

CAMT Exam Dashboard with Tesseract

TEST PLAN

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THIS REPORT HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE SOFTWARE ENGINEERING PROGRAM: COLLEGE OF ARTS MEDIA AND TECHNOLOGY

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**Document History**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Version** | **History** | **Status** | **Date** | **View-able** | **Editable** | **Respon-sible** |
| Test Plan\_  Version.1.docx | **Add**   * Chapter 1 * Chapter 2 | Draft | 5  June , 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Test Plan\_  Version.2.docx | **Update**   * Chapter 1 * Chapter 2 | Draft | 15  June , 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Test Plan\_  Version.3.docx | **Add**   * Chapter 3 * Chapter 4 | Draft | 27  June , 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Test Plan\_  Version.4.docx | **Add**   * Chapter 1 * Chapter 2 | Draft | 31  August, 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Test Plan\_  Version.5.docx | **Update**   * Chapter 1 * Chapter 2 | Draft | 10  September, 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Test Plan\_  Version.6.docx | **Add**   * Chapter 3 * Chapter 4 | Draft | 15  September, 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Test Plan\_  Version.7.docx | **Update**   * Chapter 1 * Chapter 2 | Draft | 26  September, 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Test Plan\_  Version.8.docx | **Update**   * Chapter 1 * Chapter 2 * Chapter 3 * Chapter 4 | Draft | 10  October, 2021 | Advisor  LK  JT | LK  JT | LK  JT |

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**Chapter One**

**Introduction**

**1.1 Objectives**

The objective of the Test Plan is to document the unit testing and system testing portion of development for the purpose of discovering defects and to establish a guarantee that the system will perform as expected by conducting testing that follows the requirements put forth by the test plan document. The unit testing verify that a small, well-defined function of our code is correct. System testing check whether it conform to the user requirements.

**1.2 Scope**

The scope of this document includes test planning and test data, which will cover the unit test, system test. The unit testing activities are referred to the inspection and verification of the smallest testable unit of software and system testing activities are meant to detect a completely integrated system to verify it meets user requirements.

**1.3 Acronyms and Definition**

1.3.1 Acronyms

|  |  |
| --- | --- |
| UTC | Unit Test Case |
| UTR | Unit Test Record |
| STC | System Test Case |
| STR | System Test Record |

1.3.2 Definition

|  |  |
| --- | --- |
| Name | Definition |
| Unit testing | A level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed. |
| Test case | (1)A set of test inputs, execution conditions, and expected results developed for a particular objective, such as to exercise a particular program path or to verify compliance with a specific requirement.  (2) Documentation specifying inputs predicted results and a set of execution conditions for a test item. [IEEE90] |
| System testing | A level of the software testing process where a complete, integrated system is tested in order to evaluate the compliance with the specified requirements. |

**Chapter Two**

**Test Procedure**

**2.1.** **Scope of testing**

CAMT Exam Dashboard with Tesseract will be tested through both unit testing and system testing. In addition to that, test result will be documented.

**2.2** **Test Duration**

|  |  |
| --- | --- |
| Progress | Date and Duration |
| Final Progress | Date: 30 September 2021 - 09 October 2021 | Duration: 9 Days |

**2.3 Test Responsibility**

|  |  |
| --- | --- |
| Item | Responsibility |
| Unit test case | Jiajun Tao |
| Unit test record | Jiajun Tao |
| System test | Jiajun Tao |
| System test record | Jiajun Tao |

**2.4 Test Strategy**

CAMT Exam Dashboard with Tesseract test strategy will be as follows:

1. Design test case for each feature

2. Prepare test data for each feature

3. Determine expected result

4. Perform testing on individual features

5. Record test results

6. Store test files in project repository

**2.5 Result of Testing**

In the test record, the test results will be divided into:

Actual output: The actual output implemented in each test case

Pass/Fail criteria

1. Pass: The actual results are the same as the expected results

2. Fail: The actual results are different from the expected results

**2.6** **Test Environment**

2.6.1 Hardware

DESKTOP-O445M9U

◆ Processor: Core i7-7700HQ @ 2.80GHz

◆ Memory: 16 GB 2400 MHz DDR4

◆ Graphics: NVIDIA GeForce GTX 1050Ti

◆ Operating System: Windows 10

2.6.2 Software

◆ Operating System: Windows 10

◆ Navicat 15 for MySQL

◆ IntelliJ IDEA 2019.3.2

**Chapter Three**

**Unit Testing**

**3.1 The Unit Test**

**Unit Test Case 001 (UTC-001):**

**Method name:** login (String username, String password)

**Description:** This method is for validating “username”, and “password” whether they are match.

**Data for testing:**

1.

