Logical Supporting Logistic System

Test Plan

[Progress Report II]

By

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Chapter one | Introduction

1.1 Objectives

The objective of the test plan of Logical supporting logistic system is to establish test plan of the unit testing and system testing and make sure that the bugs or the defects are discovered and fixed. The unit testing covers all of implemented method in the Logical supporting logistic system. The system testing covers the user requirements.

1.2 Scope

This test plan describes the unit testing activities to detect the defect in the system and describes the system testing activities for testing a completely integrated system to verify that it meets the user requirements.

1.2.1 Project Scope

"Logical Supporting Logistic System" is the application consists of the web application and mobile application. It supports both of company staffs and truck's drivers in logistic company. The application will improve the business process of logistic in nowadays. Begin at the process of receive the order from customer. The application will help a company staff to assign any work or any job assignment to a truck's driver in correct time and reduce an error when the company staff has to assign the job to a truck's driver. And a company staff can track the truck at the real time and able to store information of each transportation at the current time. Moreover, a company staff can get the effective when they have to manage any document. The part of the Android mobile application, the truck's driver can get the correct an event that they must go and they can share the correct location to a company staff. Then, the process to confirm the status of job and status of shipping. The truck's driver able to confirm at the current time with the right route and time for confirm to customer. This project will help the company staff and a truck's driver in the logistic company be correctness and certainly in documentation and transportation information record. The application supports the logistic company to get more efficiently.

The main features of "Logical Supporting Logistic System "are as follows

- **User account management system (On the web application)**

  The company staff able to create, update, search and delete the profile account information both of company staff and truck's driver. The account information consists of two information. There are information of account and profile information. The information of account be able to use in authentication system.

- **Authentication system**
  (On web application and Android mobile application)

  The company staff and truck's driver able to login and logout from the application by use authentication system. Authentication system on web application provide for company staffs. A company staff able to login by employee ID, username and password on web application. And Android mobile application provide to truck's drivers. A truck's able to login by username and password.

- **Truck and product tracking system**
  (On web application and Android mobile application)
  The company staff can be tracking the truck under the logistic company by using the web application. The web application provides the map and pin the location of each truck. A company staff can check the location of trucks by using the map on web application. For Android mobile application provides to truck's driver. A truck's driver can search the destination and share the location between the route of transportation.
- **Job assignment for truck's driver system**
  (On web application and Android mobile application)
  The company staff can assign the job to the truck's driver on web application. And truck's driver can check their job that they must go on Android mobile application.
- **Documentation system (On web application)**
  The company staff able to manage a lot of document which are truck's driver information document and payment document. Company staffs can create, update, search, forward and delete documents on web application.
- **Transportation information record system**
  (On web application and Android mobile application)
  The company staff able to create shipping document for use in every logistics and for assign to truck's driver and update, search and delete any shipping document on the web application. And for checking the status of transportation that the truck's driver will update on Android mobile application. The truck's driver can confirm and update the status of each transportation on Android mobile application for record information into the system.
- **Summary report per shipping document system (On web application and Android mobile application)**
  The company staff able to check the report of each transportation on the web application. The web application will provide the summary report of each transportation. For android mobile application, the truck's driver able to use for checking the summary report of transportation. After, they confirm the status of transportation.

1.3 Acronyms and Definitions

1.3.1Acronyms

SRS	Software Requirement Specification
URS	User Requirement Specification
SDD	Software Design Document
UI	User Interface
UTC	Unit Test Case
STC	System Test Case

1.3.2 Definitions

Feature	Transformation of input parameters to output parameters based on a specified algorithm. It describes the functionality of a product in the language of the product. Used for requirement analysis, design, coding, testing or maintenance. [IEEE90]
Design	The period of time in the software life cycle during which the design for architecture, software components, interface, and data are created, documented and verified to satisfy requirements. [IEEE90]
IEEE	Institute for Electrical and Electronics Engineers, Biggest global interest group for engineers of different branches and for computer scientists.
Requirement	(1) A condition or capability needed by a user to solve a problem or achieve an objective. (2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document. (3) A documented representation of a condition or capability as in definition (1) or (2).
Specification	Precise description of an activity or work product which serves as basis or input for further activities or work product. A specification can comprise requirements to a product and how they will be solved. Different parts of a specification (e.g. what is to be done, how it will be done) must not be mixed. [IEEE90]
Unit testing	A level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed.
System testing	A level of the software testing process where a complete, integrated system/software is tested. The purpose of this test is to evaluate the system's compliance with the specified requirements.

Chapter Two | Test Plan and Test Procedure

2.1 Test Objectives

The objectives of testing Logical Supporting Logistic System are:

1. All bugs or defects are detected.
2. Those bugs or defects are fixed.
3. Functionalities and user interface covered the requirements.
4. All functionalities and features must be there.

Scope of Testing

Logical Supporting Logistic System will be tested the unit testing and system testing and record the test results in the test record.

Test Duration

Progress	Date and duration
Progress Report I	**Perform date:** 16th June 2017 – 16th August 2017 **Duration:** 60 days
Progress Report II	**Perform date:** 18th September 2017 – 3th October 2017 **Duration:** 16 days

Test Responsibility

Item	Responsibility
Test unit test of web application	TC
Record unit test of web application	TC
Test unit test of android application	TC
Record unit test of android application	TC
Test system test of web application	RL
Record system test of web application	RL
Test system test of android application	RL
Record system test of android application	RL

Test Strategy

Logical Supporting Logistic System test will be following by:

1. Design test case for each feature.
2. Prepare test data for each feature.
3. Determine expected result.
4. Perform testing on individual features.
5. Result of testing will be recorded.
6. All test files will be stored on the project repository.

2.2 Result of Testing

In the test record, the test result will separate into two parts, which are:

1. Actual output: The actual outputs that are performed by each test case.
2. Pass/Fail criteria:

- Pass: the result of actual result is the same as expected result.
- Fail: the result of actual result is not the same as expected result.

2.3 Test Environment

- **Laptops**
    - **MacBook Pro (Retina, 13-inch, Late 2013)**

      Processor: 2.6 GHz Intel core i5
      Memory : 8 GB 1600 MHz DDR3
      Graphics: Intel Iris 1536 MB
      Operating System: OS X EI Capitan

    - **Dell Inspiron N7420**

      Processor: 2.40 GHZ, Intel Core i7-3630QM
      Memory : 8 GB 1333 MHz DDR3
      Graphics: NVIDIA GeForce GT 630M (2GB GDDR3)
      Operating System: Windows 10 Education

    - **Samsung Galaxy S8+**

      Processor: Snapdragon 835, CPU Cores 8
      Memory: 4GB RAM (LPDDR4) 64GB
      Operating System: Android 7.0 (Nougat)
- **Internet**

Chapter Three | Unit Testing of Logical Supporting Logistic System

3.1 Unit Testing on Web Application Progress II

3.1.1 Class JobAssignmentController

Unit Test Case 34 (UTC-34)

Test Method: ListAllJobAssignments: ViewResult:: **Input: -**
:: **Return:** ListAllJobAssignments View

Description: Test ListAllJobAssignments () method for checking whether the method get correct list of job assignment on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object JobAssignment from Appendix A and check mock object has 2 lengths in the list.	JobAssignment{}, JobAssignment{}	Length = 2
2	Test method by mock object JobAssignment from Appendix A and check 1 = JobAssignmentId in row 0 Appendix A.	JobAssignment{}, JobAssignment{}	JobAssignmentId = 1
3	Test method by mock object JobAssignment from Appendix A and check 1 = JobAssignmentId row 1 in Appendix A.	JobAssignment{}, JobAssignment{}	JobAssignmentId = 2
4	Test method by check view type which return in the method.	-	Type of ListAllJobAssignments = ViewResult

Unit Test Case 35 (UTC-35)
Test Method: DetailsJobAssignment:
ActionResult:: **Input:** Integer JobAssignmentId:: **Return:** DetailsJobAssignment View

Description: Test DetailsJobAssignment (int? jobAssignmentId) method for checking whether the method get correct details of job assignment on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object JobAssignment from Appendix A and input JobAssignmentId for check method return not null.	JobAssignmentId = 1	IsNotNull
2	Test method by mock object JobAssignment from Appendix A and input JobAssignmentId check method return null.	JobAssignmentId = null	Null

Unit Test Case 36 (UTC-36)

Test Method: FormEditJobAssignment: ActionResult :: **Input:** Integer JobAssignmentId :: **Return:** FormEditJobAssignmenton View

Description: Test FormEditJobAssignment(int? jobAssignmentId) method for checking whether the method can return FormEditJobAssignmenton View the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of FormEditJobAssignment = ActionResult
2	Test method by mock object JobAssignment from Appendix A and input JobAssignmentId for check method return not null.	JobAssignmentId= 1	IsNotNull

3	Test method by mock object JobAssignment from Appendix A and input JobAssignmentId check method return null.	JobAssignmentId= null	Null

Unit Test Case 37 (UTC-37)

Test Method: EditJobAssignment: ActionResult :: **Input:** FormJobAssignmentViewModel jobAssignmentViewModel :: **Return:** ListAllJobAssignments View

Description: Test EditJobAssignment(FormJobAssignmentViewModel jobAssignmentViewModel) method for checking whether the method can edit job assignment and return ListAllJobAssignments View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of EditJobAssignment = ActionResult
2	Test method by mock object JobAssignment from Appendix A and input mock object for check method return not null.	Job Assignment{}	IsNotNull

Unit Test Case 38 (UTC-38)

Test Method: DeleteJobAssignment: ActionResult :: **Input:** Integer JobAssignmentId:: **Return:** DeleteJobAssignment View

Description: Test DeleteJobAssignment(int? jobAssignmentId) method for checking whether the method return DeleteJobAssignment View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of DeleteJobAssignment = ActionResult
2	Test method by mock object JobAssignment from Appendix A and input JobAssignmentId for check method return not null.	JobAssignmentId = 1	IsNotNull
3	Test method by mock object JobAssignment from Appendix A and input JobAssignmentId check method return null.	JobAssignmentId = null	Null

Unit Test Case 39 (UTC-39)

Test Method: DeleteJobAssignmentConfirmed: ActionResult
:: **Input:** Integer JobAssignmentId:: **Return:** ListAllJobAssignments View

