**IT equipment management system of**

**College of Arts, Media and Technology**

Test Plan

By

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**Document History**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Document Name** | **Version** | **Status** | **Date** | **Viewable** | **Reviewer** | **Responsible** |
| **Documents** | | | | | | |
| IT equipment management system of  College of Arts, Media and Technology-Test plan\_v1.0.docx | Create Chapter one, two, and three | Release | 23 June 2015 | NS, TP, PS | NS,TP | TP |

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**\*PS = Dr. Prompong Sugunnasil**

Contents

[**Chapter One | Introduction** 7](#_Toc424302244)

[1.1 Objective 7](#_Toc424302245)

[1.2 Scope 7](#_Toc424302246)

[1.3 Acronyms and Definitions 7](#_Toc424302247)

[1.3.1 Acronyms 7](#_Toc424302248)

[1.3.2 Definitions 7](#_Toc424302249)

[**Chapter Two| Test Plan and Test Procedure** 9](#_Toc424302250)

[2.1 Test Objectives 9](#_Toc424302251)

[2.2 Scope of Testing 9](#_Toc424302252)

[2.3 Test Duration 9](#_Toc424302253)

[2.4 Test Responsibility 9](#_Toc424302254)

[2.5 Result of Testing 9](#_Toc424302255)

[2.6 Test Environent 10](#_Toc424302256)

[2.6.1 Hardware 10](#_Toc424302257)

[2.7 Appendix A 11](#_Toc424302258)

[**Chapter Three| Test case of Unit Test (UTC)** 20](#_Toc424302259)

[**UTC-1 insertCAMTUser(CAMTUser user): bool** 20](#_Toc424302260)

[**UTC-2 updateCAMTUser(CAMTUser user): bool** 22](#_Toc424302261)

[**UTC-3 removeCAMTUser(int userId): bool** 24](#_Toc424302262)

[**UTC-4 viewUserByUsernamePassword(string username, string password): CAMTUser** 25](#_Toc424302263)

[**UTC-5 viewUserByuserId(int userId): CAMTUser** 27](#_Toc424302264)

[**UTC-6** **viewAllUserByUserType (string userType): List< CAMTUser>** 28](#_Toc424302265)

[**UTC-7** **viewAllCAMTUser (): List< CAMTUser>** 30](#_Toc424302266)

[**UTC-8** **viewAllUserByUserTypeActive(int userType, bool userActive): List< CAMTUser>** 31](#_Toc424302267)

[**UTC-9** **viewUserByUsername(string username): CAMTUser** 33](#_Toc424302268)

[**UTC-10** **insertItem(Item item): bool** 34](#_Toc424302269)

[**UTC-11** **updateItem(Item item): bool** 35](#_Toc424302270)

[**UTC-12** **updateItemComponent (Item item): bool** 37](#_Toc424302271)

[**UTC-13** **viewItemByitemId(int itemId): Item** 38](#_Toc424302272)

[**UTC-14** **viewPreviousItem(): Item** 40](#_Toc424302273)

[**UTC-15** **viewItemComponentbyItemId(int itemId): List<Item>** 41](#_Toc424302274)

[**UTC-16** **viewGroupByItemBrand(): List<string>** 43](#_Toc424302275)

[**UTC-17** **viewItemModelbySerialNum(string serialNumber): Item** 44](#_Toc424302276)

[**UTC-18** **viewExpireItem(DateTime timeStart, DateTime timeEnd): List<Item>** 46](#_Toc424302277)

[**UTC-19** **viewOftenBrokenBrand(): List<List<string>>** 47](#_Toc424302278)

[**UTC-20** **viewOftenBrokenName(): List<List<string>>** 48](#_Toc424302279)

[**UTC-21** **insertItemOwner(ItemOwner itemOwner): bool** 50](#_Toc424302280)

[**UTC-22** **updateItemOwner(ItemOwner itemOwner): bool** 51](#_Toc424302281)

[**UTC-23** **viewItemOwnerByitemId(int itemId): itemOwner** 53](#_Toc424302282)

[**UTC-24** **viewAllItemOwner(): List<ItemOwner>** 54](#_Toc424302283)

[**UTC-25 insertReport(Report report): bool** 55](#_Toc424302284)

[**UTC-26 updateReport(Report report): bool** 57](#_Toc424302285)

[**UTC-27 viewReportByReportId(int reportId): Report** 59](#_Toc424302286)

[**UTC-28 viewReportbyTechnicianId(int technicianId): List<Report>** 60](#_Toc424302287)

[**UTC-29 viewReportbyReporterId(int reporterId): List<Report>** 62](#_Toc424302288)

[**UTC-30 viewReportByStatusAndUserId(int technicianId, int statusComplete):List<Report>** 64](#_Toc424302289)

[**UTC-31 viewPreviousReport(int reporterId): Report** 66](#_Toc424302290)

[**UTC-32 updateStatus(Report report): bool** 67](#_Toc424302291)

[**UTC-33 updateTypeBroken (Report report): bool** 68](#_Toc424302292)

[**UTC-34 viewExperienceTechnician (int technicianId): double** 70](#_Toc424302293)

[**UTC-35 viewTechnicianTask (string typeWork): List<List<int>>** 71](#_Toc424302294)

[**UTC-36 insertCAMTUser (string username, string password, string name, string department, string room, string address, string tel, string email, int type, int active): bool** 72](#_Toc424302295)

[**UTC-37 updateCAMTUser(int userId, string username, string password, string userName, string userDepartment, string userRoom, string userAddress, string userTel, string userEmail, int userType, bool userActive): bool** 74](#_Toc424302296)

[**UTC-38 updateCAMTUserPass(int userId, string password): bool** 76](#_Toc424302297)

[**UTC-39 loginUser(string username, string password): CAMTUserModel** 78](#_Toc424302298)

[**UTC-40 removeCAMTUser(int userId): bool** 80](#_Toc424302299)

[**UTC-41 viewAllUserByUserType(int userType): List<CAMTUserModel>** 81](#_Toc424302300)

[**UTC-42 viewAllCAMTUser(): List<CAMTUserModel>** 83](#_Toc424302301)

[**UTC-43 viewUserByuserId(int userId): CAMTUserModel** 84](#_Toc424302302)

[**UTC-44 insertItem(string itemBrand, string itemName, string itemDescription, DateTime itemStartDate, Nullable<DateTime> itemEndDate, int itemStatus, string item\_cmuNumber, string item\_camtNumber, string item\_serialNumber, Nullable<int> itemComponent): bool** 86](#_Toc424302303)

[**UTC-45 updateItem(int itemId, string itemBrand, string itemName, string itemDescription, DateTime itemStartDate, Nullable<DateTime> itemEndDate, int itemStatus, string itemPicture, string item\_cmuNumber, string item\_camtNumber, string item\_serialNumber, Nullable<int> itemComponent): bool** 87](#_Toc424302304)

[**UTC-46 removeComponent(int itemId): bool** 89](#_Toc424302305)

[**UTC-47 viewPreviousItem(): ItemModel** 90](#_Toc424302306)

[**UTC-48 viewItemModelByItemId(int itemId): ItemModel** 92](#_Toc424302307)

[**UTC-49 viewItemModelbySerialNum(string serialNumber): ItemModel** 93](#_Toc424302308)

[**UTC-50 viewExpireItem(DateTime timeStart, DateTime timeEnd): List< ItemModel>** 95](#_Toc424302309)

[**UTC-51 viewGroupByItemBrand(): List< string>** 97](#_Toc424302310)

[**UTC-52 insertItemOwner(int itemId, int userId): bool** 98](#_Toc424302311)

[**UTC-53 updateItemOwner(int itemOwnerId, int userId): bool** 99](#_Toc424302312)

[**UTC-54 viewAllItemOwner(): List<** **ItemOwnerModel>** 101](#_Toc424302313)

[**UTC-55 viewItemOwnerByItemId (int itemId): ItemOwnerModel** 103](#_Toc424302314)

[**UTC-56** **viewItemOwnerInformation(int itemId): List< ItemOwnerModel>** 105](#_Toc424302315)

[**UTC-57** **insertReport(int reporterId, string serialNumber, string reportCase, string reportContact, bool reportRecieveMsg): bool** 107](#_Toc424302316)

[**UTC-58** **distributeWork(int reportId, string typeWork): bool** 109](#_Toc424302317)

[**UTC-59** **randomTechnician(string typeWork): int** 110](#_Toc424302318)

[**UTC-60** **resetDistributeWork(int reportId, string typeWork, int userId ): bool** 112](#_Toc424302319)

[**UTC-61** **resetRandomTechnician(string typeWork , int userId): int** 114](#_Toc424302320)

[**UTC-62** **updateReport(int reportId, string reportRepairDetail, int statusComplete): bool** 116](#_Toc424302321)

[**UTC-63** **viewPreviousReport(int reporterId): ReportModel** 117](#_Toc424302322)

[**UTC-64** **viewReportbyReporterId(int reporterId): List< ReportModel>** 119](#_Toc424302323)

[**UTC-65** **viewReportByStatusAndUserId(int technicianId, int statusComplete): List< ReportModel>** 122](#_Toc424302324)

[**UTC-66** **viewReportByTechnicianId(int technicianId): List< ReportModel>** 124](#_Toc424302325)

[**UTC-67** **updateRepairingStatus(int reportId, int statusComplete): bool** 126](#_Toc424302326)

[**UTC-68** **viewReportByReportId(int reportId): List< ReportModel>** 127](#_Toc424302327)

[**UTC-69** **Send(string toEmail, string subject, string body): bool** 129](#_Toc424542935)

[**Chapter Three| Test case of System Test (STC)** 131](#_Toc424302328)

[**STC-1: User can login** 131](#_Toc424302329)

[**STC-2: Administrator can register a technician/reporter account** 132](#_Toc424302335)

[**STC-3: Administrator can view all technician accounts** 137](#_Toc424302359)

[**STC-4:** **Administrator can view all reporter accounts** 138](#_Toc424302361)

[**STC-5:** **Administrator can change an active status of technician/ reporter account** 139](#_Toc424302363)

[**STC-6:** **Administrator can delete a technician/ reporter account** 141](#_Toc424302367)

[**STC-7:** **Administrator can view all IT equipment** 143](#_Toc424302376)

[**STC-8:** **Administrator can add IT equipment** 144](#_Toc424302380)

[**STC-9:** **Administrator can edit IT equipment** 150](#_Toc424302395)

[**STC-10:** **Administrator can view IT equipment that expire** 156](#_Toc424302420)

[**STC-11:** **Administrator can view IT equipment that are often broken** 157](#_Toc424302423)

[**STC-12:** **Administrator can view an IT equipment Information** 158](#_Toc424302426)

[**STC-13:** **Administrator can define type of broken of IT equipment** 159](#_Toc424302428)

[**STC-14:** **Administrator can view all repair tasks of a technician** 161](#_Toc424302433)

[**STC-15:** **Administrator can request to distribute repair tasks again to the system** 162](#_Toc424302436)

[**STC-16:** **The Administrator can update his account information** 163](#_Toc424302440)

[**STC-17:** **Technician can view all new repair task information** 167](#_Toc424302461)

[**STC-18:** **Technician can update repair task status** 168](#_Toc424302463)

[**STC-19:** **Technician can view IT equipment information** 169](#_Toc424302466)

[**STC-20:** **Technician can view Reporter information** 170](#_Toc424302467)

[**STC-21:** **Technician can view all IT equipment that live in repair process** 171](#_Toc424302468)

[**STC-22:** **Technician can update repair task information** 172](#_Toc424302469)

[**STC-23:** **Technician can view history IT equipment that were repaired by himself** 174](#_Toc424302471)

[**STC-24:** **Technician can update his account information** 175](#_Toc424302472)

[**STC-25:** **Reporter can inform a broken IT equipment** 179](#_Toc424302490)

[**STC-26:** **Reporter can view all IT equipment that he inform** 181](#_Toc424302491)

[**STC-27:** **Reporter can view IT equipment information** 182](#_Toc424302493)

[**STC-28:** **Reporter can update his account information** 183](#_Toc424302494)

[**STC-29:** **User can logout** 187](#_Toc424302511)

# **Chapter One | Introduction**

## 1.1 Objective

The objectives of the test plan of IT equipment management system of College of Arts, Media and Technology are used to create test plan of the unit testing. It makes sure that the defects are discovered and fixed all case in all project progress report. System testing covers the user requirements system. The unit testing covers all of implemented methods in IT equipment management system of College of Arts, Media and Technology project.

## 1.2 Scope

The test plan describes the unit testing activities to find out the defect in the system and describes the system testing activities for testing an entirely integrated system to check that it covers all of the user’s requirements.

## 1.3 Acronyms and Definitions

### 1.3.1 Acronyms

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 the product in the language of the product. Used for requirements analysis, design, coding, testing or maintenance. [IEEE90]

IEEE Institute for Electrical and Electronics Engineers. Biggest global interest group for engineers of different branches and computer scientists. [IEEE90]

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 the definition (1) or (2). [IEEE90]

Specification Precise description of an activity or work product that reserves as basis or input for further activities or work product. A specification can comprise requirements to a product and how they will solve. Different parts of a specification (e.g., what is to bed one, how it will done) must not mixed. [IEEE90]

White box testing A software testing method in which the internal structure/design/implementation of the item being tested known to the tester. The tester chooses inputs to exercise paths through the code and determines the appropriate outputs. Programming know-how and the implementation knowledge is essential. White box testing is testing beyond the user interface and into the nitty-gritty of a system.

Unit testing A level of the software testing process where individual units/components of a software/system 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 tested. The purpose of this test is to evaluate the system’s compliance with specified requirements.

Null Define values represent missing unknown data.

# **Chapter Two| Test Plan and Test Procedure**

## 2.1 Test Objectives

The objectives of testing IT equipment management system of College of Arts, Media and Technology project are:

1. The defects are detected.

2. The defects are fixed.

3. Functionalities and user interface covered all requirements that a user want.

4. All functionalities and features that are define in all project progress report, must be follow in the project plan.

## 2.2 Scope of Testing

IT equipment management system of College of Arts, Media and Technology will test by press button testing techniques that are unit testing in web application side.

