result in test cases.
* System test cases must be green (passed) at least 97%
* All defects must be logged into test documents and re-tested after it is fixed.
* All defects, which are accepted by customer or project technical leader and project manager, will be marked as accepted and not be retested.
* All defects must be resolved or accepted.
* These criteria will be applied for all test types.
* **Special considerations:**
* Test databases will be required
* Testing may be stopped when
* Time runs out
* A certain number of defects found
* Test coverage > 97%
* Stop when testing becomes unproductive.

#### Type of testing

##### Functional Testing

Function testing of the target-of-test should focus on any requirements for test that can be traced directly to use cases or business functions and business rules.  The goals of these tests are to verify proper data acceptance, processing, and retrieval, and the appropriate implementation of the business rules.  This type of testing is based upon black box a 1application via the Graphical User Interface (GUI) and analyzing the output or results.  Identified below is an outline of the testing recommended for each application

|  |  |
| --- | --- |
| Test Objective: | The type of this test is to ensure proper target-of-test functionality, including user interaction, all function defined in specification document implemented correctly. |
| Technique: | The test team will execute each use case, use-case flow, or function, using valid and invalid data, to verify the following:   * The expected results occur when valid data is used. * The appropriate error or warning messages are displayed when invalid data is used. * Each business rule is properly applied. |
| Completion Criteria: | All planned tests have been executed.  All identified defects have been addressed and closed |
| Special Considerations: | Testing may be stopped when   * Time runs out * A certain number of defects found * Test coverage > 97% * Stop when testing becomes unproductive |

**Table 5-1:** Functional testing

##### User Interface Testing

User Interface (UI) testing verifies a user’s interaction with the software. The goal of UI testing is to ensure that the User Interface provides the user with the appropriate access and navigation through the functions of the target-of-test.  In addition, UI testing ensures that the objects within the UI function as expected and conform to corporate or industry standards.

|  |  |
| --- | --- |
| Test Objective: | Verify the following: Navigation through the target-of-test properly reflects business functions and requirements, including window-to-window, field-to-field, and use of access methods (tab keys, mouse movements, accelerator keys |
| Technique: | Create or modify tests for each page to verify proper navigation and object states for each page |
| Completion Criteria: | Each window successfully verified to remain consistent with benchmark version or within acceptable standard |

**Table 5-2:** User Interface testing

#### Test stage

Clearly state the stage in which the test will be executed. Identified below are the stages in which common test are executed

|  |  |  |  |
| --- | --- | --- | --- |
| Type of Tests | Stage of Test | | |
| Unit | Integration | System |
| Function Test | x | x | x |
| User Interface test | x |  | x |

**Table 5-3:** Test stages

#### Tools

|  |  |  |  |
| --- | --- | --- | --- |
| Purpose | Tool | Vendor/In-house | Version |
| Access to website | Chrome |  |  |
| Firefox |  |  |
| Run the software | Android OS device |  | Android OS 2.3.3 or upper |
| Keep tracking defects | MS Word |  | Office 2010 & 2013 |
| Test Plan | MS Word |  | Office 2010 & 2013 |
| Test Case, Test Report | MS Excel |  | Office 2010 & 2013 |

**Table 5-4:** Tools

#### Resources

This table shows the staffing assumptions for the project.

|  |  |
| --- | --- |
| Worker/Doer | Specific Responsibilities/Comments |
| Ngô Hà Thu  Phạm Hà Hải | * Manage Test resource and assign test tasks * Create Test Plan * Review Test Cases * Create Test Report * Execute Test |