Description: Test DeleteJobAssignmentConfirmed(int? jobAssignmentId) method for checking whether the method can delete job assignment and return ListAllJobAssignments View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of DeleteJobAssignmentConfirmed = ActionResult
2	Test method by mock object Job Assignment from Appendix A and input mock object for check method return not null.	Job Assignment{}	IsNotNull

3.1.2 Class TransportationInfController

Unit Test Case 40 (UTC-40)

Test Method: ListAllTransportationInfs: ViewResult :: **Input:** -
:: **Return:** ListAllTransportationInfsView

Description: Test ListAllTransportationInfs() method for checking whether the method get correct list of transportation information on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object TransportationInf from Appendix A and check mock object has 2 lengths in the list.	TransportationInf{}, TransportationInf{}	Length = 2
2	Test method by mock object TransportationInf from Appendix A and check 1 = ShippingId in row 0 Appendix A.	TransportationInf{}, TransportationInf{}	ShippingId = 1
3	Test method by mock object TransportationInf from Appendix A and check 1 = ShippingId row 1 in Appendix A.	TransportationInf{}, TransportationInf{}	ShippingId = 2
4	Test method by check view type which return in the method.	-	Type of ListAllTransportation Infs = ViewResult

Unit Test Case 41 (UTC-41)

Test Method: DetailsTransportationInf: ActionResult
:: **Input:** Integer ShippingId:: **Return:** DetailsTransportationInf View

Description: Test DetailsTransportationInf(int? shippingId) method for checking whether the method get correct details of transportation information on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object TransportationInf from Appendix A and input ShippingId for check method return not null.	ShippingId = 1	IsNotNull
2	Test method by mock object TransportationInf from Appendix A and input ShippingId check method return null.	ShippingId = null	Null

Unit Test Case 42 (UTC-42)

Test Method: FormCreateTransportationInf: ActionResult :: **Input:** -
:: **Return:** FormCreateTransportationInf View
Description: Test FormCreateTransportationInf () method for checking whether the method get FormCreateTransportationInf View on the web application.
Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of FormCreateTransportationInf = ViewResult

Unit Test Case 43 (UTC-43)

Test Method: CreateTransportationInf: ActionResult :: **Input:** TransportationInf transportationInf :: **Return:** FormCreateTransportationInf View

Description: Test CreateTransportationInf(TransportationInf transportationInf) method for checking whether the method can create transportation information and return FormCreateTransportationInf View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object Staff from Appendix A and input mock object for check method return not null.	TransportationInf {}	IsNotNull

Unit Test Case 44 (UTC-44)

Test Method: FormEditTransportationInf: ActionResult :: **Input:** Integer ShippingId :: **Return:** FormEditTransportationInf View

Description: Test FormEditTransportationInf(int? shippingId) method for checking whether the method can return FormEditTransportationInf View the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of FormEditTransportationInf = ActionResult
2	Test method by mock object TransportationInf from Appendix A and input ShippingId for check method return not null.	ShippingId = 1	IsNotNull
3	Test method by mock object TransportationInf from Appendix A and input ShippingId check method return null.	ShippingId = null	Null

Unit Test Case 45 (UTC-45)

Test Method: EditTransportationInf: ActionResult :: **Input:** TransportationInf transportationInf :: **Return:** ListAllTransportationInfs View

Description: Test EditTransportationInf(TransportationInf transportationInf) method for checking whether the method can edit transportation information and return ListAllTransportationInfs View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of EditTransportationInf = ActionResult
2	Test method by mock object TransportationInf from Appendix A and input mock object for check method return not null.	TransportationInf {}	IsNotNull

Unit Test Case 46 (UTC-46)

Test Method: DeleteTransportationInf: ActionResult :: **Input:** Integer ShippingId:: **Return:** DeleteTransportationInf View

Description: Test DeleteTransportationInf(int? shippingId) method for checking whether the method return DeleteTransportationInf View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of DeleteTransportationInf = ActionResult
2	Test method by mock object TransportationInf from Appendix	ShippingId = 1	IsNotNull

	A and input ShippingId for check method return not null.		
3	Test method by mock object TransportationInf from Appendix A and input ShippingId check method return null.	ShippingId = null	Null

Unit Test Case 47 (UTC-47)

Test Method: DeleteTransportationInfConfirmed: ActionResult
:: **Input:** Integer ShippingId:: **Return:** ListAllTransportationInfs View

Description: Test DeleteTransportationInfConfirmed(int? shippingId) method for checking whether the method can delete transportation information and
return ListAllTransportationInfs View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of DeleteTransportationInfConfirmed = ActionResult
2	Test method by mock object TransportationInf from Appendix A and input mock object for check method return not null.	TransportationInf{}	IsNotNull

Unit Test Case 48 (UTC-48)

Test Method: FormCreateJobAssignment: ActionResult :: **Input:** Integer ShippingId :: **Return:** FormCreateJobAssignment View

Description: Test FormCreateJobAssignment (int? shippingId) method for checking whether the method can return FormCreateJobAssignment View the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by check view type which return in the method.	-	Type of FormCreateJobAssignment = ActionResult
2	Test method by mock object TransportationInf and JobAssigment from Appendix A and input ShippingId for check method return not null.	ShippingId = 1	IsNotNull
3	Test method by mock object TransportationInf and JobAssigment from Appendix A and input ShippingId check method return null.	ShippingId = null	Null

Unit Test Case 49 (UTC-49)

Test Method: CreateJobAssignment: ActionResult :: **Input:** FormJobAssignmentViewModel jobAssignmentViewModel :: **Return:** ListAllTransportationInfs View

Description: Test CreateJobAssignment(FormJobAssignmentViewModel jobAssignmentViewModel) method for checking whether the method can create job assignment and return ListAllTransportationInfs View on the web application.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object JobAssignment from Appendix A and input mock object for check method return not null.	JobAssignment {}	IsNotNull

3.1.3 Class JobAssignmentRepository

Unit Test Case 50 (UTC-50)

Test Method: GetAllJobAssignments: IEnumerable<JobAssignment> :: **Input:** -
:: **Return:** IEnumerable<JobAssignment>

Description: Test GetAllJobAssignments ()method for checking whether the method get correct list of job assignment from data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object and check JobAssignment is not null.	JobAssignment{}, JobAssignment{}	JobAssignment{}, JobAssignment{}
2	Test method by not mock object and check JobAssignment is null.	-	Null

Unit Test Case 51 (UTC-51)

TestMethod: GetJobAssignmentById: JobAssignment :: **Input:** Integer JobAssignmentId :: **Return:** JobAssignment

Description: Test GetJobAssignmentById(int? jobAssignmentId) method for checking whether the method get correct job assignment by JobAssignmentId from data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input JobAssignmentId and check JobAssignment is not null.	JobAssignmentId = 1	JobAssignment{},
2	Test method by not input JobAssignmentId and check JobAssignment is null.	-	Null

Unit Test Case 52 (UTC-52)

Test Method: AddJobAssignment: Boolean :: **Input:** FormJobAssignmentViewModel jobAssignmentViewModel :: **Return:** Boolean

Description: Test AddJobAssignment(FormJobAssignmentViewModel jobAssignmentViewModel) method for checking whether the method can add job assignment and save to data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object JobAssignment and check the method should return true.	JobAssignment{}	True
2	Test method by not mock object JobAssignment and check the method should return false	-	False

Unit Test Case 53 (UTC-53)

Test Method: UpdateJobAssignment: Boolean :: **Input:** FormJobAssignmentViewModel jobAssignmentViewModel :: **Return:** Boolean

Description: Test UpdateJobAssignment (FormJobAssignmentViewModel jobAssignmentViewModel) method for checking whether the method can edit job assignment and save to data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object JobAssignment and check the method should return true.	JobAssignment{}	True
2	Test method by not mock object JobAssignment and check the method should return false	-	False

Unit Test Case 54 (UTC-54)

Test Method: DeleteJobAssignment: Boolean :: **Input:** Integer JobAssignmentId :: **Return:** Boolean

Description: Test DeleteJobAssignment(int? jobAssignmentId) method for checking whether the method can delete job assignment and save to data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input JobAssignmentId and check the method should return true.	JobAssignmentId = 1	True
2	Test method by not input JobAssignmentId and check the method should return false.	-	False

Unit Test Case 55 (UTC-55)

Test Method: GetListJobByTruckDriverId: List<JobAssignment>:: **Input:** Integer TruckDriverId :: **Return:** List<JobAssignment>

Description: Test GetListJobByTruckDriverId(int truckDriverId) method for checking whether the method get correct list JobAssignment by TruckDriverId from data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input TruckDriverId and check JobAssignment is not null.	TruckDriverId = 1	JobAssignment{},
2	Test method by not input TruckDriverId and check JobAssignment is null.	-	Null

3.1.4 Class TransportationInfRepository

Unit Test Case 56 (UTC-56)

Test Method: GetAllTransportationInfs: IEnumerable<TransportationInf> :: **Input:** - :: **Return:** IEnumerable<TransportationInf>

Description: Test GetAllTransportationInfs ()method for checking whether the method get correct list of transportation information from data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object and check TransportationInf is not null.	TransportationInf{}, TransportationInf{}	TransportationInf{}, TransportationInf{}

2	Test method by not mock object and check TransportationInf is null.	-	Null

Unit Test Case 57 (UTC-57)

TestMethod: GetTransportationInfById: TransportationInf::
Input: Integer ShippingId:: **Return:** JobAssignment

Description: Test GetTransportationInfById(int? shippingId) method for checking whether the method get correct transportation information by ShippingId from data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input ShippingId and check Tr ansportationInf is not null.	ShippingId = 1	TransportationInf{},
2	Test method by not input ShippingId and check TransportationInf is null.	-	Null

Unit Test Case 58 (UTC-58)

Test Method: AddTransportationInf: Boolean :: **Input:** TransportationInf transportationInf :: **Return:** Boolean

Description: Test AddTransportationInf(TransportationInf transportationInf) method for checking whether the method can transportation information and save to data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object TransportationInf and check the method should return true.	TransportationInf {}	True

2	Test method by not mock object TransportationInf and check the method should return false	-	False

Unit Test Case 59 (UTC-59)