## 2.3 Test Duration

|  |  |
| --- | --- |
| **Progress** | **Date and Duration** |
| **Final Progress** | **Start:** 11 June 2015  **End:** 26 June 2015  **Duration:** 16 Days |

## 2.4 Test Responsibility

|  |  |
| --- | --- |
| **Item** | **Responsibility** |
| **Unit Test** | Tanadol Parn-ong |
| **System Test** | Nathawut Supavananusorn |

## 2.5 Result of Testing

1. Actual Output: The actual output that are performed by each test case.

2. Pass/Fail criteria:

2.1 Pass: The result of an actual result is same with expected result.

2.2 Fail: The result of an actual result is not same with expected result.

## 2.6 Test Environent

### 2.6.1 Hardware

* Computers

**- Name:** Mac pro retina-13 inch 2013

**Operating System:** Window® 7 Ultimate (64-bit)

**- Name:** Dell Inspiron 5423

**Operating System:** Window® 8.1 pro

**2.6.2 Software**

* Microsoft SQL Server Management Studio
* Microsoft Visual Studio Ultimate

## 2.7 Appendix A

1. CAMTUser

1.1

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| user\_id | int | 1 |
| user\_username | varchar(16) | admin |
| user\_password | varchar(16) | 123456 |
| user\_name | varchar(255) | admin one |
| user\_department | varchar(255) | CAMT |
| user\_room | varchar(16) | 512 |
| user\_address | varchar(max) | Chiang mai, Thailand |
| user\_tel | varchar(16) | 0833201787 |
| user\_email | varchar(255) | se542115021.developer@gmail.com |
| user\_type | int | 1 |
| user\_active | bit | 1 |

1.2

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| user\_id | int | 2 |
| user\_username | varchar(16) | staff1 |
| user\_password | varchar(16) | 123456 |
| user\_name | varchar(255) | staff one |
| user\_department | varchar(255) | CAMT |
| user\_room | varchar(16) | 113 |
| user\_address | varchar(max) | Chiang mai, Thailand |
| user\_tel | varchar(16) | 0833201787 |
| user\_email | varchar(255) | se542115021.developer@gmail.com |
| user\_type | int | 2 |
| user\_active | bit | 1 |

1.3

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| user\_id | int | 3 |
| user\_username | varchar(16) | staff2 |
| user\_password | varchar(16) | 123456 |
| user\_name | varchar(255) | staff two |
| user\_department | varchar(255) | CAMT |
| user\_room | varchar(16) | 114 |
| user\_address | varchar(max) | Chiang mai, Thailand |
| user\_tel | varchar(16) | 0833201787 |
| user\_email | varchar(255) | se542115021.developer@gmail.com |
| user\_type | int | 2 |
| user\_active | bit | 1 |

1.4

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| user\_id | int | 4 |
| user\_username | varchar(16) | reporter1 |
| user\_password | varchar(16) | 123456 |
| user\_name | varchar(255) | reporter one |
| user\_department | varchar(255) | CAMT |
| user\_room | varchar(16) | 114 |
| user\_address | varchar(max) | Chiang mai, Thailand |
| user\_tel | varchar(16) | 0833201787 |
| user\_email | varchar(255) | se542115021.developer@gmail.com |
| user\_type | int | 3 |
| user\_active | bit | 1 |

2. Item

2.1

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| item\_id | int | 1 |
| item\_brand | varchar(255) | Apple |
| item\_name | varchar(255) | iMac |
| item\_description | varchar(max) | iMac 27-inch |
| item\_startDate | datetime | 2015-05-07 15:35:35.0000000 |
| item\_endDate | datetime | 2015-06-20 00:00:00.0000000 |
| item\_status | int | 1 |
| item\_picture | varchar(max) | picItem-1.jpg |
| item\_cmuNumber | varchar(max) | CMU01 |
| item\_camtNumber | varchar(max) | CAMT01 |
| item\_serialNumber | varchar(max) | null |
| item\_component | int | null |

2.2

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| item\_id | int | 2 |
| item\_brand | varchar(255) | RAM Thailand |
| item\_name | varchar(255) | RAM |
| item\_description | varchar(max) | RAM |
| item\_startDate | datetime | 2015-05-07 15:35:51.6317728 |
| item\_endDate | datetime | 2015-07-20 00:00:00.0000000 |
| item\_status | int | 1 |
| item\_picture | varchar(max) | picItem-2.jpg |
| item\_cmuNumber | varchar(max) | null |
| item\_camtNumber | varchar(max) | null |
| item\_serialNumber | varchar(max) | Serial02 |
| item\_component | int | 1 |

2.3

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| item\_id | int | 3 |
| item\_brand | varchar(255) | Intel |
| item\_name | varchar(255) | CPU Iris |
| item\_description | varchar(max) | CPU Iris core-i7 |
| item\_startDate | datetime | 2015-06-29 02:21:04.1492112 |
| item\_endDate | datetime | 2015-08-20 12:00:00.0000000 |
| item\_status | int | 1 |
| item\_picture | varchar(max) | picItem-3.jpg |
| item\_cmuNumber | varchar(max) | null |
| item\_camtNumber | varchar(max) | null |
| item\_serialNumber | varchar(max) | Serial03 |
| item\_component | int | 1 |

3. ItemOwner

3.1

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| itemOwner\_id | int | 1 |
| item\_id | int | 1 |
| user\_id | int | 4 |

3.2

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| itemOwner\_id | int | 2 |
| item\_id | int | 2 |
| user\_id | int | 4 |

3.3

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| itemOwner\_id | int | 3 |
| item\_id | int | 3 |
| user\_id | int | 4 |

4. Report

4.1

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 1 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open Keynote |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-09 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-10 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

4.2

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 2 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

5. Report

5.1

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 1 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open Keynote |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-09 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-10 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

5.2

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 1 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

5.3

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 3 |
| technician\_id | int | 3 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

6. Report

6.1

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 1 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open Keynote |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-09 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-10 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

6.2

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 1 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

6.3

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 3 |
| technician\_id | int | 3 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

6.4

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 4 |
| technician\_id | int | 3 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

7. Report

7.1

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 1 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open Keynote |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-09 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-10 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

7.2

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 1 |
| technician\_id | int | 2 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

7.3

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 3 |
| technician\_id | int | 3 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |
| report\_recieveMsg | bit | 1 |

7.4

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 4 |
| technician\_id | int | 3 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 3 |

7.5

|  |  |  |
| --- | --- | --- |
| Column Name | Data type | Value |
| report\_id | int | 4 |
| technician\_id | int | 3 |
| reporter\_id | int | 4 |
| item\_id | int | 1 |
| report\_typeBroken | varchar(255) | Error about Application of Computer |
| report\_case | varchar(max) | Cannot open iPhoto |
| report\_contact | varchar(max) | 0833201787 |
| report\_repairDetail | varchar(max) | Complete |
| report\_startDate | datetime | 2015-06-11 15:36:48.3488602 |
| report\_endDate | datetime | 2015-06-12 15:36:48.3488602 |
| report\_statusComplete | int | 2 |

# **Chapter Three| Test case of Unit Test (UTC)**

## **UTC-1 insertCAMTUser(CAMTUser user): bool**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-1:** insertCAMTUser(CAMTUser user)

**Return:** bool

**Description:** The test case is used for testing insertCAMTUser method in CAMTUserRepo. This method is used for inserting a user account to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Input | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser2 | null | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser3 | “admin” | null | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser4 | “admin” | “123456” | null | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser5 | “admin” | “123456” | “admin one” | null | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser6 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “null | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser7 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | null | “se542115021.developer@gmail.com” | 1 | true |
| camtUser8 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | null | 1 | true |
| camtUser9 | null | null | null | null | “512” | null | null | null | 1 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object Input** | **Expect Result** |
| 1-1 | Test inputs all parameters is correct data | camtUser1 | true |
| 1-2 | Test inputs user username is null | camtUser2 | false |
| 1-3 | Test inputs user password is null | camtUser3 | false |
| 1-4 | Test inputs user name is null | camtUser4 | false |
| 1-5 | Test inputs user department is null | camtUser5 | false |
| 1-6 | Test inputs user address is null | camtUser6 | false |
| 1-7 | Test inputs user tel is null | camtUser7 | false |
| 1-8 | Test inputs user email is null | camtUser8 | false |
| 1-9 | Test inputs user username, user password, user name, user department, user address, user tel, and user email is null | camtUser9 | false |

## **UTC-2 updateCAMTUser(CAMTUser user): bool**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-2:** updateCAMTUser (CAMTUser user)

**Return:** bool

**Description :** The test case is used for testing updateCAMTUser method in CAMTUserRepo. This method is used for updating a user account information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Input | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser2 | 0 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser3 | 1 | null | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser4 | 1 | “admin” | null | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser5 | 1 | “admin” | “123456” | null | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser6 | 1 | “admin” | “123456” | “admin one” | null | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser7 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “null | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser8 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | null | “se542115021.developer@gmail.com” | 1 | true |
| camtUser9 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | null | 1 | true |
| camtUser10 | 1 | null | null | null | null | “512” | null | null | null | 1 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object Input** | **Expect Result** |
| 2-1 | Test inputs all parameters is correct data | camtUser1 | true |
| 2-2 | Test inputs user id equals 0 which is not existing in the database | camtUser2 | false |
| 2-3 | Test inputs user username is null | camtUser3 | false |
| 2-4 | Test inputs user password is null | camtUser4 | false |
| 2-5 | Test inputs user name is null | camtUser5 | false |
| 2-6 | Test inputs user department is null | camtUser6 | false |
| 2-7 | Test inputs user address is null | camtUser7 | false |
| 2-8 | Test inputs user tel is null | camtUser8 | false |
| 2-9 | Test inputs user email is null | camtUser9 | false |
| 2-10 | Test inputs user username, user password, user name, user department, user address, user tel, and user email is null | camtUser10 | false |

## **UTC-3 removeCAMTUser(int userId): bool**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-3:** removeCAMTUser (int userId)

**Return:** bool

**Description :** The test case is used for testing removeCAMTUser method in CAMTUserRepo. This method is used for removing a user account in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | user\_id |
| TD1 | 1 |
| TD1 | 2 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data input** | **Expect Result** |
| 3-1 | Test inputs user id that user account don’t relate with another tables. | TD1 | true |
| 3-2 | Test inputs user id that user account relate with another tables. | TD2 | false |

## **UTC-4 viewUserByUsernamePassword(string username, string password): CAMTUser**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-4:** viewUserByUsernamePassword (string username, password)

**Return:** CAMTUser

**Description :** The test case is used for testing viewUserByUsernamePassword method in CAMTUserRepo. This method is used for viewing a user account information by identifying from username and password.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | username | password |
| TD1 | “admin” | “123456” |
| TD2 | null | “123456” |
| TD3 | “admin” | null |
| TD4 | null | null |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser2 | 0 | null | null | null | null | null | null | null | null | null | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data input** | **Expect Result** |
| 4-1 | Test inputs all parameters is correct data | TD1 | camtUser1 |
| 4-2 | Test inputs user username is null | TD2 | camtUser2 |
| 4-3 | Test inputs user password is null | TD3 | camtUser2 |
| 4-4 | Test inputs user username and password is null | TD4 | camtUser2 |

## **UTC-5 viewUserByuserId(int userId): CAMTUser**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-5:** viewUserByuserId (int userId)

**Return:** CAMTUser

**Description :** The test case is used for testing viewUserByuserId method in CAMTUserRepo. This method is used for viewing a user account information by identifying from user id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | userId |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser2 | 0 | null | null | null | null | null | null | null | null | null | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data input** | **Expect Result** |
| 5-1 | Test inputs all parameters is correct data | TD1 | camtUser1 |
| 5-2 | Test inputs user id is 0 which is not existing in the database | TD2 | camtUser2 |

## **UTC-6** **viewAllUserByUserType (string userType): List< CAMTUser>**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-6:** viewAllUserByUserType (int userType)

**Return:** List<CAMTUser>

**Description:** The test case is used for testing viewAllUserByUserType method in CAMTUserRepo. This method is used for viewing a list of user account information by identifying from user type.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | userType |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 6-1 | Test inputs all parameters is correct data | TD1 | {camtUser1} |
| 6-2 | Test inputs user type is 0 | TD2 | { } |

## **UTC-7** **viewAllCAMTUser (): List< CAMTUser>**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-7:** viewAllCAMTUser()

**Return:** List<CAMTUser>

**Description:** The test case is used for testing viewAllCAMTUser method in CAMTUserRepo. This method is used for viewing all user account information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser2 | 2 | “staff1” | “123456” | “staff one” | “CAMT” | “113” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUser3 | 3 | “staff2” | “123456” | “staff two” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUser4 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 7-1 | Test about viewing all user account in the system. | - | {camtUser1, camtUser2, camtUser3, camtUser4} |

## **UTC-8** **viewAllUserByUserTypeActive(int userType, bool userActive): List< CAMTUser>**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-8:** viewAllUserByUserTypeActive (int userType, bool userActive)

**Return:** List<CAMTUser>

**Description:** The test case is used for testing viewAllUserByUserTypeActive method in CAMTUserRepo. This method is used for viewing all user account information by identifying from user type and user active.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | userType | userActive |
| TD1 | 1 | true |
| TD2 | 0 | true |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 8-1 | Test inputs all parameters is correct data | TD1 | {camtUser1} |
| 8-2 | Test inputs user type is 0 | TD2 | { } |

## **UTC-9** **viewUserByUsername(string username): CAMTUser**

**Package:** Repositories

**Class:** CAMTUserRepo

**Unit Test Case-9:** viewUserByUsername(string username)

**Return:** CAMTUser

**Description:** The test case is used for testing viewUserByUsername method in CAMTUserRepo. This method is used for viewing all user account information by identifying from username.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | username |
| TD1 | “admin” |
| TD2 | null |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUser1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUser2 | 0 | null | null | null | null | null | null | null | null | null | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 9-1 | Test inputs all parameters is correct data | TD1 | camtUser1 |
| 9-2 | Test inputs username is null value | TD2 | camtUser2 |

## **UTC-10** **insertItem(Item item): bool**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-10:** insertItem(Item item)

**Return:** bool

**Description:** The test case is used for testing insertItem method in ItemRepo. This method is used for inserting an IT equipment information to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object input | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| item | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object input** | **Expect Result** |
| 10-1 | Test inputs all parameters is correct data | item | true |

## **UTC-11** **updateItem(Item item): bool**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-11:** updateItem (Item item)

**Return:** bool

**Description:** The test case is used for testing updateItem method in ItemRepo. This method is used for updating an IT equipment information to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object input | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| item1 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |
| item2 | 0 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object Input** | **Expect Result** |
| 11-1 | Test inputs all parameters is correct data | item1 | true |
| 11-2 | Test inputs no existing item id in the database | Item2 | false |

## **UTC-12** **updateItemComponent (Item item): bool**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-12:** updateItemComponent(Item item)

**Return:** bool

**Description:** The test case is used for testing updateItemComponent method in ItemRepo. This method is used for updating an IT equipment component to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Object input | item\_id | item\_component |
| item1 | 1 | 2 |
| Item2 | 0 | 2 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object input** | **Expect Result** |
| 12-1 | Test inputs all parameters is correct data | item1 | true |
| 12-2 | Test inputs item id equals 0 which is not existing in the database | Item2 | false |

## **UTC-13** **viewItemByitemId(int itemId): Item**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-13:** viewItemByitemId(int itemId)