"username": "admin",

"password": "admin"

2.

"username": "test",

"password": "test"

3.

"username": "admin",

"password": "123"

4.

"username": "adminadmin",

"password": "admin"

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Username is empty. | "username": "",  "password": "admin" | “username or password not match” |
| 2 | Password is empty. | "username": "admin",  "password": "" | “username or password not match” |
| 3 | Incorrect password. | "username": "admin",  "password": "123" | “username or password not match” |
| 4 | Unregistered username. | "username":"adminadmin",  "password": "admin" | "username or password not match" |
| 5 | Registered username and match password. | "username": "test",  "password": "test" | - |

**Unit Test Case 002 (UTC-002):**

**Method name:** getInfo (Long userId)

**Description:** This method is for get the user's information form database.

**Data for testing:**

1.

"userId: "0"

2.

"userId: "1"

3.

"userId: "2”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Get information from the database with a unique user id: “1”. | "userId: "1" | “User (id=1, username=admin, password=admin, type=1)” |
| 2 | Get information from the database with a unique user id: “2”. | "userId: "2” | “User (id=2, username=test, password=test, type=2)” |
| 3 | Get information from the database with a user id that does not exist. | "userId: "0" | “user not found，id：0” |

**Unit Test Case 003 (UTC-003):**

**Method name:** **Mapper Test** findByUsername (String username)

**Description:** This method is finding user information stored in the database by user name.

**Data for testing:**

1.

"username": "admin"

2.

"username": "test",

3.

"username": "adminadmin"

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Username is empty. | "username": "", | “null” |
| 2 | username: "admin". | "username": "admin" | “User (id=1, username=admin, password=admin, type=1)” |
| 3 | username: "test". | "username": "test" | “User (id=2, username=test, password=test, type=2) |
| 4 | Try does not exist username: "adminadmin". | " username":"adminadmin" | “null” |

**Unit Test Case 004 (UTC-004):**

**Method name:** **Mapper Test** findById (Long id)

**Description:** This method is finding user information stored in the database by user id.

**Data for testing:**

1.

"userId: "0"

2.

"userId: "1"

3.

"userId: "2”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Try user id: "1". | "userId: "1" | “User (id=1, username=admin, password=admin, type=1)” |
| 2 | Try user id: "2". | "userId: "2 | “User (id=2, username=test, password=test, type=2)” |
| 3 | Try user id: "0". | "userId: "0" | “user not found，id：0” |

**Unit Test Case 005 (UTC-005):**

**Method name:** handleExamTimeFile (String pdfFileName)

**Description:** This method is testing whether PDF files are recorded correctly.

**Data for testing:**

1.

"pdfFileName: "1624870767266.pdf"

2.

"pdfFileName: "1624870767266.png"

3.

“pdfFileName: "1624944580150.jpg”

4.

“pdfFileName: "1624944580150.doc”

5.

“pdfFileName: "1624944580150.ppt”

6.

“pdfFileName: "1624944580150.xls”

7.