Test Method: UpdateTransportationInf: Boolean :: **Input:** TransportationInf transportationInf :: **Return:** Boolean

Description: Test UpdateTransportationInf(TransportationInf transportationInf) method for checking whether the method can edit transportation information and save to data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by mock object TransportationInf and check the method should return true.	TransportationInf {}	True
2	Test method by not mock object TransportationInf and check the method should return false	-	False

Unit Test Case 60 (UTC-60)

Test Method: DeleteTransportationInf: Boolean :: **Input:** Integer ShippingId:: **Return:** Boolean

Description: Test DeleteTransportationInf(int? shippingId) method for checking whether the method can delete transportation information and save to data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input ShippingId and check the method should return true.	ShippingId = 1	True
2	Test method by not input ShippingId and check the method should return false.	-	False

3.2 Unit Testing on Android mobile application

3.1.5 Class JobAssignmentController : ApiController

Unit Test Case 61 (UTC-61)

Test Method: ListJobAssignmentByTruckDriverId: IHttpActionResult :: **Input:** Integer TruckDriverId :: **Return:** ListJobAssignments

Description: Test ListJobAssignmentByTruckDriverId(int truckDriverId) method for checking whether the method get correct list job assignment of truck's driver data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input TruckDriverId that job assignment exist and return list job assignment.	TruckDriverId = 1	JobAssignment{}, JobAssignment {}
2	Test method by input TruckDriverId that job assignment not exist in storage and return list job assignment.	TruckDriverId = 30	Null

3.1.6 Class TransportationInfController : ApiController

Unit Test Case 62 (UTC-62)

Test Method: GetTransportationInfByShippingId: IHttpActionResult :: **Input:** Integer ShippingId :: **Return:** TransportationInf

Description: Test GetTransportationInfByShippingId(int shippingId) method for checking whether the method get correct transportation information by ShippingId from data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input ShippingId that transportation information exists and return transportation information	ShippingId = 1	TransportationInf {},
2	Test method by input ShippingId that transportation information exists in storage and return transportation information	ShippingId = 50	Null

Unit Test Case 63 (UTC-63)

Test
Method: UpdateTransportationInf: IHttpActionResult:: **Input:** Integer ShippingId and Trans portationInf transportationInf :: **Return:** Boolean

Description: Test UpdateTransportationInf(int shippingId, TransportationInf transportationInf) method for checking whether the method can update transportation information and save to data storage.

Prerequisite or input required: The test data is available at Appendix A.

Test Cases:

Test case ID	Description	Input	Expected Result
1	Test method by input ShippingId and mock object TransportationInf that transportation information exists in storage and return true.	ShippingId = 1, TransportationInf {}	True
2	Test method by input ShippingId and mock object TransportationInf not mat ch in storage and return false.	ShippingId = 50, TransportationInf { Shippin gId = 1,……}	False
3	Test method by input ShippingId and mock object TransportationInf that transportation information not exists in storage and return Http Not Found.	ShippingId = 50, Transportatio nInf { ShippingId = 50}	Http Not Found

Chapter Four | System Testing of Logical Supporting Logistic System

4.1 System Testing on Web application

System Testing Feature4: Job Assignment for Truck's Driver System

System Test Case 24 (STC-24): Test company staff able to search the job assignment from data storage.

Description:

This system testing is used for test searching job assignment from data storage. The user who is the company staff should fill the information into search field for searching job assignment from all the list of jobs. And if the information is not match. The system shall provide the message alert which is "No matching record found"

This system testing refers from **URS-18:** Customer expects the job assignment for truck's driver system on the web application. In order to company staffs able to check the information of each job assignment that the user already assigned. And the user can edit, search and delete information of the job assignment. Then, job assignment feature can be save when the user updates the information on update form into data storage.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on the job assignment for truck's driver system on the web application.

Test step

1. The user fill information for searching into the search field that system provided in form of Date, TruckId, Starting Point, Destination, shipping No.
2. The system match the information that the user required with the information on data storage.
3. The system retrieve the job assignment information from data storage. Then, the system provides the information that the user required in column of Date, TruckId, Starting Point, Destination, shipping No. for providing.
4. If the information is not match from data storage. The system shall provide the message alert which is "No matching record found" on the index page of job assignment function.

Test Case:

ID	Description	Input					Expected Result
		Date	TruckId	Starting Point	Destination	Shipping No	
STC-24.1	Searching in the search field with Date	**2017-10-12**	**-**	**-**	**-**	**-**	The system provides the job assignment from Date of "2017-10-12" inform of {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7, Status= "Not Complete"}
STC-24.2	Searching in the search field with TruckId	-	**NP-1235**	**-**	**-**	**-**	The system provides the job assignment from TruckId of "NP-1235" inform of {Date = "2017-11-06", TruckId= "NP-1235", Starting Point = "Chiangmai", Destination= "Phuket", Shipping No = 6, Status= "Not Complete"}
STC-24.3	Searching in the search field with Starting Point	**-**	**-**	**Chiangmai**	**-**	**-**	The system provides the job assignment from Starting Point "Chiangrai" inform of {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7, Status= "Not Complete"} and {Date = "2017-11-06", TruckId= "NP-1235", Starting Point = "Chiangmai", Destination= "Phuket", Shipping No = 6, Status= "Not Complete"}
STC-24.4	Searching in the search field with Destination	**-**	**-**	**-**	**Phuket**	**-**	The system provides the job assignment from Destination of "Phuket" inform of {Date = "2017-11-06", TruckId= "NP-1235", Starting Point = "Chiangmai", Destination=

							“Phuket”, Shipping No = 6, Status= “Not Complete”}
STC-24.5	Searching in the search field with Shipping No.	**-**	**-**	**-**	**-**	**6**	The system provides the job assignment from Shipping No of “6” inform of {Date = “2017-11-06”, TruckId= “NP-1235”, Starting Point = “Chiangmai”, Destination= “Phuket”, Shipping No = 6, Status= “Not Complete”}
STC-24.6	Searching in the search field with no matching information					**66**	The system provides the message which is “No matching record found”

System Test Case 25 (STC-25): Test company staff able to update the information of job assignment into data storage.

Description:

This system testing is used for test update job assignment into data storage. The user who is company staff should select "Edit" button on the index page of job assignment and fill the information into the update form. Then, the user selects "Update" button. The system shall provide all the list of job assignment. After, the system updates the information into data storage.

This system testing refers from **URS-18:** Customer expects the job assignment for truck's driver system on the web application. In order to company staffs able to check the information of each job assignment that the user already assigned. And the user can edit, search and delete information of the job assignment. Then, job assignment feature can be save when the user updates the information on update form into data storage.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on the job assignment for truck's driver system on the web application.

Limitation

This system test case, the user can update in the field of TruckID, Latitude and Longitude.

Test step

1. The user selects "Edit" button at the list of job assignment which is the user require to update information.
2. The system provides update form with the information that user had been input at URS-34
3. The user fills all information into the update form. Then, select at "Update" button.
4. The system verifies information and provide message alert which is "Make sure that is correct TruckId"
5. If the information that user filled is invalid that system shall provide message alert which is "The TruckID field is required"
6. The system update information into data storage. Then, the system shall back to the index page for providing all the list of job assignment.

Test cases:

Input											
ID	**Description**	**Date of Transportation**	**TruckID**	**Shipping No**	**From**	**Latitude**	**Longitude**	**To**	**Latitude**	**Longitude**	**Expected Result**
STC-25.1	User update the information in the field of latitude and longitude of transportation location	11/06/2017	NP-1235	6	Chiangmai	**18.927426**	**98.880396**	Phuket	**7.8804486**	**98.392256**	-The system update information of latitude and longitude into data storage -The system provides message alert which is "Make sure that is correct TruckId" -The system backs to the index page for providing all the list of job assignment.
STC-25.2	User update the information in the field of TruckID.	10/12/2017	**CM-1001**	7	Chiangmai	18.787747	98.993128 39999993	Samut Phakan	13.595406 2	100.60724 010000001	-The system update information of TruckID into data storage -The system provides message alert which is "Make

											sure that is correct TruckId” -The system backs to the index page for providing all the list of job assignment.
STC -25.3	User don’t update any information and the field of TruckID is empty	10/12/2017	-	7	Chiangmai	18.787747	98.993128 39999993	Samut Phakan	13.595406 2	100.60724 010000001	-The system **not update** information of TruckID into data storage -The system provides message alert which is “Make sure that is correct TruckId” -The system provides message alert which is “The TruckID field is required” at below the field.

System Test Case 26 (STC-26): Test company staff able to delete job assignment staff from data storage.

Description:

This system testing is used for test deleting job assignment that user already assigned to truck's driver from data storage. The user who is the company staff should select "Delete" button and confirm to delete. Then, the system shall delete information of job assignment data storage. And back to the index page of job assignment function for providing all the list of jobs.

This system testing refers from **URS-18:** Customer expects the job assignment for truck's driver system on the web application. In order to company staffs able to check the information of each job assignment that the user already assigned. And the user can edit, search and delete information of the job assignment. Then, job assignment feature can be save when the user updates the information on update form into data storage.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on the job assignment for truck's driver system on the web application.

Test step

1. The user selects "Delete" button at the option on the list of job assignment.
2. The system retrieves and provides the information of each job assignment that selected with the button of "Delete" and "Cancel".
3. The user selects "Delete" button.
4. The system provides the message alert which is "Do you want to delete?".
5. The user selects "OK" button.
6. The system deletes information of job assignment from data storage.
7. The system backs to the index page of job assignment for providing all the list of jobs.

Test Cases:

ID	Description	Input	Expected Result
STC-26.1	User who is company staff select delete option at “Delete” button of job assignment. {Date= “2017-10-12”, TruckId= “CM-3221”, Starting Point = “Chiangmai”, Destination= “Samut Phakan”, Shipping No = 7}	Select delete button. Then, select OK button.	Job assignment of {Date= “2017-10-12”, TruckId= “CM-3221”, Starting Point = “Chiangmai”, Destination= “Samut Phakan”, Shipping No = 7} delete from data storage.
STC-26.2	User who is company staff select delete option at “Delete” button of job assignment. {Date= “2017-10-12”, TruckId= “CM-3221”, Starting Point = “Chiangmai”, Destination= “Samut Phakan”, Shipping No = 7}	Select delete button. Then, select Cancel button.	Job assignment of {Date= “2017-10-12”, TruckId= “CM-3221”, Starting Point = “Chiangmai”, Destination= “Samut Phakan”, Shipping No = 7}is **not delete** from data storage.