**Return:** Item

**Description:** The test case is used for testing viewItemByitemId method in ItemRepo. This method is used for viewing an IT equipment information by identifying from item id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | item\_id |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| item1 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |
| item2 | 0 | null | null | “null | null | null | 0 | null | null | null | null | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data input** | **Expect Result** |
| 13-1 | Test inputs all parameters is correct data | TD1 | item1 |
| 13-2 | Test inputs item id equals 0 which is not existing in the database | TD2 | item2 |

## **UTC-14** **viewPreviousItem(): Item**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-14:** viewPreviousItem ()

**Return:** Item

**Description:** The test case is used for testing viewPreviousItem method in ItemRepo. This method is used for getting last IT equipment information that is added to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| item1 | 3 | “Intel” | “CPU Iris” | “CPU Iris core-i7” | 2015-06-29 02:21:04.1492112 | 2015-08-20 12:00:00.0000000 | 1 | “picItem-3.jpg” | “” | “” | “Serial03” | 1 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 14-1 | Test about last IT equipment information that is added to the system. | - | item1 |

## **UTC-15** **viewItemComponentbyItemId(int itemId): List<Item>**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-15:** viewItemComponentbyItemId (int itemId)

**Return:** List<Item>

**Description:** The test case is used for testing viewItemComponentbyItemId method in ItemRepo. This method is used for getting all components of IT equipment.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | item\_id |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| item1 | 2 | “RAM Thailand” | “RAM” | “RAM” | 2015-05-07 15:35:51.6317728 | 2015-07-20 00:00:00.0000000 | 1 | “picItem-2.jpg” | “” | “” | “Serial02” | 1 |
| item2 | 3 | “Intel” | “CPU Iris” | “CPU Iris core-i7” | 2015-06-29 02:21:04.1492112 | 2015-08-20 12:00:00.0000000 | 1 | “picItem-3.jpg” | “” | “” | “Serial03” | 1 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data input** | **Expect Result** |
| 15-1 | Test inputs existing item id in database | TD1 | {item1, item2} |
| 15-2 | Test inputs no existing item id in database | TD2 | { } |

## **UTC-16** **viewGroupByItemBrand(): List<string>**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-16:** viewGroupByItemBrand**()**

**Return:** List<string>

**Description:** The test case is used for testing viewGroupByItemBrand method in ItemRepo. This method is used for getting all IT equipment brand.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

: None

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 16-1 | Test get all existing IT equipment brand in database | - | {“Apple”, “Intel”, “RAM Thailand”} |

## **UTC-17** **viewItemModelbySerialNum(string serialNumber): Item**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-17:** viewItemModelbySerialNum(string serialNumber)

**Return:** Item

**Description:** The test case is used for testing viewItemModelbySerialNum method in ItemRepo. This method is used for getting IT equipment information by identifying from serial number.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | serialNumber |
| TD1 | CMU01 |
| TD2 | CAMT01 |
| TD3 | Serial02 |
| TD4 | null |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| Item1 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |
| item2 | 2 | “RAM Thailand” | “RAM” | “RAM” | 2015-05-07 15:35:51.6317728 | 2015-07-20 00:00:00.0000000 | 1 | “picItem-2.jpg” | “” | “” | “Serial02” | 1 |
| item3 | 0 | null | null | “null | null | null | 0 | null | null | null | null | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 17-1 | Test inputs existing CMU number in database | TD1 | item1 |
| 17-2 | Test inputs existing CAMT number in database | TD2 | item1 |
| 17-3 | Test inputs existing Serial number in database | TD3 | item2 |
| 17-4 | Test inputs null value | TD4 | Item3 |

## **UTC-18** **viewExpireItem(DateTime timeStart, DateTime timeEnd): List<Item>**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-18:** viewExpireItem(DateTime timeStart, DateTime timeEnd)

**Return:** List<Item>

**Description:** The test case is used for testing viewItemModelbySerialNum method in ItemRepo. This method is used for getting expire IT equipment information.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | itemStart | itemEnd |
| TD1 | 2015-06-19 00:00:00.0000000 | 2015-06-21 00:00:00.0000000 |
| TD2 | 2015-06-17 00:00:00.0000000 | 2015-06-18 00:00:00.0000000 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| Item1 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 18-1 | Test inputs durable time that has expire IT equipment. | TD1 | {item1} |
| 18-2 | Test inputs durable time that don’t has expire IT equipment. | TD2 | { } |

## **UTC-19** **viewOftenBrokenBrand(): List<List<string>>**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-19:** viewOftenBrokenBrand ()

**Return:** List<List<string>>

**Description:** The test case is used for testing viewOftenBrokenBrand method in ItemRepo. This method is used for getting IT equipment brand often are broken.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

: None

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 19-1 | Test about getting IT equipment brand often are broken. | - | {{“Apple”, “2”}} |

## **UTC-20** **viewOftenBrokenName(): List<List<string>>**

**Package:** Repositories

**Class:** ItemRepo

**Unit Test Case-20:** viewOftenBrokenName()

**Return:** List<List<string>>

**Description:** The test case is used for testing viewOftenBrokenName method in ItemRepo. This method is used for getting IT equipment name often are broken.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

: None

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 20-1 | Test about getting IT equipment name often are broken. | - | {{“iMac”, “2”}} |

## **UTC-21** **insertItemOwner(ItemOwner itemOwner): bool**

**Package:** Repositories

**Class:** ItemOwnerRepo

**Unit Test Case-21:** insertItemOwner(ItemOwner itemOwner)

**Return:** bool

**Description:** The test case is used for testing insertItemOwner method in ItemOwnerRepo. This method is used for inserting item owner information to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Object input | item\_id | user\_id |
| itemOwner1 | 1 | 4 |
| itemOwner2 | 0 | 4 |
| itemOwner3 | 1 | 0 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object Input** | **Expect Result** |
| 21-1 | Test inputs all parameters is correct data | itemOwner1 | true |
| 21-2 | Test inputs item id equal 0 which is not existing in the database | itemOwner2 | false |
| 21-3 | Test inputs user id equal 0 which does not existing in the database | itemOwner3 | false |

## **UTC-22** **updateItemOwner(ItemOwner itemOwner): bool**

**Package:** Repositories

**Class:** ItemOwnerRepo

**Unit Test Case-22:** updateItemOwner(ItemOwner itemOwner)

**Return:** bool

**Description:** The test case is used for testing updateItemOwner method in ItemOwnerRepo. This method is used for updating item owner information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Object input | itemOwner\_id | user\_id |
| itemOwner1 | 1 | 4 |
| itemOwner2 | 0 | 4 |
| itemOwner3 | 1 | 0 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object Input** | **Expect Result** |
| 22-1 | Test inputs all parameters is correct data | itemOwner1 | true |
| 22-2 | Test inputs itemOwner id equal 0 which is not existing in the database | itemOwner2 | false |
| 22-3 | Test inputs user id equal 0 which is not existing in the database | itemOwner3 | false |

## **UTC-23** **viewItemOwnerByitemId(int itemId): itemOwner**

**Package:** Repositories

**Class:** ItemOwnerRepo

**Unit Test Case-23:** viewItemOwnerByitemId(int itemId)

**Return:** itemOwner

**Description:** The test case is used for testing viewItemOwnerByitemId method in ItemOwnerRepo. This method is used for viewing item owner information by identifying from item id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| Object result | itemOwner\_id | item\_id | user\_id |
| itemOwner1 | 1 | 1 | 4 |
| itemOwner2 | 0 | 0 | 0 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 23-1 | Test inputs all parameters is correct data | 1 | itemOwner1 |
| 23-2 | Test inputs itemOwner id equal 0 which is not existing in the database | 0 | itemOwner2 |

## **UTC-24** **viewAllItemOwner(): List<ItemOwner>**

**Package:** Repositories

**Class:** ItemOwnerRepo

**Unit Test Case-24:** viewAllItemOwner()

**Return:** List<ItemOwner>

**Description:** The test case is used for testing viewAllItemOwner method in ItemOwnerRepo. This method is used for viewing all item owner information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| Object result | itemOwner\_id | item\_id | user\_id |
| itemOwner1 | 1 | 1 | 4 |
| itemOwner2 | 2 | 2 | 4 |
| itemOwner3 | 3 | 3 | 4 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 24-1 | Test about viewing all item owner information in the system | 1 | { itemOwner1, itemOwner2, itemOwner3} |

## **UTC-25 insertReport(Report report): bool**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-25:** insertReport(Report report)

**Return:** bool

**Description:** The test case is used for testing insertReport method in ReportRepo. This method is used for inserting report information to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object input | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 0 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report3 | 2 | 0 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report4 | 2 | 4 | 0 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report5 | 2 | 4 | 1 | null | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report6 | 2 | 4 | 1 | “Error about Application of Computer” | null | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report7 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | null | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report8 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | null | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object input** | **Expect Result** |
| 25-1 | Test inputs all parameters is correct data | report1 | true |
| 25-2 | Test inputs technician id equal 0 which is not existing in the database | report2 | false |
| 25-3 | Test inputs reporter id equal 0 which is not existing in the database | report3 | false |
| 25-4 | Test inputs item id equal 0 which is not existing in the database | report4 | false |
| 25-5 | Test inputs report\_typeBroken is null | report5 | false |
| 25-6 | Test inputs report case is null | report6 | false |
| 25-7 | Test inputs report contact is null | report7 | false |
| 25-8 | Test inputs report repair detail is null | report8 | false |

## **UTC-26 updateReport(Report report): bool**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-26:** updateReport (Report report)

**Return:** bool

**Description:** The test case is used for testing updateReport method in ReportRepo. This method is used for updating report information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| Object input | report\_id | report\_repairDetail | reporter\_statusComplete |
| report1 | 1 | “Complete” | 3 |
| report2 | 0 | “Complete” | 3 |
| report3 | 1 | Null | 3 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object input** | **Expect Result** |
| 26-1 | Test inputs all parameters is correct data | report1 | true |
| 26-2 | Test inputs report id equal 0 which is not existing in the database | report2 | false |
| 26-3 | Test inputs report repair detail is null | report3 | false |

## **UTC-27 viewReportByReportId(int reportId): Report**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-27:** viewReportByReportId(int reportId)

**Return:** Report

**Description:** The test case is used for testing viewReportByReportId method in ReportRepo. This method is used for viewing report information in the system by identifying from report id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | reportId |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 1 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 0 | 0 | 0 | 0 | null | null | null | null | null | null | 0 | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 27-1 | Test inputs report id equal 1 which is existing in the database | TD1 | report1 |
| 27-2 | Test inputs report id equal 0 which is not existing in the database | TD2 | report2 |

## **UTC-28 viewReportbyTechnicianId(int technicianId): List<Report>**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-28:** viewReportbyTechnicianId (int technicianId)

**Return:** List<Report>

**Description:** The test case is used for testing viewReportbyTechnicianId method in ReportRepo. This method is used for viewing all report information in the system by identifying from technician id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | technicianId |
| TD1 | 2 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 1 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 2 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 28-1 | Test inputs technician id equal 2 which is existing in the database | TD1 | {report1, report2} |
| 28-2 | Test inputs technician id equal 0 which is not existing in the database | TD2 | { } |

## **UTC-29 viewReportbyReporterId(int reporterId): List<Report>**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-29:** viewReportbyReporter (int reporterId)

**Return:** List<Report>

**Description:** The test case is used for testing viewReportbyReporter method in ReportRepo. This method is used for viewing all report information in the system by identifying from reporter id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | reporter |
| TD1 | 4 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 1 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 2 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 29-1 | Test inputs reporter id equal 4 which is existing in the database | TD1 | {report1, report2} |
| 29-2 | Test inputs reporter id equal 0 which is not existing in the database | TD2 | { } |

## **UTC-30 viewReportByStatusAndUserId(int technicianId, int statusComplete):List<Report>**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-30:** viewReportByStatusAndUserId(int technicianId, int statusComplete)

**Return:** List<Report>

**Description:** The test case is used for testing viewReportByStatusAndUserId method in ReportRepo. This method is used for viewing all report information in the system by identifying from technician id and report status complete.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | technicianId | statusComplete |
| TD1 | 2 | 3 |
| TD2 | 0 | 3 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 1 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 2 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 30-1 | Test inputs all parameters is correct data | TD1 | {report1, report2} |
| 30-2 | Test inputs technician id equal 0 which is not existing in the database | TD2 | { } |

## **UTC-31 viewPreviousReport(int reporterId): Report**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-31:** viewPreviousReport(int reporterId)

**Return:** Report

**Description:** The test case is used for testing viewPreviousReport method in ReportRepo. This method is used for viewing last report which is added by reporter.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | reporterId |
| TD1 | 4 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 2 | 2 | 4 | 1 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 31-1 | Test about viewing last report which is added by reporter | TD1 | reporter1 |

## **UTC-32 updateStatus(Report report): bool**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-32:** updateStatus(Report report)

**Return:** bool

**Description:** The test case is used for testing updateStatus method in ReportRepo. This method is used for updating report status in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Object input | report\_id | report\_statusComplete |
| report1 | 4 | 3 |
| report2 | 0 | 3 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object Input** | **Expect Result** |
| 32-1 | Test inputs all parameters is correct data | report1 | true |
| 32-2 | Test inputs report id equal 0 which is not existing in the database | report2 | false |

## **UTC-33 updateTypeBroken (Report report): bool**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-33:** updateTypeBroken (Report report)

**Return:** bool

**Description:** The test case is used for testing updateTypeBroken method in ReportRepo. This method is used for updating report broken type of IT equipment in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Object input | report\_id | technician\_id | report\_typeBroken | report\_startDate | report\_statusComplete |
| report1 | 1 | 2 | “Error about Application of Computer” | 2015-06-09 15:36:48.3488602 | 3 |
| report2 | 0 | 2 | “Error about Application of Computer” | 2015-06-09 15:36:48.3488602 | 3 |
| report3 | 1 | 0 | “Error about Application of Computer” | 2015-06-09 15:36:48.3488602 | 3 |
| report4 | 1 | 2 | “” | 2015-06-09 15:36:48.3488602 | 3 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Object Input** | **Expect Result** |
| 33-1 | Test inputs all parameters is correct data | report1 | true |
| 33-2 | Test inputs report id equal 0 which is not existing in the database | report2 | false |
| 33-3 | Test inputs technician id equal 0 which is not existing in the database | report3 | false |
| 33-4 | Test inputs report\_typeBroken is null | report4 | false |

## **UTC-34 viewExperienceTechnician (int technicianId): double**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-34:** viewExperienceTechnician (int technicianId)

