

## Chapter - 04 Modeling and System Design

UML diagrams are used as the designing technique of Test Automation Framework.

### 4.1 Activity Diagrams

#### 4.1.1 Release Test Plugin

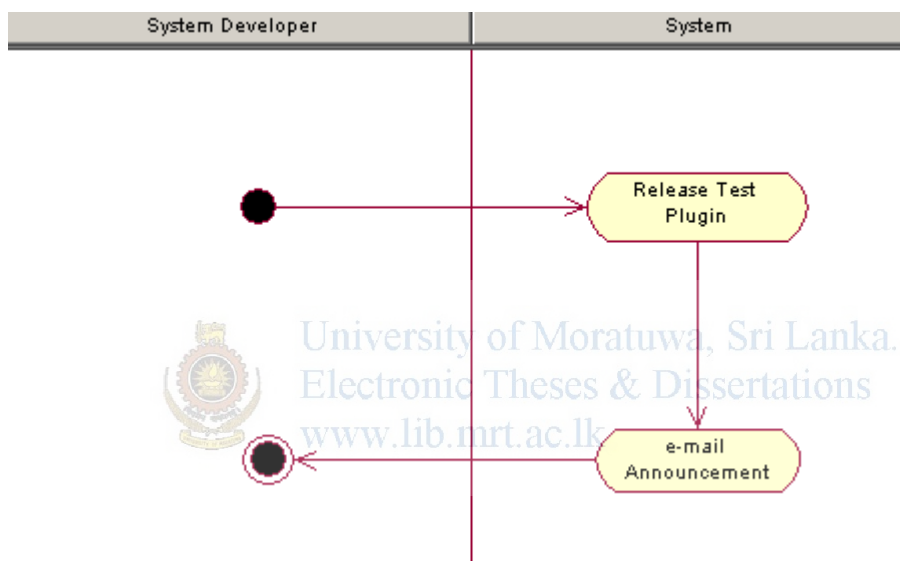


Figure 4-1 Release Test Plugin

#### Scenario Summary

The following flows are included in this use case.

Basic Flow: System developer release test plugins

Sub Flow A: e-mail announcement will create

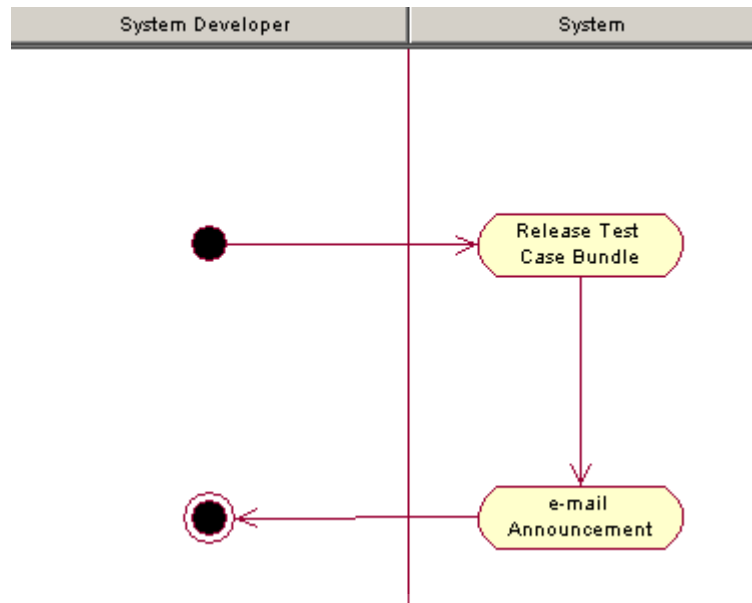
#### Actors

System Developer

#### Basic Flow: System developer release test plugins

This is the default (happy path) path that the release of test plugins. When system developer develops plugins he/she needs to release it. When he is releasing system will automatically generate an email to the users.

### 4.1.2 Release Test Case Bundle



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Figure 4-2 Release Test Case Bundle

#### Scenario Summary

The following flows are included in this use case.

Basic Flow: System developer release test case bundles

Sub Flow A: e-mail announcement will create

#### Actors

System Developer

#### Basic Flow: System developer release test plugins

This is the default (happy path) path that the release of test bundles. When system developer develops new scripts he/she needs to release it as a bundle. When he is releasing system will automatically generate an email to the users.