System Test Case 27 (STC-27): Test company staff able to view all the list of job assignment and see the detail of job assignment information. Then, user selects “Cancel” button.

Description:

This test case is the system testing for testing to view all the list of job assignment. And the information of job assignment. The user who is company staff can view the information of each job assignment by select “Detail” button at the option. Then, the system shall provide the information of job assignment.

This system testing refers from URS-19: Customer needs job assignment function be able to view the all list of job assignment. Also, the company staff able to view the list in the detail of job assignment.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on the job assignment for truck’s driver system on the web application.

Test step

1. The user selects “Detail” button at the option on the list of job assignment.
2. The system retrieves the information of job assignment from data storage.
3. The system provides the information of job assignment that user required on the field and the transportation route on the Google Map.
4. The user selects “Cancel” button.
5. The system back tot index page and provide all the list of job assignment.

Test cases:

ID	Description	Input	Expected Result
STC-27.1	User who is company staff select the option of "detail" on the list of job assignment {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7} For see the information of job assignment.	Select the option of detail	The system provides the detail information of job assignment {Status = "Not Complete", Date of Transportation = "10/12/2017", TruckId= "CM-3221", Shipping No= 7, From = "Chiangmai", Latitude = "18.78778", Longitude = "98.99313", To = "Samut Phakan", Latitude= "13.59543", Longitude = "100.6074"}
STC-27.2	User who is company staff select the option of "detail" on the list of job assignment {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7} Then, selects cancel button at below of job assignment information.	Select the option of detail. Then, select "Cancel" button.	The system provides the index page with all list of job assignments.

System Test Case 28 (STC-28): Test company staff able to view all the list of job assignment and see the detail of job assignment information. Then, user selects “Edit” button.

Description:

This test case is the system testing for testing to view all the list of job assignment. And the information of job assignment. The user who is company staff can view the information of each job assignment by select “Detail” button at the option. Then, the system shall provide the information of job assignment.

This system testing refers from URS-19: Customer needs job assignment function be able to view the all list of job assignment. Also, the company staff able to view the list in the detail of job assignment.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on the job assignment for truck’s driver system on the web application.

Test step

1. The user selects “Detail” button at the option on the list of job assignment.
2. The system retrieves the information of job assignment from data storage. And provide the information including with the information of job assignment and the route of transportation on Google Map.
3. The user can select “Edit” button at below information of job assignment that the system provided.
4. The system shall provide the update form.
5. The user fills the information into update form as STC-25. Then, the user selects “Update” button
6. The system verifies the information that user entered. Then, provide the message alert if the user as STC-25.
7. The user confirms for update information.
8. The system shall back to the index page and provide all list of job assignment.

Test Cases:

ID	Description	Input	Expected Result
STC-28.1	User who is company staff select the option of "detail" on the list of job assignment {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7} For see the information of job assignment.	Select the option of detail	The system provides the detail information of job assignment {Status = "Not Complete", Date of Transportation = "10/12/2017", TruckId= "CM-3221", Shipping No= 7, From = "Chiangmai", Latitude = "18.78778", Longitude = "98.99313", To = "Samut Phakan", Latitude= "13.59543", Longitude = "100.6074"}
STC-28.2	User who is company staff select the option of "detail" on the list of job assignment {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7} Then, selects edit button at below of job assignment information.	Select the option of detail. Then, select "Edit" button.	The system provides the form of update information of this job assignment {Status = "Not Complete", Date of Transportation = "10/12/2017", TruckId= "CM-3221", Shipping No= 7, From = "Chiangmai", Latitude = "18.78778", Longitude = "98.99313", To = "Samut Phakan", Latitude= "13.59543", Longitude = "100.6074"}

System Test Case 29 (STC-29): Test company staff able to check the status of job assignment.

Description:

This test case is the system testing for testing to check the status of job assignment. The user who is company staff select the menu of job assignment. Then, the system shall provide all the list of job assignment in the column of Date, TruckId, Starting Point, Destination, shipping No. with the status and option of each list. The status should be "Complete" or "Not Complete".

This system testing refers from URS-20: Customer expect job assignment function be able to check the status of jobs that is complete or not at the list of job assignment.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on the job assignment for truck's driver system on the web application.

Test step

1. The system retrieves the status from data storage that truck's driver confirmed the status of transportation on Android mobile application to provide the status on the index of job assignment. The status consists of "Complete" or "Not Complete"
2. The user can select at the list of job assignment for check the status on the detail information form by selecting at "Detail" button.
3. The system provides the information of job assignment with a status above the information.

Test Cases:

ID	Description	Input	Expected Result
STC-29.1	User who is company staff select the menu of job assignment. Then, checking the status by looking at the list of job assignment that system provided.	Select job assignment menu. Then, checking at {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7, Status = "Not Complete"}	The system provides the detail information with status which is **"Not Complete"** of job assignment at the row {Date= "2017-10-12", TruckId= "CM-3221", Starting Point = "Chiangmai", Destination= "Samut Phakan", Shipping No = 7}
STC-29.2	User who is company staff select the menu of job assignment. Then, select the "Detail" button at the list.	Select "Detail" button at the list of job assignment of {Date= "2017-11-06", TruckID= "NP-1235", Starting Point= "Chiangmai", Destination= "Phuket", Shipping No.= 6, Status = "Complete"}	The system provides the status on the top of information of job assignment which **is "Not Complete"** with information of {Date of Transportation= "11/06/2017", Truck= "NP-1235", Shipping No.= 6, From= "Chiangmai", Latitude= "18.70606", Longitude= "98.98172", To= "Phuket", Latitude= "7.880448", Longitude= "98.39225"}
STC-29.3	User who is company staff select the menu of job assignment. Then, checking the status by looking at the list of job assignment that system provided. And select at "Detail" button.	Select job assignment menu. Then, checking at {Date = "2017-11-24", TruckID= "CR-1001", Starting Point = "Hua Hin", Destination = "Mea Hong Song", Shipping No = 9, Status= "Complete"}	The system provides the detail information with status which is **"Complete"** of job assignment at the row {Date = "2017-11-24", TruckID= "CR-1001", Starting Point = "Hua Hin", Destination = "Mea Hong Song", Shipping No = 9, Status= "Complete"} And then, when user select "Detail" Button. The system provides the status on the top of information of job assignment which **is "Complete"** with information of {Date of Transportation = "11/24/2017", TruckID = "CR-1001", Shipping No = 9, From = "Hua Hin",

			Latitude = “12.56837”, Longitude = “99.95769”, To = “Mea Hong Son”, Latitude = “19.30203”, Longitude = “97.96544”}

System Test Case 30 (STC-30): Test user be able to search the job assignment from all the list of job assignments.

Description:

This test case is the system testing for test searching the job assignment from data storage by insert character A-Z, a-z, 0-9, ก-ฮ and symbol. Then, the system shall pair the information with the character that the user entered. If the information doesn’t match, the system shall provide message which is “No Matching records found!”

This system testing refers from URS-21: Customer needs job assignment function to be able to search job assignment from the list of jobs. The company staffs able to search job by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on the job assignment for truck’s driver system on the web application.

Test Step

1. The user fills some character or symbol into the search field that system provided.
2. The system matching the information that the user filled with the information in the data storage. Then, the system retrieves the job assignment information and provides the information that can be match from user input in the search field, on the list in form of Date, TruckId, Starting Point, Destination and Shipping No.
3. If the information on data storage doesn’t match with the input from user. The system provides message which is “No Matching records found!”

Test Cases:

ID	Description	Input	Expected Result
STC-30.1	User who is company staff search the job assignment in the text box by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.	From Date = “2017-10-12” From TruckId = “CM-3221” From Starting Point = “Chiangmai” From Destination = “Samut Phakan” From Shipping No = 7	The system provides the list of job assignment {Date= “2017-10-12”, TruckId= “CM-3221”, Starting Point = “Chiangmai”, Destination= “Samut Phakan”, Shipping No = 7, Status = “Not Complete”
STC-30.2	User who is company staff search the job assignment in the text box by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.	From TruckId = “NP-1235” From Shipping No = 6 Destination= “Phuket”	The system provides the list of job assignment {Date= “2017-11-06”, TruckID= “NP-1235”, Starting Point= “Chiangmai”, Destination= “Phuket”, Shipping No.= 6, Status= “Not Complete”}
STC-30.3	User who is company staff search the job assignment in the text box by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.	From Date = “” From TruckId = “” From Starting Point = “” From Destination = “” From Shipping No = 07 The information is not match.	The system not provide any list of job assignment. And it provides message which is “No Matching records found!”

System Testing from Feature 6: Transportation Information Record System

System Test Case 31 (STC-31): Test company staff able to create a new shipping document and store information into data storage.

Description:

This system testing is used for test create new shopping document to store information into the data storage. The user who is company staff has to select “Add Shipping Document” button on the index page of transportation information record function and fill the information into the create form. Then, the user selects “Create” button. The system shall provide all the list of shipping document. After, the system stores the information into data storage.

This system testing refers from URS- URS-32: Customer expect the system able to create shipping document by input the information of Employer, Order Date, Date of Transportation, Product Name, Starting Point, Destination, Receiver Name. Moreover, user be able to search, update and delete shipping document. And it able to be save when the user creates and update shipping document.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user select at “Add Shipping Document” button for create shipping document.
2. The system provide the create form to user for enter information of shipping document.
3. The user fills all information into the create form. Then, the user selects “Create” button.
4. The system verify all information. If the information is invalid, the system shall provide message alert as STC 31.2, STC-31.3
5. The system stores information into data storage. And back to the index page for provide all the list of shipping document.