**Return:** double

**Description:** The test case is used for testing viewExperienceTechnician method in ReportRepo. This method is used for viewing time that technician will complete all remaining work.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | technicianId |
| TD1 | 2 |
| TD2 | 0 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 34-1 | Test inputs technician id which is existing in the database | TD1 | 0.0 |
| 34-2 | Test inputs technician id equal 0 which is not existing in the database | TD2 | 0.0 |

## **UTC-35 viewTechnicianTask (string typeWork): List<List<int>>**

**Package:** Repositories

**Class:** ReportRepo

**Unit Test Case-35:** viewTechnicianTask (string typeWork)

**Return:** List<List<int>>

**Description:** The test case is used for testing viewTechnicianTask method in ReportRepo. This method is used for viewing amount of technician and technician id that ever repair in that typework.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | typeWork |
| TD1 | "Error about Application of Computer" |
| TD2 | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 35-1 | Test inputs typeWork which is existing in the database | TD1 | {{2,2}} |
| 35-2 | Test inputs typeWork is null | TD2 | {{ }} |

## **UTC-36 insertCAMTUser (string username, string password, string name, string department, string room, string address, string tel, string email, int type, int active): bool**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-36:** insertCAMTUser (string username, string password, string name, string department, string room, string address, string tel, string email, int type, int active)

**Return:** bool

**Description:** The test case is used for testing insertCAMTUser method in CAMTUserModel. This method is used for inserting user account information to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data Input | username | password | name | department | room | address | tel | email | type | active |
| TD1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD2 | null | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD3 | “admin” | null | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD4 | “admin” | “123456” | null | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD5 | “admin” | “123456” | “admin one” | null | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD6 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “null | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD7 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | null | “se542115021.developer@gmail.com” | 1 | true |
| TD8 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | null | 1 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 36-1 | Test inputs all parameters is correct data | TD1 | true |
| 36-2 | Test inputs username is null | TD2 | false |
| 36-3 | Test inputs password is null | TD3 | false |
| 36-4 | Test inputs name is null | TD4 | false |
| 36-5 | Test inputs department is null | TD5 | false |
| 36-6 | Test inputs address is null | TD6 | false |
| 36-7 | Test inputs tel is null | TD7 | false |
| 36-8 | Test inputs email is null | TD8 | false |

## **UTC-37 updateCAMTUser(int userId, string username, string password, string userName, string userDepartment, string userRoom, string userAddress, string userTel, string userEmail, int userType, bool userActive): bool**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-37:** updateCAMTUser(int userId, string username, string password, string userName, string userDepartment, string userRoom, string userAddress, string userTel, string userEmail, int userType, bool userActive)

**Return:** bool

**Description:** The test case is used for testing updateCAMTUser method in CAMTUserModel. This method is used for updating user account information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data Input | userId | userUsername | userPassword | userName | userDepartment | userRoom | userAddress | userTel | userEmail | user\_type | user\_active |
| TD1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD2 | 0 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD3 | 1 | null | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD4 | 1 | “admin” | null | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD5 | 1 | “admin” | “123456” | null | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD6 | 1 | “admin” | “123456” | “admin one” | null | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD7 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “null | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| TD8 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | null | “se542115021.developer@gmail.com” | 1 | true |
| TD9 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | null | 1 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 37-1 | Test inputs all parameters is correct data | TD1 | true |
| 37-2 | Test inputs user id equal 0 which is not existing in the database | TD2 | false |
| 37-3 | Test inputs user username is null | TD3 | false |
| 37-4 | Test inputs user password is null | TD4 | false |
| 37-5 | Test inputs user name is null | TD5 | false |
| 37-6 | Test inputs user department is null | TD6 | false |
| 37-7 | Test inputs user address is null | TD7 | false |
| 37-8 | Test inputs user tel is null | TD8 | false |
| 37-9 | Test inputs user email is null | TD9 | false |

## **UTC-38 updateCAMTUserPass(int userId, string password): bool**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-38:** updateCAMTUserPass(int userId, string password)

**Return:** bool

**Description:** The test case is used for testing updateCAMTUserPass method in CAMTUserModel. This method is used for updating user password in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data Input | userId | password |
| TD1 | 1 | “123456” |
| TD2 | 0 | “123456” |
| TD3 | 1 | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 38-1 | Test inputs all parameters is correct data | TD1 | true |
| 38-2 | Test inputs user id equal 0 which is not existing in the database | TD2 | false |
| 38-3 | Test inputs password is null | TD3 | false |

## **UTC-39 loginUser(string username, string password): CAMTUserModel**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-39:** loginUser(string username, string password)

**Return:** CAMTUserModel

**Description:** The test case is used for testing updateCAMTUserPass method in CAMTUserModel. This method is used for updating user password in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | username | password |
| TD1 | “admin” | “123456” |
| TD2 | null | “123456” |
| TD3 | “admin” | null |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUserModel2 | 0 | null | null | null | null | null | null | null | null | null | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 39-1 | Test inputs all parameters is correct data | TD1 | camtUserModel1 |
| 39-2 | Test inputs user username is null | TD2 | camtUserModel2 |
| 39-3 | Test inputs user password is null | TD3 | camtUserModel12 |

## **UTC-40 removeCAMTUser(int userId): bool**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-40:** removeCAMTUser(int userId)

**Return:** bool

**Description:** The test case is used for testing removeCAMTUser method in CAMTUserModel. This method is used for removing user account in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | userId |
| TD1 | 1 |
| TD1 | 2 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 40-1 | Test inputs user id that user account don’t relate with another tables. | TD1 | true |
| 40-2 | Test inputs user id that user account relate with another tables. | TD2 | false |

## **UTC-41 viewAllUserByUserType(int userType): List<CAMTUserModel>**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-41:** viewAllUserByUserType(int userType)

**Return:** List<CAMTUserModel>

**Description:** The test case is used for testing viewAllUserByUserType method in CAMTUserModel. This method is used for viewing all user accounts by identifying from user type.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | userType |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 41-1 | Test inputs all parameters is correct data | TD1 | {camtUserModel1} |
| 41-2 | Test inputs user type is 0 | TD2 | { } |

## **UTC-42 viewAllCAMTUser(): List<CAMTUserModel>**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-42:** viewAllCAMTUser()

**Return:** List<CAMTUserModel>

**Description:** The test case is used for testing viewAllCAMTUser method in CAMTUserModel. This method is used for viewing all user accounts in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUserModel2 | 2 | “staff1” | “123456” | “staff one” | “CAMT” | “113” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUserModel3 | 3 | “staff2” | “123456” | “staff two” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUserModel4 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 42-1 | Test about viewing all user account in the system. | - | {camtUserModel1, camtUserModel2, camtUserModel3, camtUserModel4} |

## **UTC-43 viewUserByuserId(int userId): CAMTUserModel**

**Package:** Model

**Class:** CAMTUserModel

**Unit Test Case-43:** viewUserByuserId(int userId)

**Return:** CAMTUserModel

**Description:** The test case is used for testing viewUserByuserId method in CAMTUserModel. This method is used for viewing user account information by identifying from user id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | userId |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 1 | “admin” | “123456” | “admin one” | “CAMT” | “512” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 1 | true |
| camtUserModel2 | 0 | null | null | null | null | null | null | null | null | null | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 43-1 | Test inputs all parameters is correct data | TD1 | camtUser1 |
| 43-2 | Test inputs user id is 0 which is not existing in the database | TD2 | camtUser2 |

## **UTC-44 insertItem(string itemBrand, string itemName, string itemDescription, DateTime itemStartDate, Nullable<DateTime> itemEndDate, int itemStatus, string item\_cmuNumber, string item\_camtNumber, string item\_serialNumber, Nullable<int> itemComponent): bool**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-44:** insertItem(string itemBrand, string itemName, string itemDescription, DateTime itemStartDate, Nullable<DateTime> itemEndDate, int itemStatus, string item\_cmuNumber, string item\_camtNumber, string item\_serialNumber, Nullable<int> itemComponent)

**Return:** bool

**Description:** The test case is used for testing insertItem method in ItemModel. This method is used for inserting IT equipment information to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data input | itemBrand | itemName | itemDescription | itemStartDate | itemEndDate | itemStatus | itemPicture | Item\_cmuNumber | item\_camtNumber | item\_serialNumber | itemComponent |
| TD1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 44-1 | Test inputs all parameters is correct data | TD1 | true |

## **UTC-45 updateItem(int itemId, string itemBrand, string itemName, string itemDescription, DateTime itemStartDate, Nullable<DateTime> itemEndDate, int itemStatus, string itemPicture, string item\_cmuNumber, string item\_camtNumber, string item\_serialNumber, Nullable<int> itemComponent): bool**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-45:** updateItem(int itemId, string itemBrand, string itemName, string itemDescription, DateTime itemStartDate, Nullable<DateTime> itemEndDate, int itemStatus, string itemPicture, string item\_cmuNumber, string item\_camtNumber, string item\_serialNumber, Nullable<int> itemComponent)

**Return:** bool

**Description:** The test case is used for testing updateItem method in ItemModel. This method is used for updating IT equipment information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data input | itemId | itemBrand | itemName | itemDescription | itemStartDate | itemEndDate | itemStatus | itemPicture | Item\_cmuNumber | item\_camtNumber | item\_serialNumber | itemComponent |
| TD1 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |
| TD2 | 0 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 45-1 | Test inputs all parameters is correct data | TD1 | true |
| 45-2 | Test inputs no existing item id in the database | TD2 | false |

## **UTC-46 removeComponent(int itemId): bool**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-46:** removeComponent(int itemId)

**Return:** bool

**Description:** The test case is used for testing removeComponent method in ItemModel. This method is used for removing an IT equipment component of IT equipment in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | itemId |
| TD1 | 1 |
| TD2 | 0 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 46-1 | Test inputs item id which is existing in the database | TD1 | true |
| 46-2 | Test inputs technician id equal 0 which is not existing in the database | TD2 | false |

## **UTC-47 viewPreviousItem(): ItemModel**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-47:** viewPreviousItem()

**Return:** ItemModel

**Description:** The test case is used for testing viewPreviousItem method in ItemModel. This method is used for viewing last IT equipment information that is added to the system

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |
| itemModel3 | 3 | “Intel” | “CPU Iris” | “CPU Iris core-i7” | 2015-06-29 02:21:04.1492112 | 2015-08-20 12:00:00.0000000 | 1 | “picItem-3.jpg” | “” | “” | “Serial03” | itemModel2 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 47-1 | Test about viewing last IT equipment information that is added to the system. | - | itemModel3 |

## **UTC-48 viewItemModelByItemId(int itemId): ItemModel**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-48:** viewItemModelByItemId(int itemId)

**Return:** ItemModel

**Description:** The test case is used for testing viewItemModelByItemId method in ItemModel. This method is used for viewing IT equipment information in the system

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | itemId |
| TD1 | 1 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 0 | null | null | null | null | null | 0 | null | null | null | null | itemModel1 |
| itemModel3 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 48-1 | Test inputs item id which is existing in the database | TD1 | itemModel3 |
| 48-2 | Test inputs item id which is not existing in the database | TD2 | itemModel2 |

## **UTC-49 viewItemModelbySerialNum(string serialNumber): ItemModel**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-49:** viewItemModelbySerialNum(string serialNumber)

**Return:** ItemModel

**Description:** The test case is used for testing viewItemModelbySerialNum method in ItemModel. This method is used for viewing IT equipment information by identifying from serial number.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | serialNumber |
| TD1 | “CMU01” |
| TD2 | “CMU02” |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 0 | null | null | null | null | null | 0 | null | null | null | null | itemModel1 |
| itemModel3 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 49-1 | Test inputs serial number which is existing in the database | TD1 | itemModel3 |
| 49-2 | Test inputs serial number which is not existing in the database | TD2 | itemModel2 |

## **UTC-50 viewExpireItem(DateTime timeStart, DateTime timeEnd): List< ItemModel>**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-50:** viewExpireItem(DateTime timeStart, DateTime timeEnd)

**Return:** List<ItemModel>

**Description:** The test case is used for testing viewExpireItem method in ItemModel. This method is used for viewing expire IT equipment information.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | itemStart | itemEnd |
| TD1 | 2015-06-19 00:00:00.0000000 | 2015-06-21 00:00:00.0000000 |
| TD2 | 2015-06-17 00:00:00.0000000 | 2015-06-18 00:00:00.0000000 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 50-1 | Test inputs durable time that has expire IT equipment. | TD1 | {itemModel2} |
| 50-2 | Test inputs durable time that don’t has expire IT equipment. | TD2 | { } |

## **UTC-51 viewGroupByItemBrand(): List< string>**

**Package:** Model

**Class:** ItemModel

**Unit Test Case-51:** viewGroupByItemBrand**()**

**Return:** List<string>

**Description:** The test case is used for testing viewGroupByItemBrand method in ItemModel. This method is used for viewing all IT equipment brand.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

: None

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 51-1 | Test get all existing IT equipment brand in database | - | {“Apple”, “Intel”, “RAM Thailand”} |

## **UTC-52 insertItemOwner(int itemId, int userId): bool**

**Package:** Model

**Class:** ItemOwnerModel

**Unit Test Case-52:** insertItemOwner(int itemId, int userId)

**Return:** bool

**Description:** The test case is used for testing insertItemOwner method in ItemOwnerModel. This method is used for inserting item owner information to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | itemId | userId |
| TD1 | 1 | 4 |
| TD2 | 0 | 4 |
| TD3 | 1 | 0 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 52-1 | Test inputs all parameters is correct data | TD1 | true |
| 52-2 | Test inputs item id equal 0 which is not existing in the database | TD2 | false |
| 52-3 | Test inputs user id equal 0 which does not existing in the database | TD3 | false |

## **UTC-53 updateItemOwner(int itemOwnerId, int userId): bool**

**Package:** Model

**Class:** ItemOwnerModel

**Unit Test Case-53:** updateItemOwner(int itemOwnerId, int userId)

**Return:** bool

**Description:** The test case is used for testing updateItemOwner method in ItemOwnerModel. This method is used for updating an owner of IT equipment in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | itemOwnerId | userId |
| TD1 | 1 | 4 |
| TD2 | 0 | 4 |
| TD3 | 1 | 0 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 53-1 | Test inputs all parameters is correct data | TD1 | true |
| 53-2 | Test inputs item owner id equal 0 which is not existing in the database | TD2 | false |
| 53-3 | Test inputs user id equal 0 which does not existing in the database | TD3 | false |