### 4.1.3 Install Plugin

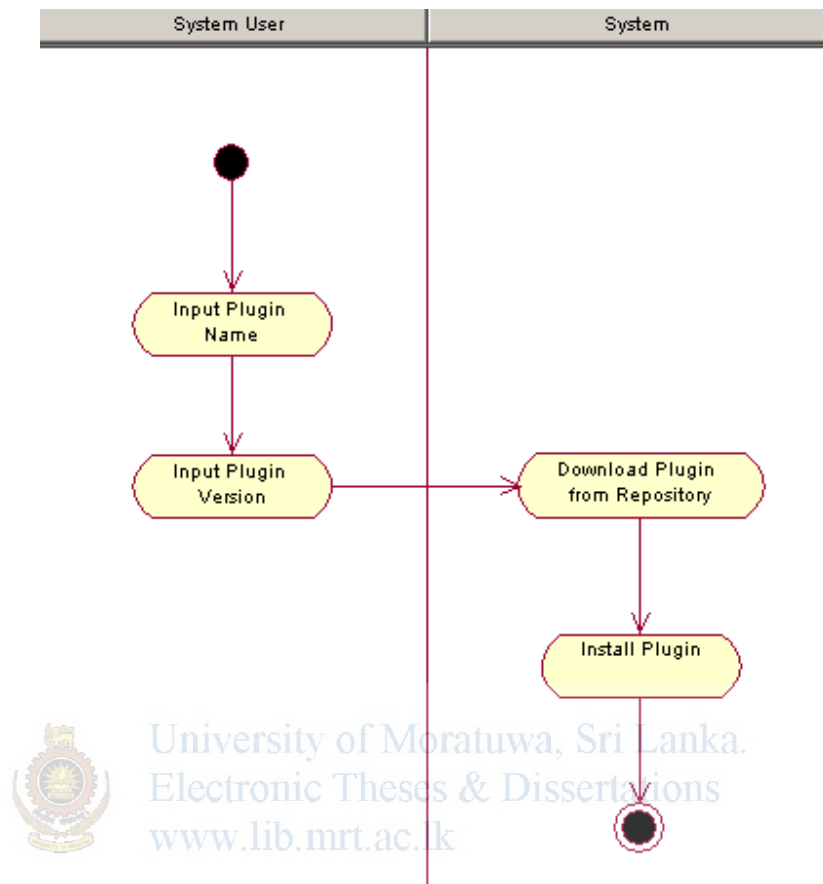


Figure 4-3 Install Plugin

#### Scenario Summary

The following flows are included in this use case.

Basic Flow: System user installs plugins

#### Actors

System User

#### Basic Flow: System developer release test plugins

This is the default (happy path) path that the installing plugins. When system developer releases plugins, system user received e-mail and after that he/she needs to install new plugins.