Test Cases:

ID	Description	Input							Expected Result
		Employer	Order Date	Date of Transportation	Product Name	Starting Point	Destination	Receiver Name	
STC-31.1	The user fills all information into create form and the information is valid.	Fu-out Shipping Co, Ltd.	09/27/2017	10/12/2017	Organic Plant	Chiangmai	Samut Phakan	Pakan Farm	1.The system **store** information into data storage without provide the message alert. 2.The system redirect to the index page for providing all the list of shipping document.
STC-31.2	The user fills all the information into create form but some information is invalid**.**	Fu-in Shipping Co, Ltd.	09/27/2017	11/06/2017	Organic Fruit	**CM**	Phuket	Thai Co	1.The system not store information into data storage and provide message alert "Starting Point length must be between 4 to 30 characters". 2.The system is not redirect to the index page for providing all the list of shipping document.
STC-31.3	The user fills the information into create form but it has some field is empty.	Fu-in Shipping Co, Ltd.	09/27/2017	11/06/2017	-	Chiangmai	Phuket	Thai Co	1.The system not store information into data storage. And provide message alert "The Product Name field is required." 2.The system is not redirect to the index page for providing all the list of shipping document.

System Test Case 32 (STC-32): Test company staff able to search shipping document from the list of shipping document that the system provided.

Description:

This system testing is used for test searching shipping document from the list provided. The user who is the company staff have to fill the information into search field. And if the information is not match. The system shall provide the message alert which is "No matching record found"

The system testing refers from URS-32: Customer expect the system able to create shipping document by input the information of Employer, Order Date, Date of Transportation, Product Name, Starting Point, Destination, Receiver Name. Moreover, user be able to search, update and delete shipping document. And it able to be save when the user creates and update shipping document.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user fill information for searching into the search field that system provided in form of Shipping No, Order Date, Employer, Product Name.
2. The system match the information that the user required with the information on data storage.
3. The system retrieve the shipping document information from data storage Then, the system provides the information that the user required in column of Shipping No, Order Date, Employer, Product Name, Status Shipping and job assignment function.
4. If the information is not match from data storage. The system shall provide the message alert which is "No matching record found" on the index page of transportation information record function.

Test cases:

ID	Description	Input				Expected Result
		Shipping No	**Order Date**	**Employer**	**Product Name**	
STC-32.1	Searching in the search field with Shipping No.	**6**	**-**	**-**	**-**	The system provides the shipping document from Shipping No of 6 inform of {Shipping No = 6, Order Date = "2017-09-27", Employer = "Fu-in Shipping Co, Ltd", Product Name = "Organic Fruit", Status = "Not Complete", Job Assign = "Active"}
STC-32.2	Searching in the search field with Order Date	-	**2017-09-28**	**-**	**-**	The system provides the shipping document from Order Date of "2017-09-28" inform of {Shipping No = 8, Order Date = "2017-09-28", Employer = "LD Logistic Co, Ltd", Product Name = "Computer", Status = "Not Complete", Job Assign = "Add Job"}
STC-32.3	Searching in the search field with Employer	**-**	**-**	**LD Logistic**	**-**	The system provides the shipping document Employer = "LD Logistic" inform of {Shipping No = 8, Order Date = "2017-09-28", Employer = "LD Logistic Co, Ltd", Product Name = "Computer", Status = "Not Complete", Job Assign = "Add Job"}
STC-32.4	Searching in the search field with Product Name	**-**	**-**	**-**	**Organic**	The system provides the shipping document from Product name of "Organic" inform of {Shipping No = 6, Order Date = "2017-09-27", Employer = "Fu-in Shipping Co, Ltd", Product Name = "Organic Fruit", Status = "Not Complete", Job Assign = "Active"} and {Shipping No = 7, Order Date = "2017-09-27", Employer = "Fu-out Shipping Co, Ltd", Product Name = "Organic Plant", Status = "Not Complete", Job Assign = "Active"}

System Test Case 33 (STC-33): Test company staff able to update the information of shipping document into data storage.

Description:

This system testing is used for test update shipping document into data storage. The user who is company staff should select "Edit" button on the index page of transportation information record function and fill the information into the update form. Then, the user selects "Update" button. The system shall provide all the list of shipping document. After, the system updates the information into data storage.

This system testing refers from **URS-32:** Customer expect the system able to create shipping document by input the information of Employer, Order Date, Date of Transportation, Product Name, Starting Point, Destination, Receiver Name. Moreover, user be able to search, update and delete shipping document. And it able to be save when the user creates and update shipping document.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user selects "Edit" button at the list of shipping document which is the user require to update information.
2. The system provides update form with the information that user had been input at URS-32.
3. The user fills all information into the update form. Then, select at "Update" button.
4. The system verifies information and If the information that user filled is invalid that system shall provide message alert.
5. The system update information into data storage. Then, the system shall back to the index page for providing all the list of shipping document.

Test Cases:

ID	Description	Input							Expected Result
		Employer	**Order Date**	**Date of Transportation**	**Product Name**	**Starting Point**	**Destination**	**Receiver Name**	
STC-33.1	The user updates all information into update form and the information is valid.	**Fu-in Shipping Co, Ltd.**	**09/28/2017**	**10/15/2017**	**Organic Plant Food**	**Chiangrai**	**Phuket**	**Phuket Farm**	1.The system **update** information into data storage without provide the message alert. 2.The system redirect to the index page for providing all the list of shipping document.
STC-33.2	The user updates some information and information is invalid.	Fu-in Shipping Co, Ltd.	09/27/2017	11/06/2017	Organic Fruit	**CM**	Phuket	Thai Co	1.The system not update information into data storage and provide message alert "Starting Point length must be between 4 to 30 characters". 2.The system is not redirect to the index page for providing all the list of shipping document.
STC-33.3	The user not update any information. And they select update button	Fu-in Shipping Co, Ltd.	09/27/2017	11/06/2017	Organic Fruit	Chiangmai	Phuket	Thai Co	1.The system not store information into data storage. 2.The system redirect to the index page for providing all the list of shipping document.

System Test Case 34 (STC-34): Test company staff able to delete information of shipping document from data storage.

Description:

This system testing is used for test deleting shipping document that user already created from data storage. The user who is the company staff should select "Delete" button and confirm to delete. Then, the system shall delete information of shipping document from data storage. And back to the index page of transportation information record function for providing all the list of shipping document.

This system testing refers from **URS-32:** Customer expect the system able to create shipping document by input the information of Employer, Order Date, Date of Transportation, Product Name, Starting Point, Destination, Receiver Name. Moreover, user be able to search, update and delete shipping document. And it able to be save when the user creates and update shipping document.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user selects "Delete" button at the option on the list of shipping document.
2. The system retriever and provides the information of each shipping document that selected with the button of "Delete" and "Cancel".
3. The user selects "Delete" button.
4. The system provides the message alert which is "Do you want to delete?".
5. The user selects "OK" button.
6. The system deletes information of shipping document from data storage.
7. The system backs to the index page of transportation information record function for providing all the list of shipping document.

Test Cases:

ID	Description	Input	Expected Result
STC-34.1	User who is company staff select delete option at “Delete” button of shipping document. {Shipping No = 6, Order Date = “2017-09-27”, Employer= “Fu-in Shipping Co, Ltd.”, Product Name = “Organic Fruit”, Status = “Not Complete”}	Select delete button. Then, select OK button.	Shipping Document of {Employer = “Fu-in Shipping Co, Ltd”, Order Date = “09/27/2017”, Date of Transportation= “11/06/2017” Product Name = “Organic Fruit”, Starting Point = “Chiangmai”, Destination = “Phuket”, Receiver Name = “Thai Co”} delete from data storage.
STC-34.2	User who is company staff select delete option at “Delete” button of shipping document. {Shipping No = 6, Order Date = “2017-09-27”, Employer= “Fu-in Shipping Co, Ltd.”, Product Name = “Organic Fruit”, Status = “Not Complete”}	Select delete button. Then, select Cancel button.	Shipping Document of {Employer = “Fu-in Shipping Co, Ltd”, Order Date = “09/27/2017”, Date of Transportation= “11/06/2017” Product Name = “Organic Fruit”, Starting Point = “Chiangmai”, Destination = “Phuket”, Receiver Name = “Thai Co”} is **not delete** from data storage.

System Test Case 35 (STC-35): Test company staff able to view all the list of shipping document and see the detail of shipping document information. Then, user selects “Cancel” button.

Description:

This test case is the system testing for testing to view all the list of shipping document. And the information of shipping document. The user who is company staff can view the information of each shipping document by select “Detail” button at the option. Then, the system shall provide the information of shipping document.

This system testing refers from URS-33: Customer needs transportation information record feature be able to view the all list of shipping documents. After, the company staffs save any shipping document when they created or update the information. Also, the company staff able to view the list in the detail of shipping document information.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user selects “Detail” button at the option on the list of shipping document.
2. The system retrieves the information of shipping document from data storage. Then, the system provides the information to the user.
3. The user selects “Cancel” button.
4. The system back tot index page and provide all the list of shipping document.

Test cases:

ID	Description	Input	Expected Result
STC-35.1	User who is company staff select the option of “detail” on the list of shipping document {Shipping No = 7, Order Date = “2017-09-27”, Employer = “Fu-out Shipping Co, Ltd.”, Product Name = “Organic Plant”, Status = “Not Complete”, Job Assign = Active} For see the information of shipping document.	Select the option of detail	The system provides the detail information of shipping document {Status = “Not Complete”, Employer = “Fu-out Shipping Co, Ltd.”, Order Date = “09/27/2017”, Date of Transportation = “11/06/2017”, Product Name = “Organic Plant”, Starting Point = “Chiangmai”, Destination = “Samut Phakan”, Receiver Name = “Pakan Farm}
STC-35.2	User who is company staff select the option of “detail” on the list of shipping document Shipping No = 7, Order Date = “2017-09-27”, Employer = “Fu-out Shipping Co, Ltd.”, Product Name = “Organic Plant”, Status = “Not Complete”, Job Assign = Active} Then, selects cancel button at below of shipping document information.	Select the option of detail. Then, select “Cancel” button.	The system provides the index page with all list of shipping document.

System Test Case 36 (STC-36): Test company staff able to view all the list of shipping document and see the detail of shipping document information. Then, user selects “Edit” button.

Description:

This test case is the system testing for testing to view all the list of shipping document. And the information of shipping document. The user who is company staff can view the information of each shipping document by select “Detail” button at the option. Then, the system shall provide the information of shipping document.