“pdfFileName: "1624944580150.pdf”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Input a not recorded PDF file. | "pdfFileName: "1624870767266.pdf" | “File doesn't exist” |
| 2 | PDF file name is empty. | "pdfFileName: "" | “Value cannot be null” |
| 3 | Input a PNG format file. | "pdfFileName:"1624870767266.png" | “Invalid/Unknown/Unsupported format” |
| 4 | Input a JPG format file. | “pdfFileName: "1624944580150.jpg” | “Invalid/Unknown/Unsupported format” |
| 5 | Input a DOC format file. | “pdfFileName: "1624944580150.doc” | “Invalid/Unknown/Unsupported format” |
| 6 | Input a PPT format file. | “pdfFileName: "1624944580150.ppt” | “Invalid/Unknown/Unsupported format” |
| 7 | Input a XLS format file. | “pdfFileName: "1624944580150.xls” | “Invalid/Unknown/Unsupported format” |
| 8 | Input a recorded PDF file. | "pdfFileName:" 1624944580150.pdf" | - |

**Unit Test Case 006 (UTC-006):**

**Method name:** get (Long id)

**Description:** This method is viewing the file record information with special ID form database.

**Data for testing:**

1.

"pdfFileRecordId: "1"

2.

"pdfFileRecordId: "2"

3.

"pdfFileRecordId: "3"

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | PDF file record id: "1". | "pdfFileRecordId: "1" | “FileRecord(id=1, pdfPath=pdf\_dir/1624944580150.pdf, pdfImgDir=pdf\_img\_dir/1624944580150/, tableImgDir=table\_img\_dir/1624944580150/, excelPath=excel\_dir/1624944580150.xlsx)” |
| 2 | PDF file record id: "2". | "pdfFileRecordId: "2" | “FileRecord(id=2, pdfPath=pdf\_dir/1624944470213.pdf, pdfImgDir=pdf\_img\_dir/1624944470213/, tableImgDir=table\_img\_dir/1624944470213/, excelPath=excel\_dir/1624944470213.xlsx)” |
| 3 | Input a file record id that does not exist | "pdfFileRecordId: "3" | “no such fileRecord，id：3” |

**Unit Test Case 007 (UTC-007):**

**Method name:** List ()

**Description:** This method is testing whether the system can get data form the Exam\_info table.

**Data for testing:**

1.

“Limit: “3”, “Page”:1000”

2.

“Limit: “3”, “Page”:2”

3.

“Limit: “3”, “Page”:3”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Out of database existing pages. | “Limit: “3”, “Page”:1000” | {  "total": 1651,  "examInfoList": [  ],  } |
| 2 | At database page 1, get three sets of data | “Limit: “3”, “Page”:1” | "examInfoList": [  {  "modifiedTime": 1629100078000,  "modifiedUser": 1,  "Time": "12.00-\n15.00",  "Section": "",  "Date": "Monday 16,\nAugust 2021",  "fileRecordId": 16,  "Students": "30",  "Committee (Proctors)": "Arinya Pongwat",  "createdTime": 1629100078000,  "id": 1690,  "Room": "C AMT\n418",  "createdUser": 1  },  {  "modifiedTime": 1629100078000,  "modifiedUser": 1,  "Time": "12.00-\n15.00",  "Section": "",  "Date": "Monday 16,\nAugust 2021",  "fileRecordId": 16,  "Students": "30",  "Committee (Proctors)": "Orawan Thong-ngarm",  "createdTime": 1629100078000,  "id": 1691,  "Room": "C AMT\n418",  "createdUser": 1  },  {  "modifiedTime": 1629100078000,  "modifiedUser": 1,  "Time": "15.30-\n18.30",  "Section": "",  "Date": "Monday 16,\nAugust 2021",  "fileRecordId": 16,  "Students": "30",  "Committee (Proctors)": "Arinya Pongwat",  "createdTime": 1629100078000,  "id": 1692,  "Room": "C AMT\n418",  "createdUser": 1  }  ]. |
| 3 | At database page 2, get three sets of data | “Limit: “3”, “Page”:3” | {  "modifiedTime": 1629100078000,  "modifiedUser": 1,  "Time": "08.00-\n11.00",  "Section": "004",  "Date": "Tuesday17,\nAugust 2021",  "fileRecordId": 16,  "Students": "30",  "Committee (Proctors)": "Thanut Walairat",  "createdTime": 1629100078000,  "id": 1697,  "Room": "C AMT\n412",  "createdUser": 1  },  {  "modifiedTime": 1629100078000,  "modifiedUser": 1,  "Time": "08.00-\n11.00",  "Section": "020",  "Date": "Tuesday17,\nAugust 2021",  "fileRecordId": 16,  "Students": "22",  "Committee (Proctors)": "Pongtawan Sangsawang",  "createdTime": 1629100078000,  "id": 1698,  "Room": "C AMT\n412",  "createdUser": 1  },  {  "modifiedTime": 1629100078000,  "modifiedUser": 1,  "Time": "08.00-\n11.00",  "Section": "001",  "Date": "Tuesday17,\nAugust 2021",  "fileRecordId": 16,  "Students": "61",  "Committee (Proctors)": "Thepparit Sinthamrongrak",  "createdTime": 1629100078000,  "id": 1699,  "Room": "CAMT\n316",  "createdUser": 1  }  ]. |