### 4.1.4 View Test Map

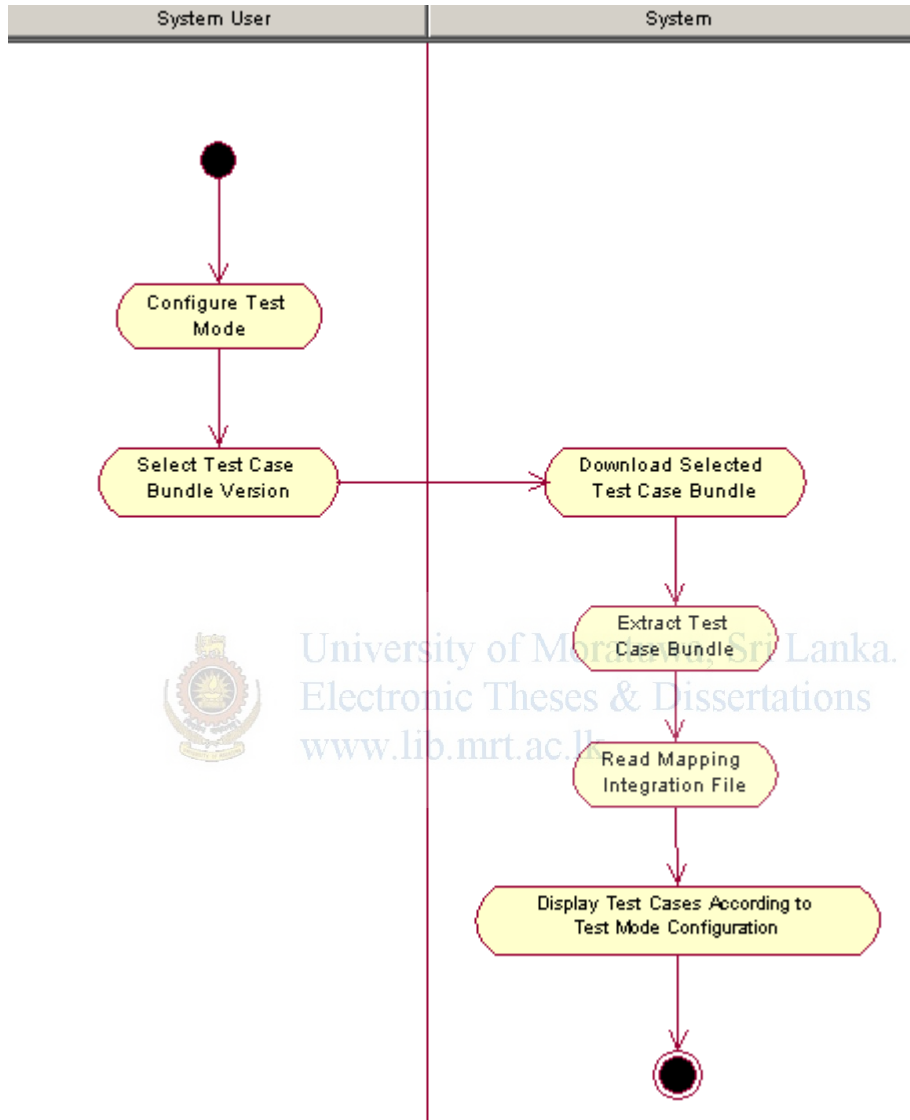


Figure 4-4 View Test Map

### 4.1.5 Execute Test Run