This system testing refers from URS-33: Customer needs transportation information record feature be able to view the all list of shipping documents. After, the company staffs save any shipping document when they created or update the information. Also, the company staff able to view the list in the detail of shipping document information.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user selects “Detail” button at the option on the list of shipping document.
2. The system retrieves the information of shipping document from data storage. And provide the information of shipping document.
3. The user can select “Edit” button at below information of shipping document that the system provided.
4. The system shall provide the update form.
5. The user fills the information into update form as STC-33. Then, the user selects “Update” button
6. The system verifies the information that user entered. Then, provide the message alert if the user as STC-33.
7. The user confirms for update information.
8. The system shall back to the index page and provide all list of shipping document.

Test Cases:

ID	Description	Input	Expected Result
STC-36.1	User who is company staff select the option of "detail" on the list of job assignment {Shipping No = 7, Order Date = "2017-09-27", Employer = "Fu-out Shipping Co, Ltd.", Product Name = "Organic Plant", Status = "Not Complete", Job Assign = Active} For see the information of shipping document	Select the option of detail	The system provides the detail information of job assignment {Status = "Not Complete", Employer = "Fu-out Shipping Co, Ltd.", Order Date = "09/27/2017", Date of Transportation = "11/06/2017", Product Name = "Organic Plant", Starting Point = "Chiangmai", Destination = "Samut Phakan", Receiver Name = "Pakan Farm}
STC-36.2	User who is company staff select the option of "detail" on the list of job assignment {Shipping No = 7, Order Date = "2017-09-27", Employer = "Fu-out Shipping Co, Ltd.", Product Name = "Organic Plant", Status = "Not Complete", Job Assign = Active} Then, selects edit button at below of shipping document information.	Select the option of detail. Then, select "Edit" button.	The system provides the form of update information of this job assignment {Status = "Not Complete", Employer = "Fu-out Shipping Co, Ltd.", Order Date = "09/27/2017", Date of Transportation = "11/06/2017", Product Name = "Organic Plant", Starting Point = "Chiangmai", Destination = "Samut Phakan", Receiver Name = "Pakan Farm}

System Test Case 37 (STC-37): Test company staff able to assign the job to truck's driver on the web application in the function of transportation information record.

Description:

This system testing is used for test assign the job to truck's driver on the function of transportation information record. The user should select "Add Job" button at the option of Job assignment on the index page of transportation information record menu. The system shall provide the job assignment form for assign the job to truck's driver on the web application.

This system testing refers from URS-34: Customer expect transportation information record system can assign the job to truck's driver on the shipping document list that the system provided in URS-33.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user select at "Add Job" button for assign job to truck's driver at the list of shipping document.
2. The system provide the create form to user for enter information of job assignment.
3. The user fills all information into the create form. Then, the user selects "Assign Job" button.
4. The system verify all information. If the information is invalid, the system shall provide message alert as STC 37.2.
5. The system stores information into data storage. And back to the index page for provide all the list of shipping document.

Test Cases:

ID	Description	Input									Expected Result
		Date of Transportation	**TruckID**	**Shipping No**	**From**	**Latitude**	**Longitude**	**To**	**Latitude**	**Longitude**	
STC-37.1	The user assigns the job to truck's driver on create job form with valid information.	**11/06/2017**	**NP-1235**	**6**	**Chiangmai**	**18.92742**	**98.88039**	**Phuket**	**7.880448**	**98.39225**	The system store information into data storage. And redirect to the index page of transportation information record function.
STC-37.2	The user assigns the job to truck's driver on create job form with invalid information.	11/06/2017	NP-1235	-	Chiangmai	18.92742	98.88039	Phuket	7.880448	98.39225	The system not store information into data storage. And provide message alert which is "Make sure that is correct TruckID"

System Test Case 38 (STC-38): The user able to search the location on Google Map that the system provides on the create new job assignment form.

Description:

This test case is the system testing for testing the function of assign job that the user be able to search the location of transportation on the Google Map that the system provides on the web application in function of transportation information record. The user can search at the search field at above of Google Map. After, the user input the location for searching. The system shall provide the location in form of latitude and longitude.

This system testing refers from URS-35: Customer expect the function of create job assignment has Google map to provide on the web application. It's necessary for searching the origin and the destination to assign the route to truck's driver in job assignment detail. The user which is company staff able to search or pin the location of origin and destination on the Google map.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The user select at "Add Job" button for assign job to truck's driver at the list of shipping document.
2. The system provide the create form to user for enter information of job assignment. And Google Map with search field location above.
3. The user enter the location for searching at the search field above.
4. The system provide the location that the user required in the form of latitude and longitude.
5. The user can copy the latitude and longitude into the create job form.

Test Cases:

ID	Description	Input	Expected Result
STC-38.1	The user can enter the location for searching into the search field that the system provided.	Search: Chiangmai	The system provides the location in form of latitude and longitude on the Google Map {Location= "Chiangmai", Latitude: "18.92742", Longitude = "98.88039"} for user to copy into the create job form.
STC-38.2	The user can enter the location for searching into the search field that the system provided.	Search: Phuket	The system provides the location in form of latitude and longitude on the Google Map {Location= "Phuket", Latitude: "7.880448", Longitude = "98.39225"} for user to copy into the create job form.

System Test Case 39 (STC-39): Test company staff able to check the status of shipping document.

Description:

This test case is the system testing for testing to check the status of shipping document. The user who is company staff select the menu of transportation information record. Then, the system shall provide all the list of shipping document in the column of Shipping No, Order Date, Employer, Product Name within the status and option on each list. The status should be “Complete” or “Not Complete”.

This system testing refers from URS-36: Customer expect transportation information record be able to check the status of shipping document that is complete or not at the list of shipping document.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test step

1. The system retrieves the status from data storage that truck’s driver confirmed the status of transportation on Android mobile application to provide the status on the index page of transportation information record. The status consists of “Complete” or “Not Complete”
2. The user can select at the list of shipping document for check the status on the detail information form by selecting at “Detail” button.
3. The system provides the information of shipping document with a status above the information.

Test Cases:

ID	Description	Input	Expected Result
STC-39.1	User who is company staff select the menu of transportation information. Then, checking the status by looking at the list of shipping document that system provided.	Select transportation information menu. Then, checking at {Shipping No = 7, Order Date = "2017-09-27", Employer = "Fu-out Shipping Co, Ltd.", Product Name = "Organic Plant", Status = "Not Complete", Job Assign = "Active"}	The system provides the detail information with status which is **"Not Complete"** of shipping document at the row {Status = "Not Complete", Employer = "Fu-out Shipping Co, Ltd.", Order Date = "09/27/2017", Date of Transportation = "11/06/2017", Product Name = "Organic Plant", Starting Point = "Chiangmai", Destination = "Samut Phakan", Receiver Name = "Pakan Farm}
STC-39.2	User who is company staff select the menu of transportation information. Then, select the "Detail" button at the list.	Select "Detail" button at the list of shipping document of {Shipping No = 7, Order Date = "2017-09-27", Employer = "Fu-out Shipping Co, Ltd.", Product Name = "Organic Plant", Status = "Not Complete", Job Assign = "Active"}	The system provides the status on the top of information of shipping document which **is "Not Complete"** with information of {Status = "Not Complete", Employer = "Fu-out Shipping Co, Ltd.", Order Date = "09/27/2017", Date of Transportation = "11/06/2017", Product Name = "Organic Plant", Starting Point = "Chiangmai", Destination = "Samut Phakan", Receiver Name = "Pakan Farm}
STC-39.3	User who is company staff select the menu of transportation information. Then, select the "Detail" button at some list that status is complete.	Select "Detail" button at the list of shipping document of {Shipping No = 9, Order Date = "2017-09-27", Employer = "Beijing Shipping", Product Name = "Snack", Status = "Complete", Job Assign = "Active"}	The system provides the status on the top of information of shipping document which **is "Complete"** with information of {Status = "Complete", Employer = "Beijing Shipping", Order Date = "09/27/2017", Date of Transportation = "11/24/2017", Product Name = "Snack", Starting Point = "Hua Hin", Destination = "Mea Hong Son", Receiver Name =

			"New", **ReceiveDateTime = "10/3/2017 1:13:11 PM"}**

System Test Case 40 (STC-40): Test user be able to search the shipping document from all the list of shipping document.

Description:

This test case is the system testing for test searching the shipping document from data storage by insert character A-Z, a-z, 0-9, ก-ฮ and symbol. Then, the system shall pair the information with the character that the user entered.

This system testing refers from URS-37: Customer needs transportation information record to be able to search shipping document from the list of shipping document. The company staffs search the shipping document in the text box by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.

Prerequisite or input required

The user who is company staff should login to the system. The test data is available at Appendix A. This system testing shall provide on transportation information record system on the web application.

Test Step

1. The user fills some character or symbol into the search field that system provided.
2. The system matching the information that the user filled with the information in the data storage. Then, the system retrieves the shipping document information and provides the information that can be match from user input in the search field, on the list in form of Shipping No, Order Date, Employer, Product Name.
3. If the information on data storage doesn't match with the input from user. The system provides message which is "No Matching records found!"

Test Cases:

ID	Description	Input	Expected Result
STC-40.1	User who is company staff search the shipping document in the text box by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.	From Shipping No: 6 From Product Name: Organic Fruit	The system provides the list of shipping document from Shipping No = 6 and Product Name = "Organic Fruit" {Shipping No = 6, Order Date = "2017-09-27", Employer= "Fu-in Shipping Co, Ltd.", Product Name = "Organic Fruit", Status = "Not Complete"}
STC-40.2	User who is company staff search the shipping document in the text box by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.	From Order Date: 2017-09-27	The system provides the list of shipping document from Order Date: 2017-09-27 {Shipping No = 6, Order Date = "2017-09-27", Employer= "Fu-in Shipping Co, Ltd.", Product Name = "Organic Fruit", Status = "Not Complete"} and {Shipping No = 7, Order Date = "2017-09-27", Employer = "Fu-out Shipping Co, Ltd.", Product Name = "Organic Plant", Status = "Not Complete"}
STC-40.3	User who is company staff search the shipping document in the text box by insert character A-Z, a-z, 0-9, ก-ฮ and symbol.	From Shipping No = "" From Order Date = "" From Employer = "z" From Product Name = "z" The information is not match.	The system not provide any list of shipping document. And it provides message which is "No Matching records found!"