## **UTC-54 viewAllItemOwner(): List<** **ItemOwnerModel>**

**Package:** Model

**Class:** ItemOwnerModel

**Unit Test Case-54:** viewAllItemOwner()

**Return:** List< ItemOwnerModel>

**Description:** The test case is used for testing updateItemOwner method in ItemOwnerModel. This method is used for viewing item owner information in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |
| itemModel3 | 2 | “RAM Thailand” | “RAM” | “RAM” | 2015-05-07 15:35:51.6317728 | 2015-07-20 00:00:00.0000000 | 1 | “picItem-2.jpg” | “” | “” | “Serial02” | itemModel2 |
| itemModel4 | 3 | “Intel” | “CPU Iris ” | “CPU Iris core-i7” | 2015-06-29 02:21:04.1492112 | 2015-08-20 12:00:00.0000000 | 1 | “picItem-3.jpg” | “” | “” | “Serial03” | itemModel2 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

|  |  |  |  |
| --- | --- | --- | --- |
| Object Result | itemOwner\_id | item\_id | user\_id |
| itemOwnerModel1 | 1 | itemModel2 | camtUserModel1 |
| itemOwnerModel2 | 2 | itemModel3 | camtUserModel1 |
| itemOwnerModel3 | 3 | itemModel4 | camtUserModel1 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 54-1 | Test about viewing all item owner information in the system | - | { itemOwnerModel12 itemOwnerModel3, itemOwnerModel4} |

## **UTC-55 viewItemOwnerByItemId (int itemId): ItemOwnerModel**

**Package:** Model

**Class:** ItemOwnerModel

**Unit Test Case-55:** viewItemOwnerByItemId (int itemId)

**Return:** ItemOwnerModel

**Description:** The test case is used for testing viewItemOwnerByItemId method in ItemOwnerModel. This method is used for viewing item owner information by identifying from item Id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | itemId |
| TD1 | 1 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 0 | null | null | null | null | null | 0 | null | null | null | null | itemModel1 |
| itemModel3 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |
| camtUserModel2 | 0 | null | null | null | null | null | null | null | null | null | null |

|  |  |  |  |
| --- | --- | --- | --- |
| Object Result | itemOwner\_id | item\_id | user\_id |
| itemOwnerModel1 | 1 | itemModel3 | camtUserModel1 |
| itemOwnerModel2 | 0 | itemModel2 | camtUserModel2 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 55-1 | Test about viewing item owner information which is existing in database. | TD1 | itemOwnerModel1 |
| 55-2 | Test about viewing item owner information which is not existing in database. | TD2 | itemOwnerModel2 |

## **UTC-56** **viewItemOwnerInformation(int itemId): List< ItemOwnerModel>**

**Package:** Model

**Class:** ItemOwnerModel

**Unit Test Case-56:** viewItemOwnerInformation(int itemId)

**Return:** List< ItemOwnerModel>

**Description:** The test case is used for testing viewItemOwnerInformation method in ItemOwnerModel. This method is used for viewing item owner, IT equipment, and IT equipment component information by identifying from item Id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | itemId |
| TD1 | 1 |
| TD2 | 2 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |
| itemModel3 | 2 | “RAM Thailand” | “RAM” | “RAM” | 2015-05-07 15:35:51.6317728 | 2015-07-20 00:00:00.0000000 | 1 | “picItem-2.jpg” | “” | “” | “Serial02” | itemModel2 |
| itemModel4 | 3 | “Intel” | “CPU Iris ” | “CPU Iris core-i7” | 2015-06-29 02:21:04.1492112 | 2015-08-20 12:00:00.0000000 | 1 | “picItem-3.jpg” | “” | “” | “Serial03” | itemModel2 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

|  |  |  |  |
| --- | --- | --- | --- |
| Object Result | itemOwner\_id | item\_id | user\_id |
| itemOwnerModel1 | 1 | itemModel2 | camtUserModel1 |
| itemOwnerModel2 | 2 | itemModel3 | camtUserModel1 |
| itemOwnerModel3 | 3 | itemModel4 | camtUserModel1 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 56-1 | Test about viewing item owner, IT equipment, and IT equipment component information, which is existing in the system. | TD1 | { itemOwnerModel2, itemOwnerModel3, itemOwnerModel4} |
| 56-2 | Test about viewing item owner, IT equipment which does not have an IT equipment component | TD2 | { itemOwnerModel3 } |

## **UTC-57** **insertReport(int reporterId, string serialNumber, string reportCase, string reportContact, bool reportRecieveMsg): bool**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-57:** insertReport(int reporterId, string serialNumber, string reportCase, string reportContact, bool reportRecieveMsg)

**Return:** bool

**Description:** The test case is used for testing insertReport method in ReportModel. This method is used for inserting a report to the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data input | reporterId | serialNumber | reportCase | reportContact | reportRecieveMsg |
| TD1 | 4 | “CMU01” | "Cannot open Keynote" | “0833201787” | true |
| TD2 | 0 | “CMU01” | "Cannot open Keynote" | “0833201787” | true |
| TD3 | 4 | “CMU02” | "Cannot open Keynote" | “0833201787” | true |
| TD4 | 4 | null | "Cannot open Keynote" | “0833201787” | true |
| TD5 | 4 | “CMU01” | null | “0833201787” | true |
| TD6 | 4 | “CMU01” | "Cannot open Keynote" | null | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 57-1 | Test inputs all parameters is correct data | TD1 | true |
| 57-2 | Test inputs reporter id equal 0 which is not existing in the database | TD2 | false |
| 57-3 | Test inputs serial number equal “CMU02” which is not existing in the database | TD3 | false |
| 57-4 | Test inputs serial number is null | TD4 | false |
| 57-5 | Test inputs report case is null | TD5 | false |
| 57-6 | Test inputs report contact is null | TD6 | false |

## **UTC-58** **distributeWork(int reportId, string typeWork): bool**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-58:** distributeWork(int reportId, string typeWork)

**Return:** bool

**Description:** The test case is used for testing distributeWork method in ReportModel. This method is used for distributing a repair task to a technician. Report information will be updated technician id in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | reportId | typeWork |
| TD1 | 4 | " Error about Application of Computer " |
| TD2 | 0 | " Error about Application of Computer " |
| TD3 | 4 | null |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 58-1 | Test inputs all parameters is correct data | TD1 | true |
| 58-2 | Test inputs report id equal 0 which is not existing in the database | TD2 | false |
| 58-3 | Test inputs type work is null | TD3 | false |

## **UTC-59** **randomTechnician(string typeWork): int**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-59:** randomTechnician (string typeWork)

**Return:** int

**Description:** The test case is used for testing randomTechnician method in ReportModel. This method is used for finding a technician who has least working time that will complete all remaining work.

**Prerequisites or Test Data**

**:** Appendix A1-7

**Test Data**

|  |  |
| --- | --- |
| Data input | typeWork |
| TD1 | “Error about Application of Computer” |

**Test Case**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Case** | **Description** | **Prerequisites** | **Data Input** | **Expect Result** |
| 59-1 | Test about assigning work to a technician. In case, the system does not have technician accounts in the database. | Appendix A1.1, 1.4, 2-3 | TD1 | 1 |
| 59-2 | Test about assigning work to a technician. In case, all technician do not have experience in that type of work. | Appendix A 1-3 | TD1 | 2 or 3 |
| 59-3 | Test about assigning work to a technician. In case, some technician do not have experience in that type of work. | Appendix A 1-4 | TD1 | 3 |
| 59-4 | Test about assigning work to a technician. In case, some technician ever works in that type of work less than two times. | Appendix A 1,2,3,5 | TD1 | 3 |
| 59-5 | Test about assigning work to a technician. In case, all technician have working time that will complete all remaining work in each one equally. | Appendix A 1,2,3,6 | TD1 | 2 or 3 |
| 59-6 | Test about assigning work to a technician, who has least working time that will complete all remaining work. | Appendix A 1,2,3,7 | TD1 | 2 |

## **UTC-60** **resetDistributeWork(int reportId, string typeWork, int userId ): bool**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-60:** resetDistributeWork(int reportId, string typeWork, int userId )

**Return:** bool

**Description:** The test case is used for testing resetDistributeWork method in ReportModel. This method is used for distributing a repair task to new technician. Report information will be updated technician id in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| Data input | reportId | typeWork | userId |
| TD1 | 4 | " Error about Application of Computer " | 2 |
| TD2 | 0 | " Error about Application of Computer " | 2 |
| TD3 | 4 | null | 2 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 60-1 | Test inputs all parameters is correct data | TD1 | true |
| 60-2 | Test inputs report id equal 0 which is not existing in the database | TD2 | false |
| 60-3 | Test inputs type work is null | TD3 | false |

## **UTC-61** **resetRandomTechnician(string typeWork , int userId): int**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-61:** resetRandomTechnician(string typeWork , int userId)

**Return:** int

**Description:** The test case is used for testing resetRandomTechnician method in ReportModel. This method is used for finding new technician who has least working time that will complete all remaining work.

**Prerequisites or Test Data**

**:** Appendix A1-7

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | typeWork | userId |
| TD1 | “Error about Application of Computer” | 2 |
| TD2 | “Error about Application of Computer” | 2 |
| TD3 | “Error about Application of Computer” | 1 |
| TD4 | “Error about Application of Computer” | 1 |
| TD5 | “Error about Application of Computer” | 1 |
| TD6 | “Error about Application of Computer” | 1 |

**Test Case**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Case** | **Description** | **Prerequisites** | **Data Input** | **Expect Result** |
| 61-1 | Test about assigning work to a technician. In case, the system does not have technician accounts in the database. | Appendix A1.1, 1.4, 2-3 | TD1 | 1 |
| 61-2 | Test about assigning work to a technician. In case, all technician do not have experience in that type of work. | Appendix A 1-3 | TD1 | 2 or 3 |
| 61-3 | Test about assigning work to a technician. In case, some technician do not have experience in that type of work. | Appendix A 1-4 | TD1 | 3 |
| 61-4 | Test about assigning work to a technician. In case, some technician ever works in that type of work less than two times. | Appendix A 1,2,3,5 | TD1 | 3 |
| 61-5 | Test about assigning work to a technician. In case, all technician have working time that will complete all remaining work in each one equally. | Appendix A 1,2,3,6 | TD1 | 2 or 3 |
| 61-6 | Test about assigning work to a technician, who has least working time that will complete all remaining work. | Appendix A 1,2,3,7 | TD1 | 2 |

## **UTC-62** **updateReport(int reportId, string reportRepairDetail, int statusComplete): bool**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-62:** updateReport(int reportId, string reportRepairDetail, int statusComplete)

**Return:** bool

**Description:** The test case is used for testing updateReport method in ReportModel. This method is used for updating repair detail and status complete of the report in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| Data input | reportId | reportRepairDetail | statusComplete |
| TD1 | 1 | “Complete” | 3 |
| TD2 | 0 | “Complete” | 3 |
| TD3 | 1 | null | 3 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 62-1 | Test inputs all parameters is correct data | TD1 | true |
| 62-2 | Test inputs report id equal 0 which is not existing in the database | TD2 | false |
| 62-3 | Test inputs repair detail of report is null | TD3 | false |

## **UTC-63** **viewPreviousReport(int reporterId): ReportModel**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-63:** viewPreviousReport(int reporterId)

**Return:** ReportModel

**Description:** The test case is used for testing viewPreviousReport method in ReportModel. This method is used for viewing last report that is added by the reporter.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | reporterId |
| TD1 | 4 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 2 | “staff1” | “123456” | “staff one” | “CAMT” | “113” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUserModel2 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 2 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |
| report2 | 0 | null | null | null | null | null | null | null | null | null | 0 | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 63-1 | Test inputs reporter id which is existing in the database | TD1 | report1 |
| 63-2 | Test inputs reporter id equal 0 which is not existing in the database | TD2 | report2 |

## **UTC-64** **viewReportbyReporterId(int reporterId): List< ReportModel>**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-64:** viewReportbyReporterId(int reporterId)

**Return:** List< ReportModel>

**Description:** The test case is used for testing viewReportbyReporterId method in ReportModel. This method is used for viewing all report that is added by the reporter, which can be identified from reporter Id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | reporterId |
| TD1 | 4 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 2 | “staff1” | “123456” | “staff one” | “CAMT” | “113” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUserModel2 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 1 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 2 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 64-1 | Test inputs reporter id which is existing in the database | TD1 | {report1, report2} |
| 64-2 | Test inputs reporter id equal 0 which is not existing in the database | TD2 | { } |

## **UTC-65** **viewReportByStatusAndUserId(int technicianId, int statusComplete): List< ReportModel>**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-65:** viewReportByStatusAndUserId(int technicianId, int statusComplete)

**Return:** List< ReportModel>

**Description:** The test case is used for testing viewReportByStatusAndUserId method in ReportModel. This method is used for viewing all report information by identifying from technician id and status complete.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | technicianId | statusComplete |
| TD1 | 2 | 3 |
| TD2 | 0 | 3 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 2 | “staff1” | “123456” | “staff one” | “CAMT” | “113” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUserModel2 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 1 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 2 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 65-1 | Test inputs all parameters is correct data | TD1 | {report1, report2} |
| 65-2 | Test inputs technician id equal 0 which is not existing in the database | TD2 | { } |

## **UTC-66** **viewReportByTechnicianId(int technicianId): List< ReportModel>**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-66** viewReportByTechnicianId(int technicianId)

**Return:** List< ReportModel>

**Description:** The test case is used for testing viewReportByTechnicianId method in ReportModel. This method is used for viewing all report information by identifying from technician id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | technicianId |
| TD1 | 2 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 2 | “staff1” | “123456” | “staff one” | “CAMT” | “113” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUserModel2 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 1 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open Keynote” | “0833201787” | “complete” | 2015-06-09 15:36:48.3488602 | 2015-06-10 15:36:48.3488602 | 3 | true |
| report2 | 2 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 66-1 | Test inputs all parameters is correct data | TD1 | {report2, report1} |
| 66-2 | Test inputs technician id equal 0 which is not existing in the database | TD2 | { } |

## **UTC-67** **updateRepairingStatus(int reportId, int statusComplete): bool**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-67:** updateRepairingStatus(int reportId, int statusComplete)

**Return:** bool

**Description:** The test case is used for testing updateRepairingStatus method in ReportModel. This method is used for updating status complete of report in the system.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |
| --- | --- | --- |
| Data input | reportId | statusComplete |
| TD1 | 1 | 3 |
| TD2 | 0 | 3 |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data Input** | **Expect Result** |
| 67-1 | Test inputs all parameters is correct data | TD1 | true |
| 67-2 | Test inputs report id equal 0 which is not existing in the database | TD2 | false |

## **UTC-68** **viewReportByReportId(int reportId): List< ReportModel>**

**Package:** Model

**Class:** ReportModel

**Unit Test Case-68** viewReportByReportId(int reportId)

**Return:** List< ReportModel>

**Description:** The test case is used for testing viewReportByReportId method in ReportModel. This method is used for viewing report information by identifying from report id.