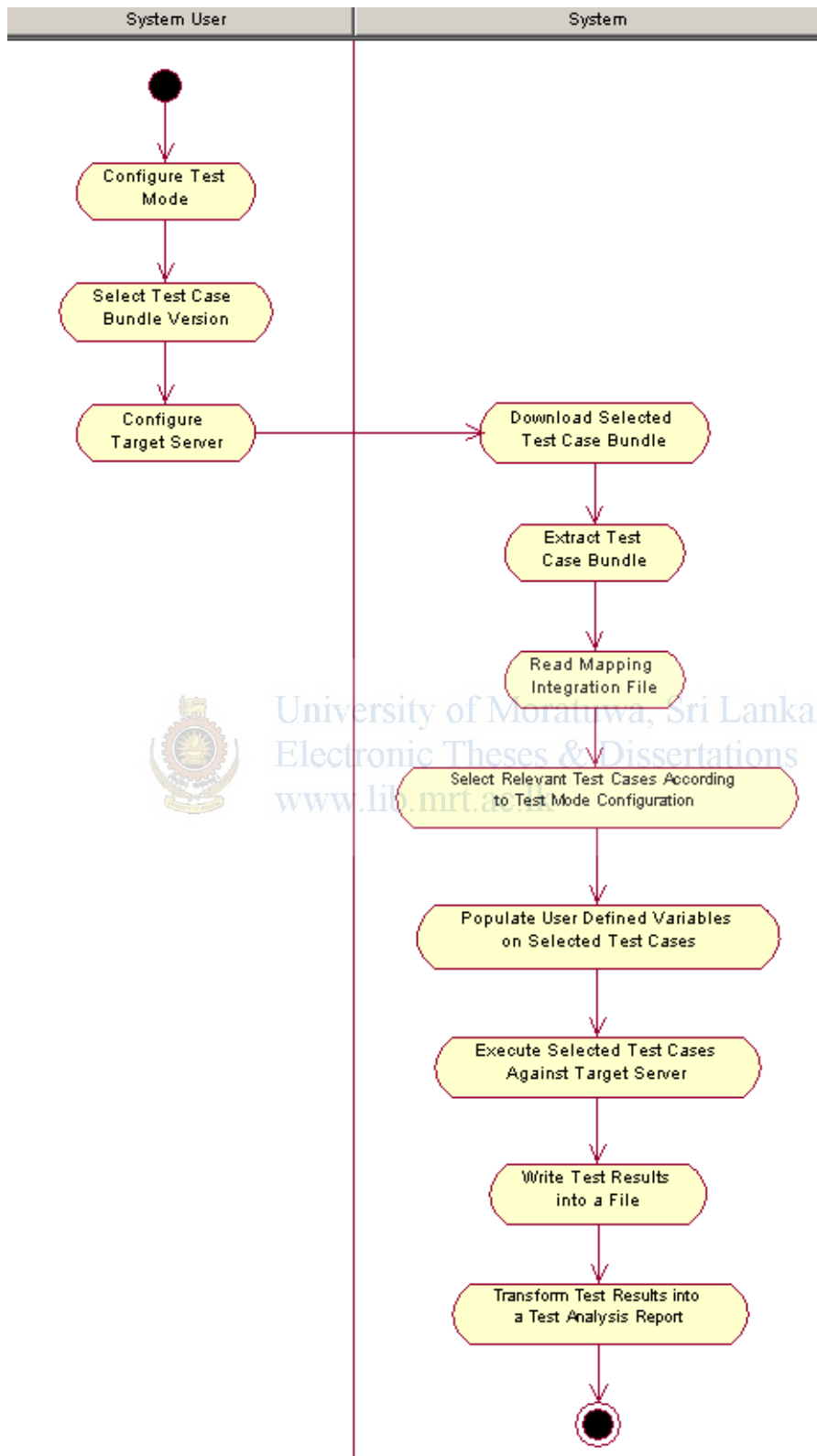


Figure 4-5 Execute Test Run

**Scenario Summary**

The following flows are included in this use case.