**Unit Test Case 008 (UTC-008):**

**Method name:** remove ()

**Description:** This method is testing whether the system can delete data form the Exam\_info table and determine whether to send an email.

**Data for testing:**

1.

Id”9999”, isSendEmail ”false”

2.

Id”1784”, isSendEmail ”false”

3.

Id”1783”, isSendEmail ”true”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Input an id that does not exist and do not send email. | Id”9999”, isSendEmail ”false” | no such exam info |
| 2 | Get 1784 data. | Id”1784” | ExamInfo(id=1784, fileRecordId=null, date= Monday 25 January,2021, time=12.00 - 15.00, course=954100, section=001, students=30, room=CAMT 112, committee= Pattama Longani) |
| 3 | Exam info id equal “1784” and do not send email. | Id”1784”, isSendEmail ”false” | no such exam info |
| 4 | Get 1783 data. | Id”1783” | ExamInfo(id=1783, fileRecordId=null, date=  Saturday 30, November2019, time=12.00 - 15.00, course= "954413", section=001, students=29, room=CAMT 114, committee= Arunothai Pongwat) |
| 5 | Exam info id equal “1783” and send email. | Id”1783”, isSendEmail ”true” | no such exam info  exam files in the mailbox |

**Unit Test Case 009 (UTC-009):**

**Method name:** modify ()

**Description:** This method is testing whether the system can modify data form the Exam\_info table and determine whether to send an email.

**Data for testing:**

1.

Id:”1784L”, Date:"TEST 1", isSendEmail ”false”

2.

Id:”1784L”, Time:”TEST 2", isSendEmail ”false”

3.

Id:”1784L”, Course:”TEST 3", isSendEmail ”false”

4.

Id:”1784L”, Section:”TEST 4", isSendEmail ”false”

5.

Id:”1784L”, Students:”TEST 5", isSendEmail ”false”

6.

Id:”1784L”, Room:”TEST 6", isSendEmail ”false”

7.

Id:”1784L”, Committee:”TEST 7", isSendEmail ”false”

8.