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |
| --- | --- |
| Data input | reportId |
| TD1 | 2 |
| TD2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | item\_id | item\_brand | item\_name | item\_description | item\_startDate | item\_endDate | item\_status | item\_picture | item\_cmuNumber | item\_camtNumber | item\_serialNumber | item\_component |
| itemModel1 | 0 | null | null | null | null | null | 0 | null | null | null | null | null |
| itemModel2 | 1 | “Apple” | “iMac” | “iMac 27-inch” | 2015-05-07 15:35:35.0000000 | 2015-06-20 00:00:00.0000000 | 1 | “picItem-1.jpg” | “CMU01” | “CAMT01” | “” | itemModel1 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object Result | user\_id | user\_username | user\_password | user\_name | user\_department | user\_room | user\_address | user\_tel | user\_email | user\_type | user\_active |
| camtUserModel1 | 2 | “staff1” | “123456” | “staff one” | “CAMT” | “113” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 2 | true |
| camtUserModel2 | 4 | “reporter1” | “123456” | “reporter one” | “CAMT” | “114” | “Chiang mai, Thailand” | “0833201787” | “se542115021.developer@gmail.com” | 3 | true |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Object result | report\_id | technician\_id | reporter\_id | item\_id | report\_typeBroken | report\_case | report\_contact | report\_repairDetail | report\_startDate | report\_endDate | report\_statusComplete | report\_recieveMsg |
| report1 | 2 | camtUserModel1 | camtUserModel2 | itemModel2 | “Error about Application of Computer” | “Cannot open iPhoto” | “0833201787” | “complete” | 2015-06-11 15:36:48.3488602 | 2015-06-12 15:36:48.3488602 | 3 | true |
| report2 | 0 | null | null | null | null | null | null | null | null | null | 0 | false |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expect Result** |
| 68-1 | Test inputs all parameters is correct data | TD1 | report1 |
| 68-2 | Test inputs report id equal 0 which is not existing in the database | TD2 | report2 |

## **UTC-69** **Send(string toEmail, string subject, string body): bool**

**Package:** Model

**Class:** MailAPI

**Unit Test Case-69** Send(string toEmail, string subject, string body)

**Return:** bool

**Description:** The test case is used for testing Send method in MailAPI. This method is used for sending a mail to the client

**Prerequisites or Test Data**

**:** Appendix A1-4

**Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| Data input | toEmail | subject | body |
| TD1 | “se542115021.developer@gmail.com” | “Test” | “Test” |
| TD2 | null | “Test” | “Test” |

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Data input** | **Expect Result** |
| 69-1 | Test inputs all parameters is correct data | TD1 | true |
| 69-2 | Test inputs toEmail is null value | TD2 | false |

# **Chapter Three| Test case of System Test (STC)**

## **STC-1: User can login**

**Description**

Users can log in to the system. The log in method is used to verify before use this system. The system will check an empty text fill box and the system will check the user’s data in the database.

**Prerequisites or Test input**

User must have a user account.

**Test procedure**

1. User enters to login page.

2. User fills username

Input

2.1. Input username “admin”  
2.2. Input password “123456”

3. User clicks the login button.

4. User enters to Administrator main page or Technician main page or Reporter main page.

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case NO.** | **Username** | **Password** | **Expected Output** |
|  | *NULL* | *NULL* | The system displays “Please fill username and password” and requires input again. |
|  | adm | 123456 | The system displays “Please fill username 4-16 characters” and requires input again. |
|  | admin | 123 | The system displays “Please fill password 4-16 characters” and requires input again. |
|  | admon | 123546 | The system displays “username or password incorrect” and requires input again. |
|  | abcdefg | 123456 | The system displays “your username still not approve from administrator” and requires input again. |

## **STC-2: Administrator can register a technician/reporter account**

**Description**

Administrators can register the Technician/ the Reporter account to the system. The register method is used to create account for login. The system will check an empty text fill box and the system will check the user’s data in the database.

**Prerequisites or Test input**

N/A

**Test procedure**

1. Administrator enters to User Registration page.

2. Administrator fills username, password, name, department, room, address, telephone number, email, and user type information to User Registration page.

Input

2.1. Input username “reporter1”

2.2. Input password “123456

2.3. Input name “reporter one”

2.4. Input department “CAMT”

2.5. Input room “114”

2.6. Input address “Chiang Mai”

2.7. Input telephone number “0833201787”

2.8. Input email “se542115021.developer@gmail.com”

2.9. Input user type “reporter”

3. Administrator clicks the register button.

4. Administrator clicks yes button in yes/no dialog message.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** | **Actual Output** | **Pass/Fail** |
|  | Administrator fills information into a form in User Registration page.  1. Leave the username empty  2. Input password “123456  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill username” and redirects to User Registration page again. | The system displays “Please you fill username” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Leave the password empty  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill password” and redirects to User Registration page again. | The system displays “Please you fill password” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Input password “123456”  3. Leave the name empty  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill name” and redirects to User Registration page again. | The system displays “Please you fill name” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Input password “123456”  3. Input name “reporter one”  4. Leave the department empty  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill department” and redirects to User Registration page again. | The system displays “Please you fill department” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Input password “123456”  3. Input name “reporter one”  4. Input department “CAMT”  5. Leave the room empty  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill room” and redirects to User Registration page again. | The system displays “Please you fill room” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Input password “123456”  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Leave the address empty  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill address” and redirects to User Registration page again. | The system displays “Please you fill address” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Input password “123456”  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Leave the telephone number empty  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill telephone number” and redirects to User Registration page again. | The system displays “Please you fill telephone number” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Input password “123456”  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Leave the email empty “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill email” and redirects to User Registration page again. | The system displays “Please you fill email” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “rep”  2. Input password “123456”  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill username 4-16 characters” and redirects to User Registration page again. | The system displays “Please you fill username 4-16 characters” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “reporter1”  2. Input password “123”  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Please you fill password 4-16 characters” and redirects to User Registration page again. | The system displays “Please you fill password 4-16 characters” and redirects to User Registration page again. | Pass |
|  | Administrator fills information into a form in User Registration page.  1. Input username “admin”  2. Input password “123456”  3. Input name “reporter one”  4. Input department “CAMT”  5. Input room “114”  6. Input address “Chiang Mai”  7. Input telephone number “0833201787”  8. Input email “se542115021.developer@gmail.com”  9. Input user type “reporter” | The system displays “Your username are duplicate with other username” and redirects to User Registration page again. | The system displays “Your username are duplicate with other username” and redirects to User Registration page again. | Pass |
|  | Administrator clicks no button in yes/no dialog message. | The system will not record. And then the system will provide to fill information into a form again. | The system will not record. And then the system will provide to fill information into a form again. |  |

## **STC-3: Administrator can view all technician accounts**

**Description**

This method provides the Administrator view the Technician account in the system. The system will display all Technician’s information in the database.

**Prerequisites or Test input**

N/A

**Test procedure**

1. Administrator enters to User Management page.

2. Administrator clicks the Technician Management button.

3. Administrator enters to Technician Management page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the Technician Management button. | The system redirects to Technician Management page and displays all technician account information in Technician Management page. |

## **STC-4:** **Administrator can view all reporter accounts**

**Description**

This method provides the Administrator view the Reporter account in the system. The system will display all Reporter’s information in the database.

**Prerequisites or Test input**

N/A

**Test procedure**

1. Administrator enters to User Management page.

2. Administrator clicks the Reporter Management button.

3. Administrator enters to Reporter Management page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the Reporter Management button. | The system redirects to the Reporter Management page and displays all reporter account information in Reporter Management page. |

## **STC-5:** **Administrator can change an active status of technician/ reporter account**

**Description**

Administrators can change an active status of the Technician/ the Reporter account. This method is used to manage status of the Technician/ the Reporter account in the system. The system will update a status of the Technician/ the Reporter into the database.

**Prerequisites or Test input**

The system must has reporter/ technician information in the system.

**Test procedure**

1. Situation of Technician accounts.

1.1. Administrator enters to Technician Management page.

1.2. Administrator clicks Active/Inactive button.

1.3. Administrator clicks yes button in yes/no dialog message

2. Situation of Reporter accounts.

2.1 Administrator enters to Reporter Management page.

2.2 Administrator clicks Active/Inactive button.

2.3 Administrator clicks yes button in yes/no dialog message

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks Active/Inactive button in Technician Management page and clicks yes button in yes/no dialog message. | The system changes active status of a technician and displays “Active” to “Inactive” status or “Inactive” to “Active” status of a technician in Technician management. |
|  | Administrator clicks Active/Inactive button in Reporter Management page and clicks yes button in yes/no dialog message. | The system changes active status of a reporter and displays “Active” to “Inactive” status or “Inactive” to “Active” status of a reporter in Reporter management. |
|  | Administrator clicks no button in yes/no dialog message in Technician Management page. | The system will not record. And then the system will provide to click active/ inactive again. |
|  | Administrator clicks no button in yes/no dialog message in Reporter Management page. | The system will not record. And then the system will provide to click active/ inactive again. |

## **STC-6:** **Administrator can delete a technician/ reporter account**

**Description**

Administrators can delete a Technician/ a Reporter account. This method is used to delete a Technician/ a Reporter account into the system. The system will remove a Technician/ a Reporter account into the database.

**Prerequisites or Test input**

The system must has reporter/ technician information in the system.

**Test procedure**

1. Situation of Technician accounts.

1.1 Administrator enters to Technician Management page.

1.2 Administrator clicks delete button.

1.3 Administrator clicks yes button in yes/no dialog message.

2. Situation of Reporter accounts.

2.1 Administrator enters to Reporter Management page.

2.2 Administrator clicks delete button.

2.3 Administrator clicks yes button in yes/no dialog message

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator enters to Technician Management page. | The system displays all technician account information in Technician. |
|  | Administrator clicks delete button in Technician Management page. | The system displays yes/no dialog massage “Do you sure to delete this account?” |
|  | Administrator clicks yes button in yes/no dialog message in Technician Management page. | The system deletes a technician account in the system and displays “Delete user successful” on the web application. |
|  | Administrator clicks no button in yes/no dialog message in Technician Management page. | The system will not delete. |
|  | Administrator enters to Reporter Management page. | The system displays all reporter account information in Reporter Management page. |
|  | Administrator clicks delete button in Reporter Management page. | The system displays yes/no dialog massage “Do you sure to delete this account?” |
|  | Administrator clicks yes button in yes/no dialog message in Reporter Management page. | The system deletes a reporter account in the system and displays “Delete user successful” on the web application. |
|  | Administrator clicks no button in yes/no dialog message in Reporter Management page. | The system will not delete. |
|  | Administrator cannot delete a technician/reporter account | The system displays error message “Can't delete user”. |

## **STC-7:** **Administrator can view all IT equipment**

**Description**

Administrators can view all IT equipment in the system. This method is used to view all IT equipment’s information in the system. The system will display all IT equipment to the Administrator.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Administrator clicks the Items Management button.

2. Administrator enters to the Items Management page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the Items Management button. | The system redirects to the Items Management page and displays all IT equipment. |
|  | Administrator clicks the Add Item button. | The system redirects to Add Item page. |
|  | Administrator clicks the Edit button. | The system redirects to Item Information page. |

## **STC-8:** **Administrator can add IT equipment**

**Description**

Administrators can add IT equipment to the system. This method is used to add new IT equipment’s information into the system. The system will record IT equipment’s information into the database.

**Prerequisites or Test input**

N/A

**Test procedure**

1. Administrator enters to Add Item page.

2. Administrator fills item brand, item name, item description, CAMT number, CMU number, serial number, time end, and item status information.

Input

2.1. Input item brand “Apple”

2.2. Input item name “Mac”

2.3. Input item description “iMac”

2.4. Input CAMT number “CAMT01”

2.5. Input CMU number “CMU01”

2.6. Leave serial number empty (can empty)

2.7. Input time end “2015-06-20 00:00:00.0000000”

2.8. Input item status “Good”

2.9. Input item picture “picItem-1.jpg”

2.10. Input item owner “reporter one”

3. Administrator clicks the Owner button.

4. Administrator enters to Owner page.

5. Administrator selects an owner.

6. Administrator click Add Owner button.

7. Administrator enters to Add Item page.

8. Administrator click browse button for adding a picture.

9. Administrator clicks Add Item button.

10. Administrator clicks yes button in yes/no dialog message

**If Administrator would like to add a component.**

1. After step 7 in flow of execution.

2. Administrator clicks the Add Component button.

3. Administrator fills item brand, item name, item description, CAMT number, CMU number, serial number, time end, and item status information.

3.1 Input item brand “RAM Thailand”

3.2 Input item name “RAM”

3.3 Input item description “RAM”

3.4 Input CAMT number “CAMT02”

3.5 Input CMU number “CMU02”

3.6 Leave the serial number empty (can empty)

4. Administrator click browse button for adding a picture.

5. Administrator clicks Add Item button.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks yes button in yes/no dialog message. | The system validates item information and records item information and a component information in the system. And then displays “Add items is success” on the web application. |
|  | Administrator fills item information and clicks Add Item button.  1. Input item brand “Apple”  2. Input item name “Mac”  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Leave serial number empty  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Input item picture “picItem-1.jpg”  10. Input item owner “reporter one” | The system displays yes/no dialog massage “Do you sure to add an item?” |
|  | Administrator fills item information.  1. Leave the item brand empty  2. Input item name “Mac  3. Input item description “iMac  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information.  1. Input item brand “Apple”  2. Leave the item name empty  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information.  1. Input item brand “Apple”  2. Leave the item name empty  3. Leave the item description empty  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information.  1. Input item brand “Apple”  2. Leave the item name empty  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Leave the item status empty  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information.  1. Input item brand “Apple”  2. Leave the item name empty  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Leave the picture empty  10. Input owner “reporter one” | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information.  1. Input item brand “Apple”  2. Input item name “Mac”  3. Input item description “iMac”  4. Leave CAMT number empty  5. Input CMU number “CMU01”  6. Leave the serial number empty  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill CAMT number, CMU number, or Serial number” on the web application. |
|  | Administrator fills item information.  1. Input item brand “Apple”  2. Input item name “Mac”  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Leave CMU number empty  6. Leave the serial number empty  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill CAMT number, CMU number, or Serial number” on the web application. |
|  | Administrator enters to Add Item page and fills item information. And then the Administrator clicks the Owner button. | The system redirects to Owner page and displays all technician and reporter information. |
|  | Administrator enters to Owner page and selects an owner. And then the Administrator click Add Owner button. | The system redirects to Add Item page. |
|  | Administrator clicks the Add Component button. | The system displays “Add Component” form. |
|  | Administrator fills item information into a component form.  1. Leave the item brand empty  2. Input item name “RAM”  3. Input item description “RAM”  4. Input CAMT number “CAMT02”  5. Input CMU number “CMU02”  6. Leave the serial number empty (can empty) | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information into a component form.  1. Input item brand “RAM Thailand”  2. Leave the item name empty  3. Input item description “RAM”  4. Input CAMT number “CAMT02”  5. Input CMU number “CMU02”  6. Leave the serial number empty (can empty) | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information into a component form.  1. Input item brand “RAM Thailand”  2. Input item name “RAM”  3. Leave the item description empty  4. Input CAMT number “CAMT02”  5. Input CMU number “CMU02”  6. Leave the serial number empty (can empty) | The system displays “Please you fill Item brand, Item name, Item description, Item status, and Item picture information” on the web application. |
|  | Administrator fills item information into a component form.  1. Input item brand “RAM Thailand”  2. Input item name “RAM”  3. Input item description “RAM”  4. Leave the CAMT number empty  5. Input CMU number “CMU02”  6. Leave the serial number empty (can empty) | The system displays “Please you fill CAMT number, CMU number, or Serial number” on the web application. |
|  | Administrator fills item information into a component form.  1. Input item brand “RAM Thailand”  2. Input item name “RAM”  3. Input item description “RAM”  4. Input CAMT number “CAMT02”  5. Leave the CMU number empty  6. Leave the serial number empty (can empty) | The system displays “Please you fill CAMT number, CMU number, or Serial number” on the web application. |
|  | Administrator clicks yes button in yes/no dialog message. | The system validates item information and records item information and a component information in the system. And then displays “Add items is success” on the web application. |
|  | Administrator clicks no button in yes/no dialog message. | The system will not record. And then the system will provide to fill information into a form again. |

## **STC-9:** **Administrator can edit IT equipment**

**Description**

Administrators can edit IT equipment in the system. This method is used to edit and update IT equipment’s information in the system. The system will update and record new IT equipment’s information in the database.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Administrator enters to Item information page.