**Table 5-5**: Human resource

## Test cases

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test case ID** | **Test case Title** | **Test procedure** | **Expected result** | **Result** | **Test date** | **Assign** |
|  | **Register** |  |  |  |  |  |
|  | - User role: Pharmacy Users  - Pre-condition: The Home screen is displayed | | |  |  |  |
|  | Visitor registers successfully | 1. Visitor clicks on "Register" button on top right of website.  2. Visitor input valid data in all field required in both step 1 and step 2  3. Visitor click on “Finish Register” button | System redirect to homepage and display username of user in the top of website |  |  |  |
|  | Visitor register unsuccessfully | 1. Visitor clicks on "Register" button on top right of website.  2. Visitor input invalid data  3. Click “Finish Register” button | System show error message beside invalid fields |  |  |  |
|  | Check mandatory | 1. Visitor clicks on "Register” button on top right of website.  2. Visitor keep mandatory fields blank  3. Visitor click on “Finish Register” button" | Return error message to inform that "User must input here" |  |  |  |
|  | Check duplication | "1. Visitor clicks on "Register” button on top right of website.  2. Visitor input main information (email, address,…) which is similarly to existed account  3. Visitor click on “Finish Register” button | Return error message to inform that "That information has existed" |  |  |  |
|  | Check email form | 1. Visitor clicks on "Register" button on top right of website.  2. Visitor input invalid email form (eg: x@) | The system display error message to inform that "email is invalid" below email text box |  |  |  |
|  | Check Confirm password is not similar with password | 1. Visitor clicks on “Register” button on top right of website.  2. Visitor input 2 different string into “password” and "confirm password” text box | The system shows a message "The value in confirm password is not the same with password" on the screen |  |  |  |
|  | Amend “Password” after input “Confirm password” | 1. Visitor clicks on “Register” button on top right of website.  2. Visitor input a password into “password” and “confirm password” text box  3. Re-input into “password” text box with different string | Clear “confirm password” text box and inform user to input again |  |  |  |
|  | Check Confirm password is similar with password | 1. Visitor clicks on “Register” button on top right of website.  2. Visitor input the same string into both “password” and “confirm password” text box  3. Fill valid value to another field of both step 1 and step 2  4. Click “Finish Register” button | Display “Process complete successfully” message |  |  |  |
|  | Input “Street, village” or “Number, lane” fields when both “City” and “District” fields blank | 1. Visitor clicks on “Register” button on top right of website.  2. Finish step 1 then switch to step 2  3. Skip “City” and “District” fields blank  4. Try to fill into “Street, village” or “Number, lane” fields | Display error message below “City” and “District” fields to inform that “User must fill it” |  |  |  |
|  | Choose the District before City | 1. Visitor clicks on “Register” button on top right of website.  2. Finish step 1 then switch to step 2  3. Skip “City” and “District” fields blank  4. Click into “District” field | Cannot show district suggested list and display error message below “City” field to inform that “user must fill it” |  |  |  |
|  | Input “Street, village” or “Number, lane” fields when “District” fields blank | 1. Visitor clicks on “Register” button on top right of website.  2. Finish step 1 then switch to step 2  3. Choose a city in city suggested list  4. Skip “District” field blank  5. Try to fill into “Street, village” or “Number, lane” fields again | Display error message below “District” field to inform that “user must fill it” |  |  |  |
|  | Input “Street, village” or “Number, lane” fields after choosing “City” and “District” value | 1. Visitor clicks on “Register” button on top right of website.  2. Finish step 1 then switch to step 2  3. Choose a value in both “City” and “District” drop down list  4. Fill into “Street, village” or “Number, lane” fields | User can insert into that text box |  |  |  |
|  | Register after login | 1. User login system as Pharmacy user  2. Click on “Register” tab  3. Click “Skip Step 1” button  4. Fill all fields in step 2  5. Click on “Finish register” button" | The system shows a message “Process completed successful” on the screen |  |  |  |
|  | 1. User login system as Pharmacy user  2. Click on “Register” tab on submenu  3. Keep all fields blank  4. Click on “Finish step 1” button  5. Fill all fields in step 2  6. Click on “Finish register” button" | Auto-fill all fields of step 1 by user information then display “Process completed successful" message |  |  |  |
|  | 1. User login system as Pharmacy user  2. Click on “Register” tab on submenu  3. Fill all fields in step 1 which is different from their registered information  4. Click on “Finish step 1” button  5. Fill all fields in step 2  6. Click on “Finish register” button" | Display “Process completed successful” then save Register data as new representative |  |  |  |
|  | **Pharmacy User / Administrator login** | |  |  |  |  |
|  | - User role: all users - Pre-condition: User must have account on system | | |  |  |  |
|  | Login the system successfully | 1. Click on "Login" tab on Submenu 2. Input valid email and password then click on "Login" button | Redirect to Home page. In the top right of page, show account that user has logged in. |  |  |  |