Basic Flow: System User execute test run

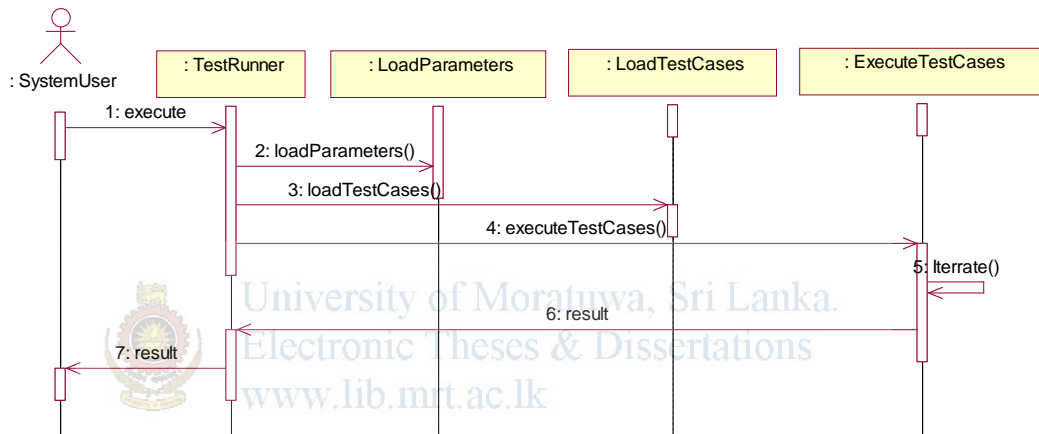
**Actors**

System User

**Basic Flow: System developer release test plugins**

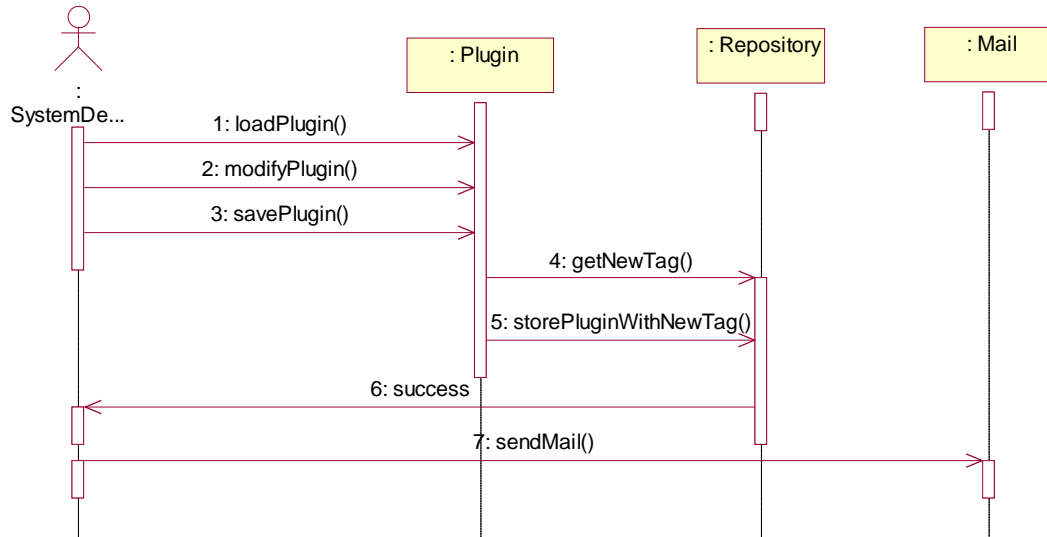
This is the default (happy path) path that the system user can run the automation framework. At the end of the test run he/she will received detailed test results sheet.

**4.2 Sequence Diagrams**



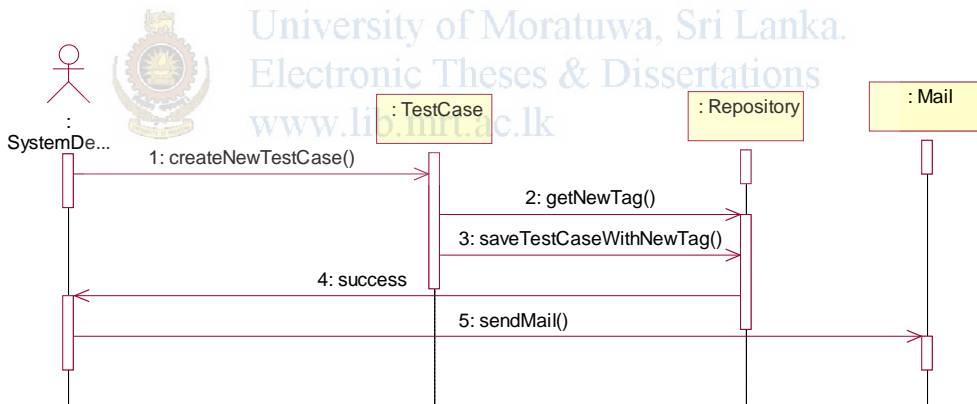
**Figure 4-6 Execute Test Cases**

Figure 4-6 will display sequence of the executing test case bundle.



**Figure 4-7 Release Plugin**

Figure 4-7 will explain how system developer releases the test plugins.



**Figure 4-8 Release Test Case Bundles**

Figure 4-8 will explain how system developer releases the test case bundle.