2. Administrator clicks the Edit Item Information button.

3. Administrator enters to Edit Item page.

4. Administrator fills item brand, item name, item description, CAMT number, CMU number, serial number, time end, and item status information.

Input

2.1. Input item brand “Apple”

2.2. Input item name “Mac”

2.3. Input item description “iMac”

2.4. Input CAMT number “CAMT01”

2.5. Input CMU number “CMU01”

2.6. Leave serial number empty (can empty)

2.7. Input time end “2015-06-20 00:00:00.0000000”

2.8. Input item status “Good”

2.9. Input item picture “picItem-1.jpg”

2.10. Input item owner “reporter one”

5. Administrator clicks the Owner button.

6. Administrator enters to Edit Owner page.

7. Administrator selects an owner.

8. Administrator clicks Edit Owner button.

9. Administrator enters to Edit Item page.

10. Administrator clicks browse button for editing a picture.

11. Administrator clicks Edit Item button.

12. Administrator clicks yes button in yes/no dialog message.

**If Administrator would like to add a component.**

1. After step 1 in flow of execution.

2. Administrator clicks the Add Component button.

3. Administrator enters to Add Component page.

4. Administrator fills item brand, item name, item description, CAMT number, CMU number, serial number, time end, item status information, and item picture.

Input

4.1 Input item brand “RAM Thailand”

4.2 Input item name “RAM”

4.3 Input item description “RAM”

4.4 Input CAMT number “CAMT02”

4.5 Input CMU number “CMU02”

4.6 Leave the serial number empty (can empty)

5. Administrator clicks Add Item Component button.

6. Administrator clicks yes button in yes/no dialog message.

**If Administrator would like to remove a component.**

1. After step 1 in flow of execution.

2. Administrator clicks the remove Component button.

3. Administrator clicks yes button in yes/no dialog message.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator enters to Item information page. | The system displays item information and item component information. |
|  | Administrator clicks the Edit Item Information button. | The system redirects to Edit Item page and display item information in editing form. |
|  | Administrator enters to Edit Item page and fills item information. And then the administrator clicks the Owner button. | The system redirects to Edit Owner page and displays all technician and reporter information. |
|  | Administrator enters to Edit Owner page and selects an owner. And then the Administrator clicks Edit Owner button. | The system redirects to Edit Item page and displays item information in editing form. |
|  | Administrator enters to Edit Item page ad clicks browse button for editing a picture. And then the Administrator clicks Edit Item button. | The system displays yes/no dialog massage “Do you sure to edit this item?” |
|  | Administrator clicks yes button in yes/no dialog message for editing IT equipment. | The system validates item information and updates item information in the system. And then the system displays “Edit this item is success” on the web application. |
|  | Administrator clicks no button in yes/no dialog message for editing IT equipment. | The system will not validate and update. |
|  | Administrator fills item information after click Edit Item button.  1. Leave the item brand empty  2. Input item name “Mac”  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item brand” on the web application. |
|  | Administrator fills item information after click Edit Item button.  1. Input item brand “Apple”  2. Leave the item name empty  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item name” on the web application. |
|  | Administrator fills item information after click Edit Item button.  1. Input item brand “Apple”  2. Input item name “Mac”  3. Leave the item description empty  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item description” on the web application. |
|  | Administrator fills item information after click Edit Item button.  1. Input item brand “Apple”  2. Input item name “Mac”  3. Input item description “iMac”  4. Input CAMT number “CAMT01”  5. Input CMU number “CMU01”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Leave the item status empty  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill Item status” on the web application. |
|  | Administrator fills item information after click Edit Item button.  1. Input item brand “Apple”  2. Input item name “Mac”  3. Input item description “iMac”  4. Leave CAMT number empty  5. Leave CMU number empty  6. Leave the serial number empty  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-1.jpg”  10. Input owner “reporter one” | The system displays “Please you fill CAMT number, CMU number, or Serial number” on the web application. |
|  | Administrator clicks the Add Component button in Item information page. | The system redirects to Add Component page and displays Add Component form. |
|  | Administrator enters to Add Component page and fills item information. And then the Administrator clicks Add Item Component button. | The system displays yes/no dialog massage “Do you sure to add Item Component?” |
|  | Administrator clicks yes button in yes/no dialog message for adding a component. | The system validates item information and records a component information to the system. And then the system displays “Add component success” on the web application. |
|  | Administrator clicks no button in yes/no dialog message for adding a component. | The system will not validates and record a component. |
|  | Administrator fills item information after click the Add component button.  1. Leave the item brand empty  2. Input item name “RAM”  3. Input item description “RAM”  4. Input CAMT number “CAMT02”  5. Input CMU number “CMU02”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-2.jpg” | The system displays “Please you fill Item brand” on the web application. |
|  | Administrator fills item information after click the Add component button.  1. Input item brand “RAM Thailand”  2. Leave the item name empty  3. Input item description “RAM”  4. Input CAMT number “CAMT02”  5. Input CMU number “CMU02”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-2.jpg” | The system displays “Please you fill Item name” on the web application. |
|  | Administrator fills item information after click the Add component button.  1. Input item brand “RAM Thailand”  2. Input item name “RAM”  3. Leave the item description empty  4. Input CAMT number “CAMT02”  5. Input CMU number “CMU02”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-2.jpg” | The system displays “Please you fill Item description” on the web application. |
|  | Administrator fills item information after click the Add component button.  1. Input item brand “RAM Thailand”  2. Input item name “RAM”  3. Input item description “RAM”  4. Input CAMT number “CAMT02”  5. Input CMU number “CMU02”  6. Input serial number “”  7. Input time end “2015-06-20 00:00:00.0000000”  8. Leave the item status empty  9. Browse picture “picItem-2.jpg” | The system displays “Please you fill Item status” on the web application. |
|  | Administrator fills item information after click the Add component button.  1. Input item brand “RAM Thailand”  2. Input item name “RAM”  3. Input item description “RAM”  4. Leave CAMT number empty  5. Leave CMU number empty  6. Leave the serial number empty  7. Input time end “2015-06-20 00:00:00.0000000”  8. Input item status “Good”  9. Browse picture “picItem-2.jpg” | The system displays “Please you fill CAMT number, CMU number, or Serial number” on the web application. |
|  | Administrator clicks the remove Component button. | The system displays yes/no dialog massage “Do you sure to remove this item component?” |
|  | Administrator clicks yes button in yes/no dialog message for removing a component. | The system will remove item and updates item information in the system. |
|  | Administrator clicks no button in yes/no dialog message for removing a component. | The system will not remove a component. |

## **STC-10:** **Administrator can view IT equipment that expire**

**Description**

Administrators can view all IT equipment that expire in the system. The system will display IT equipment that expire from the database.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Administrator enters MIS page.

2. Administrator clicks the Items MIS button.

3. Administrator enters to Items MIS page.

4. Administrator selects time start and time end in Items MIS page.

5. Administrator clicks the View Item Expire button.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the Items MIS button. | The system redirects to Items MIS page. |
|  | Administrator selects time start and time end in Items MIS page and clicks the View Item Expire button. | The system displays all IT equipment that will expire in Items MIS page. |

## **STC-11:** **Administrator can view IT equipment that are often broken**

**Description**

Administrator can view IT equipment that are often broken. Administrator must select information type (item brand, item name) for finding.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Administrator enters MIS page.

2. Administrator clicks the Items MIS button.

3. Administrator enters to Items MIS page.

4. Administrator selects information type (item brand, item name) in Items MIS page.

5. Administrator clicks the View Items button.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the Items MIS button. | The system redirects to Items MIS page. |
|  | Administrator selects information type (item brand, item name) in Items MIS page and clicks the View Items button. | The system displays all IT equipment that are often broken from information type in Items MIS page. |

## **STC-12:** **Administrator can view an IT equipment Information**

**Description**

Administrator can view an IT equipment Information in Items Information page.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Administrator clicks the View button.

2. Administrator enter to the Items Information page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the View button. | The system redirects to Item Information page and displays IT equipment information in Items Information page. |

## **STC-13:** **Administrator can define type of broken of IT equipment**

**Description**

Administrator can define type of broken of IT equipment in New Reparation page.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Administrator enters to Reparation Management page.

2. Administrator clicks the New Reparation button.

3. Administrator enters to New Reparation page.

4. Administrator selects type of broken in New Reparation page.

5. Administrator clicks the Define type button.

6. Administrator clicks yes button in yes/no dialog message.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the New Reparation button. | The system redirects to New Reparation page and displays all new reparation that are informed by Reporter. |
|  | Administrator selects type of broken and clicks the Define type button in New Reparation page. | The system displays yes/no dialog massage “Do you sure to define type of broken?” |
|  | Administrator clicks yes button in yes/no dialog message. | The system distributes a task automatically by calculating the average of time to repair in each job of the technician and updates report information in the system. And then the system displays “Define type of broken already” on the web application. |
|  | Administrator clicks no button in yes/no dialog message. | The system will not start the process. |

## **STC-14:** **Administrator can view all repair tasks of a technician**

**Description**

Administrator can view all repair tasks of a technician in Technician’s Reparation page**.**

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1. Administrator enters to Reparation Management page.

2. Administrator clicks All Reparation button.

3. Administrator enters to All Reparation page.

4. Administrator clicks the View Reparation button.

5. Administrator enters to Technician’s Reparation page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks All Reparation button. | The system redirects to All Reparation page and displays all technician information. |
|  | Administrator clicks the View Reparation button. | The system redirects to Technician’s Reparation page and displays all repair task information of that Technician in Technician’s Reparation page. |

## **STC-15:** **Administrator can request to distribute repair tasks again to the system**

**Description**

Administrator can request to distribute repair tasks again to the system. Which Administrator clicks the Distribute button in Technician’s Reparation page**.**

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1. Administrator enters to Technician’s Reparation page.

2. Administrator clicks the Distribute button.

3. Administrator clicks yes button in yes/no dialog message.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator clicks the Distribute button. | The system displays yes/no dialog massage “Do you sure to distribute repair tasks again?" |
|  | Administrator clicks yes button in yes/no dialog message. | The system distributes a task automatically by calculating the average of time to repair in each job of the technician, updates report information in the system and displays “Repair task is distributed to a technician” on the web application. |
|  | Administrator clicks no button in yes/no dialog message. | The system will not start the process. |

## **STC-16:** **The Administrator can update his account information**

**Description**

Administrator can update his account information, which can update basic information or password in Admin Information page**.**

**Prerequisites or Test input**

The system must has an administrator account information in the system.

**Test procedure**

1. Administrator enters to Admin Information page.

2. Administrator fills username, name, room, address, phone, and email.

Input

2.1. Input name “Admin One”

2.2. Input department “CAMT”

2.3. Input room “114”

2.4. Input address “Chiang Mai”

2.5. Input telephone number “0833201787”

2.6. Input email “se542115021.developer@gmail.com”

3. Administrator click Update Information button

4. Administrator clicks yes button in yes/no dialog message.

**If Administrator would like to edit his password.**

1. Administrator enters to Admin Information page.

2. Administrator fills old password, new password, and confirm password.

Input

1. Input old password “123456”

2. Input new password “12345678”

3. Input confirm password “12345678”

3. Administrator clicks the Change Password button.

4. Administrator clicks yes button in yes/no dialog message.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Administrator enters to Admin Information page. | The system provides Admin Information form and username text field that cannot edit text. |
|  | Administrator fills information and clicks Update Information button. | The system displays yes/no dialog massage “Do you sure for edit information?” |
|  | Administrator fills information.  1. Leave the name empty  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill name” on the web application. |
|  | Administrator fills information.  1. Input name “Admin one”  2. Leave the department empty  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill department” on the web application. |
|  | Administrator fills information.  1. Input name “Admin one”  2. Input department “CAMT”  3. Leave the room empty  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill room” on the web application. |
|  | Administrator fills information.  1. Input name “Admin one”  2. Input department “CAMT”  3. Input room “114”  4. Leave the address empty  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill address” on the web application. |
|  | Administrator fills information.  1. Input name “Admin one”  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Leave the telephone empty  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill telephone number” on the web application. |
|  | Administrator fills information.  1. Input name “Admin one”  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Leave the email empty | The system displays “Please you fill email” on the web application. |
|  | Administrator clicks yes button in yes/no dialog message. | The system validates information and updates user account information in the system. And then the system displays “Update Administrator information successful” on the web application. |
|  | Administrator clicks no button in yes/no dialog message. | The system will not validate and update. |
|  | Administrator fills old password, new password, and confirm password and clicks the Change Password button. | The system displays yes/no dialog massage “Do you sure for edit password?” |
|  | Administrator fills old password, new password, and confirm password.  1. Leave the old password empty  2. Input new password “12345678”  3. Input confirm password “12345678” | The system displays “Please you fill old password” on the web application. |
|  | Administrator fills old password, new password, and confirm password.  1. Input old password “123456”  2. Leave the new password empty  3. Input confirm password “12345678” | The system displays “Please you fill new password” on the web application. |
|  | Administrator fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345678”  3. Leave the confirm password empty | The system displays “Please you fill confirm password” on the web application. |
|  | Administrator fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “123”  3. Input confirm password “12345678” | The system displays “Please you fill new password 4-16 characters” on the web application. |
|  | Administrator fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345678”  3. Input confirm password “123” | The system displays “Please you fill confirm password 4-16 characters” on the web application. |
|  | Administrator fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345”  3. Input confirm password “123456” | The system displays “New Password and confirm password are not match” on the web application. |
|  | Administrator fills old password, new password, and confirm password.  1. Input old password “12345678”  2. Input new password “12345678”  3. Input confirm password “12345678” | The system displays “Old password incorrect” on the web application. |
|  | Administrator clicks yes button in yes/no dialog message. | The system validates new password, old password, and confirm password and updates user account information in the system. And then the system displays “Update your password successful” on the web application. |
|  | Administrator clicks no button in yes/no dialog message. | The system will not validate and update. |

## **STC-17:** **Technician can view all new repair task information**

**Description**

Technician can view all new repair task information in Technician Main page**.**

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1. Technician enters to Technician Main page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician enters to Technician Main page. | The system displays all new repair task information in Technician Main page. |

## **STC-18:** **Technician can update repair task status**

**Description**

Technician can update repair task status for changing status from “Wait to process” to “In processing”.in Technician Main page.