4.2 System Testing on Android mobile application

System Testing Feature2: Authentication System

System Test Case 41 (STC-41): Test truck's driver able to login on Android mobile application by insert username and password.

Description:

The test case is system testing of login on Android mobile application by insert username and password. The system shall verify the information for login function.

This system testing refers from URS-08. Customer wants authentication system in the Android mobile application to use by the truck's driver. The truck's driver has to login by insert username and password. Therefore, truck's driver able to login on Android mobile application.

Prerequisite or input required

The test data is available at Appendix A. This system testing shall provide in authentication system on Android mobile application.

Test Step

1.The user fill the information into the field that system provide that consist of username and password.
2. The user select "Login" button.
3.The system verify the information with the information in data storage.
4.The system access to Android mobile application by user account of truck's driver.

Test cases:

ID	Description	Input		Expected Result
		Username	Password	
STC-41.1	Input information into the field of Username = "Thada" and Password = "TD12123" on the login page with correct information	Thada	TD12123	Direct to share location page on Android mobile application.
STC-41.2	Input information into the field of Username = "Sompong" and Password = "TD12124" on the login page with correct information	Sompong	TD12124	Direct to share location page on Android mobile application.
STC-41.3	Input information into the field of Username = "Sompong" and Password = "TD124" on the login page with correct information	Sompong	TD124	The system shows alert message The user cannot access to the Android mobile application

System Test Case 42 (STC-42): Recheck flow** Test logout by truck's driver on Android application.

Description:

This test case is system testing of logout from Android mobile application that used by truck's driver. The system shall logout and back to login page. After, user confirm to logout.

This system testing refers from URS-09. Customer wants authentication system can be logout by truck's drivers on Android mobile application. Therefore, this test case is system testing on Android mobile application which is the truck's driver able to logout from the web application.

Prerequisite or input required

The user which is truck's driver should login to the system. The test data is available at Appendix A. This system testing shall provide in authentication system on Android mobile application.

Test Step

1.The user login to the system. And select Profile menu.
2.The system provide the profile interface on Android mobile application.
3.The user select "Logout" button.
4.The system shows message alert which is "Logout successfully". And the system logout from Android mobile application.

Test cases:

ID	Description	Input	Expected Result
STC-42.1	User which is the truck's driver who is already login. They select "Logout" button.	Logout button.	-The system logout the user from the system -The system provides login page.
STC-42.2	User which is the truck's driver who is already login. They select "Logout" button.	Logout button. Then confirm, status by select "Cancel" button	- The system is not logout the user from the system -The system provides the current function on Android mobile application that user is using.

System Test Case 43 (STC-43): Test logout function on Android mobile application when the user doesn't do any action on the application in 30 minutes.

Description:

The test case is system testing of logout function on Android mobile application when the user doesn't do any action on the application in 30 minutes. The system shall logout from Android mobile application when user doesn't do any action on the application.

This system testing refers from URS-10. Customer expects the automatic logout function on android mobile application when the user doesn't do any action on the application in 30 minutes.

Prerequisite or input required

The user which is truck's driver should login to the system. The test data is available at Appendix A. This system testing shall provide in authentication system on Android mobile application.

Test Step

1.Login to Android mobile application
2.The user account of truck's driver depart from Android mobile application.
3. The system logout the user from the system then provide login page. After, the user doesn't do any action on Android mobile application.

Test cases:

ID	Description	Input	Expected Result
STC-43.1	User which is truck's driver has to login into Android mobile application and then leave Android mobile application.	Leave an Android mobile application about 30 minutes.	-The user account departs from Android mobile application. -The system logout the user from the system -The system provides login page.

System Testing Feature 3: Truck's and Product Tracking System

System Test Case 44 (STC-44): Test share the location between the route of transportation by using Google Map on Android mobile application.

Description:

The test case is system testing for Test share the location between the route of transportation by using Google Map on Android mobile application. The system shall store the location to system storage

This system testing refers from URS-15. Customer needs truck and product tracking system feature on the Android mobile application that provides to the truck's driver for share the location between the route of transportation.

Prerequisite or input required

The user which is truck's driver should login to the system. The test data is available at Appendix A. This system testing shall provide in Truck's and Product Tracking System on Android mobile application.

Test Step

1.The user select at "Map"
2.The system provide Google Map and provide the location that truck's driver is staying which is current location.
3.The user select "Share location"
4.The system sends the information of location to the system storage for storage information.

ID	Description	Input	Expected Result
STC-44.1	User which is truck's driver has to login into Android mobile application and then select at "Map" menu.	Select "Share location"	The system sends the information of location to the system storage. As the Tabel3 Location {"1", "1", "13.0245", "98.1545", "03/03/2017 12:00:00 AM", "Chiang Saen Chiang Rai 57150"} , Location {"2", "2", "16.1215", "99.1215", "03/03/2017 12:00:00 AM", "Sansai Chiang Mai 52000"}

System Test of Feature4: Job Assignment for Truck's Driver System

System Test Case 45 (STC-45): Test user be able to check the job on Android mobile application.

Description:

This test case is the system testing that used for test check the job assignment on Android mobile application. The job is the order from customer that truck's driver must go for transfer product from the location that customer required. Truck's driver is the user that they should use Android mobile application by select the function of "My Jobs" on Android mobile application for check their jobs.

This system testing refers from URS-22: Customer needs job assignment system feature on the Android mobile application to truck's drivers for checking their job that they must go. And the truck's driver able to see the detail of each job on Android mobile application.

Prerequisite or input required

The user who is truck's driver should login to the system. The test data is available at Appendix A. This system testing shall provide in Job Assignment for Truck's Driver System on Android mobile application.

Test Step

1. The user selects "My Job" menu that the system provided on Android mobile application.
2. The system retrieves the list of job assignment from data storage. Then, the system provides the list of job assignment on Android mobile application.
3. The user can check their jobs by looking at the list that the Android mobile application provide to the user. The job assignment list shall provide by truck's driver id of truck's driver.

Test Cases:

ID	Description	Input	Expected Result
STC-45.1	User which is truck's driver has to login into Android mobile application and then select at "My Jobs" menu.	Select "My Jobs" menu at the menu bar that Android mobile application provided. Login Page Username: Thada Password: TD12123	The system provides all the list of job assignment by providing from TruckDriverId. My Jobs provides the list of job assignment which is {Shipping ID= 20, Location= "Chiangrai – Samut Phakan", Date of Transportation = "2017-10-18"} and {Shipping ID= 22, Location= "Saraburi – Hua Hin", Date of Transportation = "2017-10-18"}

System Test Case 46 (STC-46): Test user be able to see the detail of each job assignment on Android mobile application.

Description:

This test case is the system testing that used for testing the job assignment for see the information on Android mobile application. The user should select “Detail” button on Android mobile application that system provided. Then, the system shall provide the information of each job assignment by retrieve the information from shipping document.

This system testing refers from URS-22: Customer needs job assignment system feature on the Android mobile application to truck's drivers for checking their job that they must go. And the truck’s driver able to see the detail of each job on Android mobile application.

Prerequisite or input required

The user who is truck’s driver should login to the system. The test data is available at Appendix A. This system testing shall provide in Job Assignment for Truck’s Driver System on Android mobile application.

Test Step

1 The user selects “My Jobs” at the menu bar.
2 The system retrieves the list of job assignment from data storage. Then, the system provides the list of job assignment on Android mobile application.
3 The user selects some job assignment from the list that the system provided.
4 The system retrieves the information of job assignment from data storage. Then, the system provides the information of job assignment which is the route on Google Map.
5 The system provides the button option of “Detail” and “Update”.
6 The user selects “Detail” button that the system provided.
7 The system provides the information of job assignment in the detail of shipping document.

Test Cases:

ID	Description	Input	Expected Result
STC-46.1	User which is truck's driver has to login into Android mobile application and then select at "My Jobs" menu.	Select "My Jobs" menu at the menu bar that Android mobile application provided. And select job of {Shipping ID= 20, Location= "Chiangrai – Samut Phakan", Date of Transportation = "2017-10-18"} Login Page Username: Thada Password: TD12123	The system provides the information of shipping document of {Shipping ID= 20, Location= "Chiangrai – Samut Phakan", Date of Transportation = "2017-10-18"} with the information of shipping document {Status of Transportation = "Not Complete", Employer= "Chai-Jha-Learn", Order Date = "09/30/2017", Date of Transportation = "10/18/2017", Product Name = "Smart Phone", Starting Point = "Chiangrai", Destination = "Samut Phakan", Receiver Name= "Puttipong Tadang"}

System Test Case 47 (STC-47): Test user be able to view the route of each job assignment on Android mobile application.

Description:

This test case is the system testing that used for testing the job assignment for view the route of each job on Android mobile application. The user should select some job assignment from the list that the system provided. Then, the system shall provide the route of each job for user can view to transfer the product.

This system testing refers URS-23: Customer expects the system should have job assignment for truck's driver feature on the Android mobile application to truck's drivers for viewing the route of each job.

Prerequisite or input required

The user who is truck's driver should login to the system. The test data is available at Appendix A. This system testing shall provide in Job Assignment for Truck's Driver System on Android mobile application.

Test Step

1 The user selects "My Jobs" menu that the system provided on Android mobile application.
2 The system retrieves the list of job assignment from data storage. Then, the system provides the list of job assignment on Android mobile application.
3 The user selects some job assignment from the list that the system provided.
4 The system retrieves the information of each job assignment from data storage. Then, the system provides the information of each job in form of the route on Google Map on Android mobile application.

Test Cases:

ID	Description	Input	Expected Result
STC-47.1	User which is truck's driver has to login into Android mobile application and then select at "My Jobs" menu.	Select "My Jobs" menu at the menu bar that Android mobile application provided. And select job of {Shipping ID= 20, Location= "Chiangrai – Samut Phakan", Date of Transportation = "2017-10-18"} Login Page Username: Thada Password: TD12123	The system provides the route of transportation of job assignment of {Shipping ID= 20, Location= "Chiangrai – Samut Phakan", Date of Transportation = "2017-10-18"} on Google Map. The location provide by pin at the current location of truck's driver to the destination which is "Samut Phakan"

System Test of Feature6: Transportation Information Record System

System Test Case 48 (STC-48): Test user be able to **update and confirm status** of transportation on Android mobile application into data storage.