|  | Login the system unsuccessfully | 1. Click on "Login" tab on Submenu 2. Input invalid email or password or both then click on "Login" button | The error message "Invalid user name or password" is displayed on the login screen |  |  |  |
|  | Login the system with feature remember password of web browser successfully | 1. Click on "Login" tab on Submenu 2. Click on "Login" button | Redirect to Home page. In the top right of page, show account that user has logged in. |  |  |  |
|  | Login the system with feature remember password of web browser by another account successfully | 1. Click on "Login" tab on Submenu 2. Insert another valid account and password then click on "Login" button | Redirect to Home page. In the top right of page, show account that user has logged in. |  |  |  |
|  | Login system after changing information | 1. Click on "Login" tab on Submenu 2. Input valid email and password then click on "Login" button | Redirect to Home page. In the top right of page, show account that user has logged in. |  |  |  |
|  | Login system successfully after changing password | 1. Click on "Login" tab on Submenu 2. Input valid email and new password then click on "Login" button | Redirect to Home page. In the top right of page, show account that user has logged in. |  |  |  |
|  | Login system unsuccessfully after changing password | 1. Click on "Login" tab on Submenu 2. Input valid email and old password then click on "Login" button | The error message "Invalid user name or password" is displayed on the login screen |  |  |  |
|  | **User / Admin logout** | |  |  |  |  |
| - User role: all users - Pre-condition: User must have account on system | | | | | | |
|  | User logout successfully | 1. User login successfully  2. User clicks on "Exit" button on top right of website. | Redirect to Home page, require user to log in. |  |  |  |
|  | Admin logout account successfully from admin page | 1. User login successfully as admin user  2. Admin clicks on "Exit" button on top right of admin page. | Redirect to Home page, require user to log in. |  |  |  |
|  | **Homepage screen** |  |  |  |  |  |
| - User role: all users - Pre-condition: User must access to website | | | | | | |
|  | Homepage GUI | 1. User insert URL of that website into internet browser | Display Home page with 4 parts: Banner, Submenu, Content (Medicine Quick Search, News), Contact and information |  |  |  |
|  | Check submenu feature | 1. User insert URL of that website into internet browser  2. Click into each feature in submenu | System switch to the right screen of chosen feature |  |  |  |
|  | Medicine Quick Search | 1. User insert URL of that website into internet browser  2. Insert medicine name into text box  3. Click “Search” button | - Return search result  - Return error message to inform that data not found |  |  |  |
|  | Medicine Advance Search | 1. User insert URL of that website into internet browser  2. Click on “Advanced Search” Hyper link below “Search” button  3. Insert element information of the medicine that be searched  4. Click “Search” button | - Return search result  - Return error message to inform that data not found |  |  |  |
|  | Reading news feature | 1. User insert URL of that website into internet browser  2. Click on “News” tab  3. Click on a new title | Switch to new screen of that article in detail |  |  |  |
|  | **Find the nearest pharmacy** | |  |  |  |  |
| - User role: all users - Pre-condition: User must access to website | | | | | | |
|  | Find nearest pharmacy GUI | 1. User insert URL of that website into internet browser  2. Click on “Find nearest pharmacy” on submenu | Display Find nearest pharmacy screen with 4 parts: Banner, Submenu, Content (Text box, Google map, list of 5 best pharmacy), Contact and information |  |  |  |
|  | Find nearest pharmacy feature | 1. User insert URL of that website into internet browser  2. Click on “Find Nearest pharmacy” on submenu  3. Insert an address of the area that you want to find out  4. Click search button | Display that area on Google map  Icon of the nearest pharmacy will be highlighted |  |  |  |
|  | See the detail information of the pharmacy on map | 1. User insert URL of that website into internet browser  2. Click on “Find Nearest pharmacy” on submenu  3. Insert an address of the area that you want to find out  4. Click search button  5. Click on the icon of the pharmacy you want to go | Display detail information of that pharmacy on a popup |  |  |  |
|  | **Pharmacy module** | |  |  |  |  |
| - User role: Pharmacy user - Pre-condition: User must access to website | | | | | | |
|  | Register new pharmacy information | 1. User insert URL of that website into internet browser  2. Click on “Register” on submenu | Display Register screen with 4 parts: Banner, Submenu, Content , Contact and information |  |  |  |
|  | Change pharmacy information | 1. User insert URL of that website into internet browser  2. Click on user name hyperlink on the right top corner of the screen | Displays user information screen |  |  |  |
|  | Add new sold medicine | 1. User insert URL of that website into internet browser  2. Login as pharmacy user  3. Click on Manage submenu  4. Choose a pharmacy that needs to be edit  5. Click on “Selling list” tab  6. Click on “add new” button  7. Search for medicine you want to add  8. Click “Add” button | Chosen medicine has been added to selling list successfully |  |  |  |