Id:”1784L”, Date:" ", Time:” ", Course:” ", Section:” ", Students:” ", Room:” ", Committee:” ", isSendEmail “true”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Modify the date of 1784 data and do not send email. | Id:”1784L”, Date:"TEST 1", isSendEmail ”false” | ExamInfo(id=1784, fileRecordId=null, date= TEST 1, time=null, course=null, section=null, students=null, room=null, committee=null) |
| 2 | Modify the time of 1784 data and do not send email. | Id:”1784L”, Time:”TEST 2", isSendEmail ”false” | ExamInfo(id=1784, fileRecordId=null, date= null, time= TEST 2, course=null, section=null, students=null, room=null, committee=null) |
| 3 | Modify the course of 1784 data and do not send email. | Id:”1784L”, Course:”TEST 3", isSendEmail ”false” | ExamInfo(id=1784, fileRecordId=null, date= null, time=null, course= TEST 3, section=null, students=null, room=null, committee=null) |
| 4 | Modify the section of 1784 data and do not send email. | Id:”1784L”, Section:”TEST 4", isSendEmail ”false” | ExamInfo(id=1784, fileRecordId=null, date= null, time=null, course=null, section= TEST 4, students=null, room=null, committee=null) |
| 5 | Modify the student of 1784 data and do not send email. | Id:”1784L”, Students:”TEST 5", isSendEmail ”false” | ExamInfo(id=1784, fileRecordId=null, date= null, time=null, course=null, section=null, students= TEST 5, room=null, committee=null) |
| 6 | Modify the room of 1784 data and do not send email. | Id:”1784L”, Room:”TEST 6", isSendEmail ”false” | ExamInfo(id=1784, fileRecordId=null, date= null, time=null, course=null, section=null, students=null, room= TEST 6, committee=null) |
| 7 | Modify the committee of 1784 data and do not send email. | Id:”1784L”, Committee:”TEST 7, isSendEmail ”false”" | “Update successful”  ExamInfo(id=1784, fileRecordId=null, date= null, time=null, course=null, section=null, students=null, room=null, committee= TEST 7) |
| 8 | Modify all info to empty and do not send email. | Id:”1784L”, Date:" ", Time:” ", Course:” ", Section:” ", Students:” ", Room:” ", Committee:” ", isSendEmail ” false” | ExamInfo(id=1784, fileRecordId=null, date= null, time=null, course=null, section=null, students=null, room=null, committee=null) |
| 9 | Modify the 1784 exam info and send email. | Id:”1784L”, Date:" Monday 25  January, 2021 “, Time:” 12.00 -  15.00 ", Course:” 954100", Section:” 001", Students:” 30 ", Room:” C AMT  112 ", Committee:” Jiajun Tao", isSendEmail ” true” | ExamInfo(id=1784, fileRecordId=null, date= Monday 25 January,2021, time=12.00 - 15.00, course=954100, section=001, students=30, room=CAMT 112, committee=Jiajun Tao) |

**Unit Test Case 010 (UTC-010):**

**Method name:** getName()

**Description:** This method is testing whether the system can match the name of the committee with the corresponding email address.

**Data for testing:**

1.

Username “Jiajun Tao”

2.

Username “Lingyu Kong”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | The committee’s name is “Jiajun Tao” | Username “Jiajun Tao” | “User (id=5, username=Jiajun Tao, email=jiajun\_tao@cmu.ac.th, type=0)” |
| 2 | The committee’s name is “Lingyu Kong” | Username “Lingyu Kong”" | “User (id=6, username=Lingyu kong, email=lingyu\_k@cmu.ac.th, type=0)” |

**Unit Test Case 011 (UTC-011):**

**Method name:** getStatisticData ()

**Description:** This method is testing whether the system can get statistic data.

**Data for testing:**

1.

fileRecordId: "1”

2.

fileRecordId: "99”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | The file record id is 1. | fileRecordId: "1” | [ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Friday 29  January, 2021, count=7), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Monday 25  January, 2021, count=16), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Saturday 30  January, 2021, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Sunday 31  January, 2021, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Thursday 28  January, 2021, count=19), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Tuesday 26  January, 2021, count=31), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Wednesday 27  January, 2021, count=11), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Wednesday27  January, 2021, count=2)]  [ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953102, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953111  CMU-GE, count=9), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953201, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953202, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953211, count=5), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953214, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953232, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953234, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953422, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954100, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954142, count=7), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954143, count=8), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954170, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954230, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954231, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954240, count=5), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954248, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954340, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954371, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954374, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954414, count=1), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954464, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954472, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954491, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954498, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=955102, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=955104, count=4)]  [ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953, count=28), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954, count=58), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=955, count=7)] |
| 2 | The file record id is 99. | fileRecordId: "99” | “no such fileRecord，id：99” |

**Unit Test Case 012 (UTC-012):**

**Method name:** testGetStatisticCount ()

**Description:** This method is testing whether the system can get statistic count.

**Data for testing:**

1.

fileRecordId: "1”

2.

fileRecordId: "99”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | The file record id is 1. | fileRecordId: "1” | “ExamInfoStatisticCountResponse(courseCount=27, sectionCount=13, teacherCount=54)” |
| 2 | The file record id is 99. | fileRecordId: "99” | “no such fileRecord，id：99” |

**Unit Test Case 013 (UTC-013):**

**Method name: Mapper Test** testGetCourseCount ()

**Description:** This method is testing whether the system can get course count stored in the database.

**Data for testing:**

1.

fileRecordId: "1”

2.