Description:

This test case is the system testing that used for testing the transportation information record feature for update and confirm the status of transportation. The user should select the status for update to data storage. And It will provide on the web application in the column of status on job assignment and transportation information record feature.

This system testing refers from URS-38: Customer wants the transportation information record for the truck's driver on Android mobile to update and confirm the status of transportation.

Prerequisite or input required

The user who is truck's driver should login to the system. The test data is available at Appendix A. This system testing shall provide in Transportation Information Record System on Android mobile application.

Test Step

1 The user selects "My Job" menu that the system provided on Android mobile application.
2 The system retrieves the list of job assignment from data storage. Then, the system provides the list of job assignment on Android mobile application.
3 The user selects some job assignment from the list that the system provided.
4 The system provides the information of each job in form of the route on Google Map on Android mobile application with the button option of "Detail" and "Update"
5 The user selects "Update" button.
6 The system provides the update form.
7 The user selects status of transportation which consist of "Complete" or "Not Complete"
8 The user selects "Update" for update information into data storage.
9 The system store information into data storage. And redirect to My Jobs interface.

Test Cases:

ID	Description	Input	Expected Result
STC-48.1	User which is truck's driver has to login into Android mobile application and then select at "My Jobs" menu. Then, they select some job for update and confirm status which is complete.	Select "My Jobs" menu at the menu bar that Android mobile application provided. And select status for confirm on the information of {Status of Transportation = "Not Complete", Employer= "Chai-Jha-Learn", Order Date = "09/30/2017", Date of Transportation = "10/18/2017", Product Name = "Smart Phone", Starting Point = "Chiangrai", Destination = "Samut Phakan", Receiver Name= "Puttipong Tadang"} which is "**Complete".**	The system stores information of {Status of Transportation = "Complete", Employer= "Chai-Jha-Learn", Order Date = "09/30/2017", Date of Transportation = "10/18/2017", Product Name = "Smart Phone", Starting Point = "Chiangrai", Destination = "Samut Phakan", Receiver Name= "Puttipong Tadang"} with current time into ReceiveDateTime into data storage. And redirect to My Jobs interface. Then, this list is not provided.
STC-48.2	User which is truck's driver has to login into Android mobile application and then select at "My Jobs" menu. Then, they select some job for update and confirm status which is not complete.	Select "My Jobs" menu at the menu bar that Android mobile application provided. And select status for confirm on the information of {Status of Transportation = "Not Complete", Employer= "Chai-Jha-Learn", Order Date = "09/30/2017", Date of Transportation = "10/18/2017", Product Name = "Smart Phone", Starting Point = "Chiangrai", Destination = "Samut Phakan", Receiver Name= "Puttipong Tadang"} which is still **"Not Complete".**	The system provides more field to user input. After user confirm update status, the system stores information of {Status of Transportation = "Complete", Employer= "Chai-Jha-Learn", Order Date = "09/30/2017", Date of Transportation = "10/18/2017", Product Name = "Smart Phone", Starting Point = "Chiangrai", Destination = "Samut Phakan", Receiver Name= "Puttipong Tadang", **Other: "Got Accident"**} into data storage. And redirect to My Jobs interface. Then, this list is still provided.

System Test Case 49 (STC-49): Test user be able to **update and confirm the information of** transportation on Android mobile application into data storage.

Description:

This test case is the system testing that used for testing the transportation information record feature for update and confirm the information of transportation. The user should update the information of shipping document on Android mobile application by input the information.

This system testing refers from URS-38: Customer wants the transportation information record for the truck's driver to update and confirm the information of shipping document by input receiver, time of receiving and status of shipping document which are complete or uncomplete.

Prerequisite or input required

The user who is truck's driver should login to the system. The test data is available at Appendix A.

Test Step

1 The user selects "My Job" menu that the system provided on Android mobile application.
2 The system retrieves the list of job assignment from data storage.
3 The system provides the list of job assignment on Android mobile application.
4 The user selects some job assignment from the list that the system provided.
5 The system retrieves the information of each job assignment from data storage.
6 The system provides the information of each job in form of the route on Google Map on Android mobile application with the button option of "Detail" and "Update"
7 The user selects "Update" button.
8 The system provides the update form.
9 The user input all the information that can be update into the form of update.
10 The user selects "Update" for update information into data storage.
11 The system store information into data storage.

Test Cases:

ID	Description	Input	Expected Result
STC-49.1	User which is truck's driver has to login into Android mobile application and then select at "My Jobs" menu.	Select "My Jobs" menu at the menu bar that Android mobile application provided. And select status for confirm on the information of {Status of Transportation = "Not Complete", Employer= "Chai-Jha-Learn", Order Date = "09/30/2017", Date of Transportation = "10/18/2017", Product Name = "Smart Phone", Starting Point = "Chiangrai", Destination = "Samut Phakan", Receiver Name= "Puttipong Tadang"} which consist of **Status = "Complete"** **Time of Receiving = "10/18/2017 15.30"** **Receiver Name = "Puttipong"**	The system stores information of {Status of Transportation = "Complete", Employer= "Chai-Jha-Learn", Order Date = "09/30/2017", Date of Transportation = "10/18/2017", Product Name = "Smart Phone", Starting Point = "Chiangrai", Destination = "Samut Phakan", Receiver Name= "Puttipong Tadang", Time of Receiving = "10/18/2017 15.30"} into data storage. And redirect to My Jobs interface. Then, this is not provide.
STC-49.2			

System Test Case 50 (STC-50): Test user be able to use the built-in camera on Android mobile application for take photos to update the status of transportation.

Description:

This test case is the system testing that used for testing the transportation information record feature for update and confirm the information of transportation by take photos. The user can take photos and update into shipping document on the feature of transportation information record function on Android mobile application.

This system testing refers from URS-40: Customer expects the transportation information record feature for the truck's driver to take photos of a receiver or product transportation for updating the status of a shipping document.

Prerequisite or input required

The user who is truck's driver should login to the system. The test data is available at Appendix A.

Test Step

1 The user selects "My Job" menu that the system provided on Android mobile application.
2 The system retrieves the list of job assignment from data storage. Then, the system provides the list of job assignment on Android mobile application.
3 The user selects some job assignment from the list that the system provided.
4 The system provides the information of each job in form of the route on Google Map on Android mobile application with the button option of "Detail" and "Update"
5 The user selects "Update" button.
6 The system provides the update form with camera mode.
7 The user selects camera mode and takes photos for update. Then, user selects "Update" for update information into data storage.
8 The system store information into data storage.

Test Cases:

ID	Description	Input	Expected Result
STC-50.1	User which is truck's driver has to login into Android mobile application and then select at "My Jobs" menu and update the information on the update form with shipping document information.	User uses camera mode for taking photo for update information of transportation.	The system shall store photos that user took on the data storage. And redirect to My job menu for provide all the list of job assignment. After, the user confirmed update information.

Appendix A

Test Data

Table 1: Shipping Document Information

ID	Shipping No	Employer	Order Date	Date of Transportation	Product Name	Starting Point	Destination	Receiver Name	ReceiveDateTime
1	6	Fu-in Shipping Co, Ltd	09/27/2017	11/06/2017	Organic Plant	Chiangmai	Phuket	Thai Co	
2	7	Fu-out Shipping Co, Ltd	09/27/2017	10/12/2017	Organic Fruit	Chiangmai	Samut Phakan	Pakan Farm	
3	8	LD Logistic	09/28/2017	11/13/2017	Computer	Bangkok	Hua Hin	Com Device	
4	9	Beijing Shipping	09/27/2017	11/24/2017	Snack	Hua Hin	Mea Hong Son	New	10/3/2017 1:13:11 PM

Table 2: Job Assignment Information

ID	Date of Transportation	TruckID	Shipping No	From	Latitude	Longitude	To	Latitude	Longitude
1	11/06/2017	NP-1235	6	Chiangmai	18.92742	98.88039	Phuket	7.880448	98.39225
2	10/12/2017	CM-3221	7	Chiangmai	18.787747	98.99312839999993	Samut Phakan	13.5954062	100.60724010000001
3	11/24/2017	CR-1001	9	Hua Hin	12.56837	99.95769	Mea Hong Son	19.30203	97.96544

Table 3: Transportation Information Record Index Page

ID	Shipping No	Order Date	Employer	Product Name	Status Shipping	Job Assignment
1	6	2017-09-27	Fu-in Shipping Co, Ltd	Organic Fruit	Not Complete	Active
2	7	2017-09-27	Fu-out Shipping Co, Ltd	Organic Plant	Not Complete	Active
3	8	2017-09-28	LD Logistic Co, Ltd	Computer	Not Complete	“Add Job”
4	9	2017-09-27	Beijing Shipping	Snack	Complete	Active

Table 4: Job Assignment Index Page

ID	Date	TruckID	Stating Point	Destination	Shipping No	Status
1	2017-10-12	CM-3221	Chiangmai	Samut Phakan	7	Not Complete
2	2017-11-06	NP-1235	Chiangmai	Phuket	6	Not Complete
3	2017-11-24	CR-1001	Hua Hin	Mea Hong Son	9	Complete

Table5: Truck's Driver

ID	Username	Password	Confirm Password	Fullname	CitizenID	DriverLisenceId	TruckID	Gender	Address	Birthday	TelephoneNo	Email
1	Thada	TD12123	TD12123	Thada Jumlern	2211144897752	58001687	CR-1234	Male	255/35 Pakpeaw Meaung Saraburi 18000	08/12/1995	0867540606	Thad.a@gmail.com
2	Sompong	TD12124	TD12124	Sompong Motor	2211144890083	580001687	CR-1235	Male	98/2 Measai Chiangrai 60120	09/3/1995	0867564580	Som.p@gmail.com
3	driverA	driver	driver	DriverA	2157990061773	12548789	CR-1001	Male	264 M.1 Golden Triangle	11/30/1990	0874561254	driver@gmail.com

Table6: Location

ID	DriverId	Latitude	Longitude	DateTime	Address
1	1	13.0245	98.1545	12:00:00 AM	Chiang Saen Chiang Rai 57150
2	2	16.1215	99.1215	12:00:00 AM	Sansai Chiang Mai 52000