## Checklist

### Check list about Home page

|  |  |  |  |
| --- | --- | --- | --- |
| **Question** | **Yes** | **No** | **N/A** |
| Navigation space is the same on all page |  |  |  |
| Do feature buttons on submenu display with the right role of users? |  |  |  |
| Do Quick search part display right below submenu? |  |  |  |
| Display advertisement below Quick search part on Homepage |  |  |  |
| Do feature button link to the right page? |  |  |  |
| Does contact information part display at the bottom of the page? |  |  |  |

### Check list about validation

|  |  |  |  |
| --- | --- | --- | --- |
| **Question** | **Yes** | **No** | **N/A** |
| If the user enters an invalid value and clicks on the OK button is the invalid field identified and highlighted correctly with an error message? |  |  |  |
| Do all mandatory fields require user input? |  |  |  |
| For all numeric fields check whether negative numbers cannot and should not be able to be entered. |  |  |  |
| Does username require the right form of an email? |  |  |  |
| Can input password less than 9 characters? |  |  |  |
| Can edit mandatory fields? |  |  |  |

### Submission check list

|  |  |  |  |
| --- | --- | --- | --- |
| **Question** | **Yes** | **No** | **N/A** |
| **TABLES AND FIGURES** | | | |
| Does every table column, including the stub column, have a heading? |  |  |  |
| Are all tables referred to in text? |  |  |  |
| Is lettering in a figure no smaller than 12 points and no larger than 14 points? |  |  |  |
| Are all figures and tables mentioned in the text and numbered in the order in which they are mentioned? |  |  |  |
| **REFERENCES** | | | |
| Are references cited both in text and in the reference list? |  |  |  |
| Do the text citations and reference list entries agree both in spelling and in date? |  |  |  |
| Are website links in the reference list typed fully? |  |  |  |
| Have all referenced information noted with their sources? |  |  |  |
| **FORMAT** | | | |
| Do all pages have header and footer? |  |  |  |
| Does margin display as: Top: 2.5cm, Bottom: 2.5cm, Left: 3.5cm, Right: 2cm for the whole report? |  |  |  |
| Is “Time New Roman” font used for the whole report? |  |  |  |
| Are all pages numbered in sequence, starting with the title page? |  |  |  |
| **PARAGRAPHS AND HEADINGS** | | | |
| Is each paragraph longer than a single sentence but not longer than one manuscript page? |  |  |  |
| Are all paragraph distributed as justify format? |  |  |  |
| Does all normal text have font size as 12point? |  |  |  |
| Is the line spacing multiple at 1.15 for the whole report? |  |  |  |
| Do the levels of headings accurately reflect the organization of the report? |  |  |  |
| Do all headings of the same level appear in the same format? |  |  |  |
| **USABILITY** | | | |
| Are the entire field prompts spelt correctly? |  |  |  |
| Are fonts too large or too small to read? |  |  |  |
| Are names in command button & option box names are not abbreviations. |  |  |  |
| Assure that option boxes, option buttons, and command buttons are logically grouped together in clearly demarcated areas "Group Box" |  |  |  |
| Can the typical user run the system without frustration? |  |  |  |
| Does the site have a consistent, clearly recognizable "look-&-feel"? |  |  |  |
| Is all terminology understandable for all of the site’s intended users? |  |  |  |
| **USER INTERFACE TESTING-COLOR** |  |  |  |
| Are hyperlink colors standard? |  |  |  |
| Are the field prompts the correct color? |  |  |  |
| Are the field backgrounds the correct color? |  |  |  |
| Are the screen and field colors adjusted correctly for non-editable mode? |  |  |  |
| Does the site use (approximately) standard link colors? |  |  |  |
| Are all the buttons are in standard format and size? |  |  |  |
| Is the general screen background the correct color? |  |  |  |
| Is the page background (color) distraction free? |  |  |  |
| **USER INTERFACE TESTING-CONTENT** |  |  |  |
| All fonts to be the same |  |  |  |
| Are all the screen prompts specified in the correct screen font? |  |  |  |
| Is all text properly aligned? |  |  |  |
| Is the text in all fields specified in the correct screen font? |  |  |  |
| Is all the headings left aligned? |  |  |  |
| Does the first letter of the second word appear in lowercase? |  |  |  |