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1. Technician enters to Technician Main page.

2. Technician clicks the Repair button beside repair task information.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician enters to Technician Main page. | The system displays all new repair task information in Technician Main page. |
|  | Technician clicks the Repair button beside repair task information. | The system changes a repair task status from “Wait to process” to “In processing” in the system and displays a repair task that was updated in Repairing page. |

## **STC-19:** **Technician can view IT equipment information**

**Description**

Technician can view IT equipment information in IT equipment information page, which is a broken IT equipment.

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1.Technician clicks an IT equipment name.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician clicks an IT equipment name button. | The system redirects to IT equipment information page and displays IT equipment information in IT equipment information page. |

## **STC-20:** **Technician can view Reporter information**

**Description**

Technician can view Reporter information in Reporter information page.

**Prerequisites or Test input**

The system must has reporter information in the system.

**Test procedure**

1.Technician clicks a reporter name button.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician clicks a reporter name button. | The system redirects to Reporter information page and displays reporter information in Reporter information page. |

## **STC-21:** **Technician can view all IT equipment that live in repair process**

**Description**

Technician can view all IT equipment that live in repair process in Repairing page**.**

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1. Technician clicks the Repairing button.

2. Technician enters to Repairing page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician clicks the Repairing button. | The system redirects to Repairing page and displays all IT equipment that live in repair process in Repairing page. |

## **STC-22:** **Technician can update repair task information**

**Description**

Technician can update repair task information in Repairing Information page. In this process can do two method, which consists update repairing information and release repairing information.

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1. Technician enters to Repairing page.

2. Technician clicks IT equipment name.

3. Technician enters to Repairing information page

4. Technician fills a repairing description in Repairing information page.

5. Technician clicks the Update Repairing button.

6. Technician clicks yes button in yes/no dialog message.

**If Technician would like to release repairing information.**

1. Technician enters to Repairing page.

2. Technician clicks IT equipment name.

3. Technician enters to Repairing information page

4. Technician fills a repairing description in Repairing information page.

5. Technician click the Release Repairing button.

6. Technician clicks yes button in yes/no dialog message.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician enters to Repairing page. | The system displays all IT equipment that live in repair process in Repairing page. |
|  | Technician clicks IT equipment name. | The system redirects to Repairing Information page and displays IT equipment information in Repairing Information page. The system provides a repairing process form and the Update Repairing and Release Repairing button in Repairing information page. |
|  | Technician fills a repairing description in Repairing information page and clicks the Update Repairing button. | The system displays yes/no dialog massage “Do you sure for updating reparing status?”. |
|  | Technician fills a repairing description in Repairing information page and clicks the Release Repairing button. | The system displays yes/no dialog massage “Do you sure for updating reparing status?” |
|  | Technician clicks yes button in yes/no dialog message. | The system validates repairing description and updates repair task information in the system. And then the system displays “Repairing information is updated” on the web application. |
|  | Technician clicks no button in yes/no dialog message. | The system will not validate and update. |

## **STC-23:** **Technician can view history IT equipment that were repaired by himself**

**Description**

Technician can view history IT equipment that were repaired by himself in History page**.**

**Prerequisites or Test input**

The system must has repair task information in the system.

**Test procedure**

1. Technician clicks the History button.

2. Technician enters to History page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician clicks the History button. | The system redirects to History page and displays all IT equipment information that were repaired by that technician in History page. |

## **STC-24:** **Technician can update his account information**

**Description**

Technician can update his account information in Technician Information page**.**

**Prerequisites or Test input**

The system must has a Technician account information in the system.

**Test procedure**

1. Technician enters to Technician Information page

2. Technician fills username, name, room, address, phone, and email.

Input

2.1. Input name “staff one”

2.2. Input department “CAMT”

2.3. Input room “114”

2.4. Input address “Chiang Mai”

2.5. Input telephone number “0833201787”

2.6. Input email “se542115021.developer@gmail.com”

3. Technician clicks Update Information button.

4. Technician clicks yes button in yes/no dialog message.

**If Technician would like to edit his password.**

1. Technician enters to Technician Information page

2. Technician fills old password, new password, and confirm password.

3. Technician clicks the Change Password button.

4. Technician clicks yes button in yes/no dialog message.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Technician enters to Technician Information page. | The system provides Technician Information form and username text field that cannot edit text. |
|  | Technician fills information and clicks Update Information button. | The system displays yes/no dialog massage “Do you sure for edit information ?” |
|  | Technician fills information.  1. Leave the name empty  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill name” on the web application. |
|  | Technician fills information.  1. Input name “staff one”  2. Leave the department empty  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill department” on the web application. |
|  | Technician fills information.  1. Input name “staff one”  2. Input department “CAMT”  3. Leave the room empty  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill room” on the web application. |
|  | Technician fills information.  1. Input name “reporter one”  2. Input department “CAMT”  3. Input room “114”  4. Leave the address empty  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill address” on the web application. |
|  | Technician fills information.  1. Input name “staff one”  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Leave the telephone empty  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill telephone number” on the web application. |
|  | Technician fills information.  1. Input name “staff one”  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Leave the email empty | The system displays “Please you fill email” on the web application. |
|  | Technician clicks yes button in yes/no dialog message. | The system validates information and updates user account information in the system. And then the system displays “Update Technician information successful” on the web application. |
|  | Technician clicks no button in yes/no dialog message. | The system will not validate and update. |
|  | Technician fills old password, new password, and confirm password and clicks the Change Password button. | The system displays yes/no dialog massage “Do you sure for edit password?” |
|  | Technician fills old password, new password, and confirm password.  1. Leave the old password empty  2. Input new password “12345678”  3. Input confirm password “12345678” | The system displays “Please you fill old password” on the web application. |
|  | Technician fills old password, new password, and confirm password.  1. Input old password “123456”  2. Leave the new password empty  3. Input confirm password “12345678” | The system displays “Please you fill new password” on the web application. |
|  | Technician fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345678”  3. Leave the confirm password empty | The system displays “Please you fill confirm password” on the web application. |
|  | Technician fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “123”  3. Input confirm password “12345678” | The system displays “Please you fill new password 4-16 characters” on the web application. |
|  | Technician fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345678”  3. Input confirm password “123” | The system displays “Please you fill confirm password 4-16 characters” on the web application. |
|  | Technician fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345”  3. Input confirm password “123456” | The system displays “New Password and confirm password are not match” on the web application. |
|  | Technician fills old password, new password, and confirm password.  1. Input old password “12345678”  2. Input new password “12345678”  3. Input confirm password “12345678” | The system displays “Old password incorrect” on the web application. |
|  | Technician clicks yes button in yes/no dialog message. | The system validates new password, old password, and confirm password and updates user account information in the system. And then the system displays “Update your password successful” on the web application. |
|  | Technician clicks no button in yes/no dialog message. | The system will not validate and update. |

## **STC-25:** **Reporter can inform a broken IT equipment**

**Description**

Reporter can inform a broken IT equipment in Reporter Main page. Reporter can select notification mode, which will define mail sending permission**.**

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Reporter enters to Reporter Main page.

2. Reporter fills serial number, description, contact information, notification mode.

Input

2.1. Input serial number “CAMT01”

2.2. Input description “Cannot open this computer”

2.3. Input contact information “0831112222”

2.4. select notification mode “Allow”

3. Reporter selects mode of notification.

4. Reporter click the Submit button.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Reporter enters to Reporter Main page. | The system provides reparation inform form and notification modes. |
|  | Reporter fills information, selects mode of notification and clicks the Submit button. | The system validate information and records repair task to the system. And then the system displays “Your report are send” on the web application. |
|  | Reporter fills information  1. Leave the serial number empty  2. Input description “Cannot open this computer”  3. Input contact information “0831112222”  4. select notification mode “Allow” | The system displays “Please you fill Serial number” on the web application. |
|  | Reporter fills information  1. Input serial number “CAMT01”  2. Leave the description empty  3. Input contact information “0831112222”  4. select notification mode “Allow” | The system displays “Please you fill description” on the web application. |
|  | Reporter fills information  1. Input serial number “CAMT01”  2. Input description “Cannot open this computer”  3. Leave the contact information empty  4. select notification mode “Allow” | The system displays “Please you fill contact” on the web application. |
|  | Reporter fills information  1. Input serial number “CAMT01”  2. Input description “Cannot open this computer”  3. Input contact information “0831112222”  4. No select notification mode | The system displays “Please you select Notification mode” on the web application. |
|  | Reporter fills information  1. Input serial number “&\*()#1”  2. Input description “Cannot open this computer”  3. Input contact information “0831112222”  4. select notification mode “Allow” | The system displays “Can't send report, please contact to Administrator” on the web application. |

## **STC-26:** **Reporter can view all IT equipment that he inform**

**Description**

Reporter can view all IT equipment that he inform in Report History page.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Reporter clicks the Report History button.

2. Reporter enters to Report History page.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Reporter clicks the Report History button. | The system redirects to Report History page and displays all IT equipment that were informed by that reporter in Report History page. |

## **STC-27:** **Reporter can view IT equipment information**

**Description**

Reporter can view IT equipment information in IT equipment information page.

**Prerequisites or Test input**

The system must has IT equipment information in the system.

**Test procedure**

1. Reporter enters to Report History page.

2. Reporter clicks an IT equipment name button.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Reporter clicks an IT equipment name button. | The system redirects to IT equipment information page and displays IT equipment information in IT equipment information page. |

## **STC-28:** **Reporter can update his account information**

**Description**

Reporter can update his account information in Reporter Information page**.**

**Prerequisites or Test input**

The system must has a Reporter account information in the system.

**Test procedure**

1. Reporter enters to Reporter Information page.

2. Reporter fills username, name, room, address, phone, and email.

Input

2.1. Input name “reporter one”

2.2. Input department “CAMT”

2.3. Input room “114”

2.4. Input address “Chiang Mai”

2.5. Input telephone number “0833201787”

2.6. Input email “se542115021.developer@gmail.com”

3. Reporter clicks Update Information button.

4. Reporter clicks yes button in yes/no dialog message.

**When Administrator would like to edit his password.**

1. Reporter enters to Reporter Information page.

2. Reporter fills old password, new password, and confirm password.

Input

2.1. Input old password “123456”

2.2. Input new password “12345678”

2.3. Input confirm password “12345678”

3. Reporter clicks the Change Password button.

4. Reporter clicks yes button in yes/no dialog message.

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Reporter enters to Reporter Information page. | The system provides Reporter Information form and username text field that cannot edit text. |
|  | Reporter fills information and clicks Update Information button. | The system displays yes/no dialog massage “Do you sure for edit information?” |
|  | Reporter fills information.  1. Leave the name empty  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill name” on the web application. |
|  | Reporter fills information.  1. Input name “reporter one”  2. Leave the department empty  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill department” on the web application. |
|  | Reporter fills information.  1. Input name “reporter one”  2. Input department “CAMT”  3. Leave the room empty  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill room” on the web application. |
|  | Reporter fills information.  1. Input name “reporter one”  2. Input department “CAMT”  3. Input room “114”  4. Leave the address empty  5. Input telephone number “0833201787”  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill address” on the web application. |
|  | Reporter fills information.  1. Input name “reporter one”  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Leave the telephone empty  6. Input email “se542115021.developer@gmail.com” | The system displays “Please you fill telephone number” on the web application. |
|  | Reporter fills information.  1. Input name “reporter one”  2. Input department “CAMT”  3. Input room “114”  4. Input address “Chiang Mai”  5. Input telephone number “0833201787”  6. Leave the email empty | The system displays “Please you fill email” on the web application. |
|  | Reporter clicks yes button in yes/no dialog message. | The system validates information and updates user account information in the system. And the system displays “Update Reporter information successful” on the web application. |
|  | Reporter clicks no button in yes/no dialog message. | The system will not validate and update. |
|  | Reporter fills old password, new password, and confirm password and clicks the Change Password button. | The system displays yes/no dialog massage “Do you sure for edit password?” |
|  | Reporter fills old password, new password, and confirm password.  1. Leave the old password empty  2. Input new password “12345678”  3. Input confirm password “12345678” | The system displays “Please you fill old password” on the web application. |
|  | Reporter fills old password, new password, and confirm password.  1. Input old password “123456”  2. Leave the new password empty  3. Input confirm password “12345678” | The system displays “Please you fill new password” on the web application. |
|  | Reporter fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345678”  3. Leave the confirm password empty | The system displays “Please you fill confirm password” on the web application. |
|  | Reporter fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “123”  3. Input confirm password “12345678” | The system displays “Please you fill new password 4-16 characters” on the web application. |
|  | Reporter fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345678”  3. Input confirm password “123” | The system displays “Please you fill confirm password 4-16 characters” on the web application. |
|  | Reporter fills old password, new password, and confirm password.  1. Input old password “123456”  2. Input new password “12345”  3. Input confirm password “123456” | The system displays “New Password and confirm password are not match” on the web application. |
|  | Reporter fills old password, new password, and confirm password.  1. Input old password “12345678”  2. Input new password “12345678”  3. Input confirm password “12345678” | The system displays “Old password incorrect” on the web application. |
|  | Reporter clicks yes button in yes/no dialog message. | The system validates new password, old password, and confirm password and updates user account information in the system. And then the system displays “Update your password successful” on the web application. |
|  | Reporter clicks no button in yes/no dialog message. | The system will not validate and update. |

## **STC-29:** **User can logout**

**Description**

User can logout from the system**.**

**Prerequisites or Test input**

User must login to the system.

**Test procedure**

1. User clicks the Logout button

|  |  |  |
| --- | --- | --- |
| **Test Case NO.** | **Description** | **Expected Output** |
|  | Users click the Logout button. | The system redirects to Login page and clears the user session. |