fileRecordId: "99”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | The file record id is 1. | fileRecordId: "1” | “27” |
| 2 | The file record id is 99. | fileRecordId: "99” | “no such fileRecord，id：99” |

**Unit Test Case 014 (UTC-014):**

**Method name: Mapper Test** testGetSectionCount ()

**Description:** This method is testing whether the system can get section count stored in the database.

**Data for testing:**

1.

fileRecordId: "1”

2.

fileRecordId: "99”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | The file record id is 1. | fileRecordId: "1” | “13” |
| 2 | The file record id is 99. | fileRecordId: "99” | “no such fileRecord，id：99” |

**Unit Test Case 015 (UTC-015):**

**Method name: Mapper Test** testGetCommitteeCount ()

**Description:** This method is testing whether the system can get committee count stored in the database.

**Data for testing:**

1.

fileRecordId: "1”

2.

fileRecordId: "99”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | The file record id is 1. | fileRecordId: "1” | “54” |
| 2 | The file record id is 99. | fileRecordId: "99” | “no such fileRecord，id：99” |

**Unit Test Case 016 (UTC-016):**

**Method name: Mapper Test** findById()

**Description:** This method is testing find Exam\_info stored in the database by id.

**Data for testing:**

1.

Id: "1”

2.

Id: "9999”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | The Exam\_ info id is 1. | Id: "1” | “ExamInfo(id=1, fileRecordId=1, date=Monday 25  January, 2021, time=12.00 -  15.00, course=953214, section=701, students=38, room=C AMT  113, committee=Passakorm Phannachitta)” |
| 2 | The Exam\_ info id is 9999. | Id: "9999” | “null” |

**Unit Test Case 017 (UTC-017):**

**Method name: Mapper Test** updateById()

**Description:** This method is testing update Exam\_info stored in the database by id.

**Data for testing:**

1.

Id:”1783L”, Date:"test date”

2.

Id:”1783L”, Time:”test time"

3.

Id:”1783L”, Course:”test course"

4.

Id:”1783L”, Section:”test section"

5.

Id:”1783L”, Students:”test students"

6.

Id:”1783L”, Room:”test room"

7.

Id:”1783L”, Committee:”test committee"

8.

Id:”1783L”, Date:" ", Time:” ", Course:” ", Section:” ", Students:” ", Room:” ", Committee:” "

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Update the date of 1783 data. | Id:”1783L”, Date:"test date” | ExamInfo(id=1783, fileRecordId=null, date=test date, time= null, course= null, section= null, students= null, room= null, committee= null) |
| 2 | Update the time of 1783 data. | Id:”1783L”, Time:”test time" | ExamInfo(id=1783, fileRecordId=null, date= null, time= test time, course= null, section= null, students= null, room= null, committee= null) |
| 3 | Update the course of 1783 data. | Id:”1783L”, Course:”test course" | ExamInfo(id=1783, fileRecordId=null, date= null, time=null, course= test course, section= null, students= null, room= null, committee= null) |
| 4 | Update the section of 1783 data. | Id:”1783L”, Section:”test section" | ExamInfo(id=1783, fileRecordId=null, date= null, time= null, course= null, section= test section, students= null, room= null, committee= null) |
| 5 | Update the student of 1783 data. | Id:”1783L”, Students:”test students"  " | ExamInfo(id=1783, fileRecordId=null, date= null, time= null, course= null, section= null, students= test students, room= null, committee= null) |
| 6 | Update the room of 1783 data. | Id:”1783L”, Room:”test room" | ExamInfo(id=1783, fileRecordId=null, date= null, time= null, course= null, section= null, students= null, room= test room, committee= null) |
| 7 | Update the committee of 1783 data. | Id:”1783L”, Committee:”test committee" | ExamInfo(id=1783, fileRecordId=null, date= null, time= null, course= null, section= null, students= null, room= null, committee= test committee) |
| 8 | Update all info to empty. | Id:”1783L”, Date:" ", Time:” ", Course:” ", Section:” ", Students:” ", Room:” ", Committee:” " | ExamInfo(id=1783, fileRecordId=null, date= null, time= null, course= null, section= null, students= null, room= null, committee= null) |

**Unit Test Case 018 (UTC-018):**

**Method name: Mapper Test** deleteById()

**Description:** This method is testing delete Exam\_info stored in the database by id.

**Data for testing:**

1.