## TEST LOGS

### Defect logs

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Module name** | **Defect** | **Priority** | **Status** | **Assign to** | **Fix on** | **Retest on** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

### Test report

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Name** | Smart Medicine Dictionary | **Creator** | ThuNH |
| **Project Code** | SMD | **Reviewer/Approver** | SangNV |
| **Document Code** |  | **Issue Date** | August 1­­0th 2013 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Module code** | **Pass** | **Fail** | **Untested** | **N/A** | **Number of test cases** |
| **Mobile module** | | | | | | |
| 1 | Search medicine |  |  |  |  |  |
| 2 | View Medicine Details |  |  |  |  |  |
| 3 | Find the nearest pharmacy |  |  |  |  |  |
| 4 | Pharmacy detail information |  |  |  |  |  |
| 5 | Medical Diary |  |  |  |  |  |
| **Web module** | | | | | | |
| 6 | Search medicine |  |  |  |  |  |
| 7 | Medicine advance search |  |  |  |  |  |
| 8 | Pharmacy advance search |  |  |  |  |  |
| 9 | Find the nearest pharmacy |  |  |  |  |  |
| 10 | View News |  |  |  |  |  |
| 11 | Add News |  |  |  |  |  |
| 12 | Edit News |  |  |  |  |  |
| 13 | Delete News |  |  |  |  |  |
| 14 | Register |  |  |  |  |  |
| 15 | Login |  |  |  |  |  |
| 16 | Logout |  |  |  |  |  |
| 17 | <Pharmacy user> Change information |  |  |  |  |  |
| 18 | <Pharmacy user> Change password |  |  |  |  |  |
| 19 | <Pharmacy user> Add new selling medicine |  |  |  |  |  |
| 20 | <Pharmacy user> Remove selling medicine |  |  |  |  |  |
| 21 | Search registered pharmacy |  |  |  |  |  |
| 22 | Accept registered pharmacy |  |  |  |  |  |
| 23 | Deny registered pharmacy |  |  |  |  |  |
| 24 | Delete pharmacy |  |  |  |  |  |
| 25 | Search medicine |  |  |  |  |  |
| 26 | Add new medicine |  |  |  |  |  |
| 27 | Copy new medicine |  |  |  |  |  |
| 28 | Edit medicine |  |  |  |  |  |
| 29 | Delete medicine |  |  |  |  |  |
| 30 | Restore medicine |  |  |  |  |  |
|  | **Sub total** |  |  |  |  |  |