### 4.3 Class Diagrams

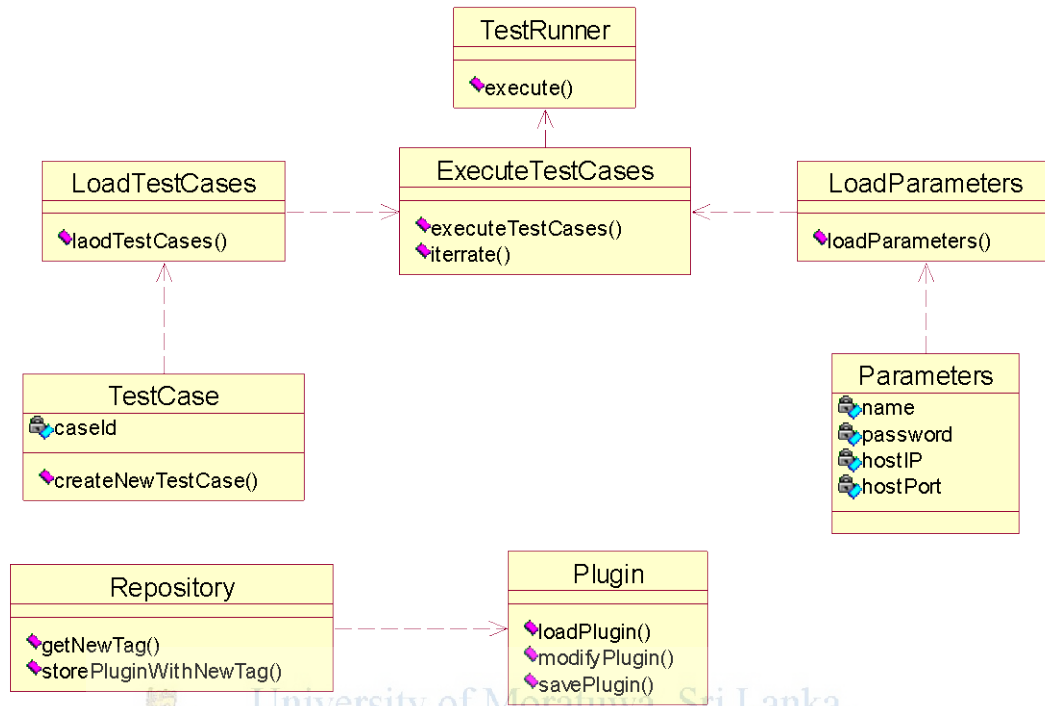


Figure 4-8 Class Diagram

### 4.4 Report Design

Following rules were considered when designing user interfaces.

#### 4.4.1 Color combination

Color combination used within the eBuilder color range. Select soft colors as much as possible in the report design. Combinations of the “Red” color are used to highlight erroneous occurrences in the test results analysis.

#### 4.4.2 Format

##### Report Header

As figured in Figure 4-6, report header contains the eBuilder logo and the report name.



Figure 4-9 Report Header

### Test Analysis Overview

As Figure 4-7 shows, this tabular overview gives the summary for each test case executed. Status (Passed/Failed) of the test case change the color of the record.

TEST Case	Status	Tests	Failures	Success Rate	Total Time	Average Time	Details
TC001	Failed	6	1	83.33%	18579 ms	3097 ms	
TC010	Failed	8	2	75.00%	7797 ms	975 ms	
TC013	Passed	7	0	100.00%	3202 ms	457 ms	
TC014	Passed	6	0	100.00%	2967 ms	495 ms	
TC016	Passed	7	0	100.00%	2984 ms	426 ms	

Figure 4-10 Test Analysis Overview

### Test Analysis Detail View

As shows in Figure 4-8, detail view of the test case gives the much more details of all the included requests.

TEST Case	Status	Tests	Failures	Success Rate	Total Time	Average Time	Details
TC010	Failed	8	2	75.00%	7797 ms	975 ms	

Request URL	Time (milliseconds)	Bytes	Success
/start.do	31	9150	true
/j_security_check	2844	51882	true
/maccess/jaas/Login.do	1000	51882	true
/mcommodity/pricelist/SearchPricelistItems.do	531	63244	true
/mcommodity/pricelist/SearchPricelistItems.do	156	66084	false
/mcommodity/pricelist/SearchPricelistItems.do	63	63308	false
/mcommodity/commodity/ViewItem.do	3063	69709	true
/logout.do	109	4662	true

Figure 4-11 Test Analysis Detail View

### Test Analysis Failure Details

As shows in Figure 4-9, failure details gives the details of the failed requests of relevant failed test case.

#### TC010

Request URL	Response	Failure Message
/mcommodity/pricelist/SearchPricelistItems.do200 - OK		Test failed, text expected to contain /Results/
/mcommodity/pricelist/SearchPricelistItems.do200 - OK		Test failed, text expected to contain /Results/

Figure 4-12 Test Analysis Failure Details

### 4.4.3 Buttons

#### Success Expand Button

Success Expand button gives the functionality to see the detail view of passed test cases.

Button have used is figured in Figure 4-10 (with gray color down arrow).



Figure 4-13 Success Expand Button

#### Failure Expand Button

Failure Expand button gives the functionality to see the detail view of failed test cases.

Button have used is figured in Figure 4-11 (with red color down arrow).



Figure 4-14 Failure Expand Button

### **Collapse Button**

Collapse button gives the functionality of collapsing expanded detail view of each test case. Button have used is figured in Figure 4-12 (with green color up arrow).



**Figure 4-15 Collapse Button**

### **4.5 Summery**

This chapter consists of the full design of the project. It contains all the UML diagrams drawn to obtain the proper design of the project. It also discusses about the way that report was designed.



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