Id”9999”

2.

Id”1783”

3.

Id”1784”

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Input an id that does not exist. | Id”9999” | 0 |
| 2 | Get 1784 data. | Id”1784” | ExamInfo(id=1784, fileRecordId=null, date= Monday 25 January,2021, time=12.00 - 15.00, course=954100, section=001, students=30, room=CAMT 112, committee= Pattama Longani) |
| 3 | Exam info id equal “1784”. | Id”1784” | 0 |
| 4 | Get 1783 data. | Id”1783” | ExamInfo(id=1783, fileRecordId=null, date=  Saturday 30, November2019, time=12.00 - 15.00, course= "954413", section=001, students=29, room=CAMT 114, committee= Arunothai Pongwat) |
| 5 | Exam info id equal “1783” | Id”1783” | 0 |

**Unit Test Case 019 (UTC-019):**

**Method name: Mapper Test** groupByCourse()

**Description:** This method is testing the dashboard data resulting from the course, and that data is stored in the database.

**Data for testing:**

1.

fileRecordId: "1"

2.

fileRecordId: "9999"

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Input a file record id equal 1. | fileRecordId: "1" | [ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953102, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953111  CMU-GE, count=9), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953201, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953202, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953211, count=5), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953214, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953232, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953234, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=953422, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954100, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954142, count=7), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954143, count=8), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954170, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954230, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954231, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954240, count=5), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954248, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954340, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954371, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954374, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954414, count=1), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954464, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954472, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954491, count=2), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=954498, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=955102, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=955104, count=4)] |
| 2 | Input a file record id that does not exist. | fileRecordId: "9999" | “[ ]” |

**Unit Test Case 020 (UTC-020):**

**Method name: Mapper Test** groupByDate()

**Description:** This method is testing the dashboard data resulting from the date, and that data is stored in the database.

**Data for testing:**

1.

fileRecordId: "1"

2.

fileRecordId: "9999"

**Test Case**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| 1 | Input a file record id equal 1. | fileRecordId: "1" | [ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Friday 29  January, 2021, count=7), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Monday 25  January, 2021, count=16), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Saturday 30  January, 2021, count=3), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Sunday 31  January, 2021, count=4), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Thursday 28  January, 2021, count=19), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Tuesday 26  January, 2021, count=31), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Wednesday 27  January, 2021, count=11), ExamInfoStatisticResponse.IndicatorsWithCount(indicators=Wednesday27  January, 2021, count=2)] |
| 2 | Input a file record id that does not exist. | fileRecordId: "9999" | “[ ]” |

**Chapter Four**

**System Testing**

**4.1 System test for Authentication System**

**STC-01: Administrators can log in the system.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the administrators can log in the system by inputting username, and password. After the user input all fields correctly, administrators will go to:  Parse page. |
| **Prerequisite** | The administrator opens the Login page in the system.  - The administrator must have registered user account. |
| **Test Steps** | 1. The administrator open url: https://localhost/9527.      1. The administrator input username and password. 2. The administrator clicks login button.      1. The administrator arrives ParseFile page. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-01.1** | Username is empty. | "username": "",  "password": "admin" | The system will display an error message “Please enter a username” |
| **STC-01.2** | Password is empty. | "username": "admin",  "password": "" | The system will display an error message “Please enter a password” |
| **STC-01.3** | Log into the system with the incorrect password. | "username": "admin",  "password": "123" | The system will display an error message “username or password not match” |
| **STC-01.4** | Log into the system with an unregistered username. | " username":"adminadmin",  "password": "admin" | The system will display a toast error message "username or password not match" |
| **STC-01.5** | Log into the system with a registered administrator account. | "username”: “admin",  "password": "admin" | The system will direct into the parseFile page and show the user type and user name in the upper right corner. |

**STC-02: Lecturers can log in the system.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the lecturers can log in the system by inputting username, and password. After the user input all fields correctly, lecturers will go to:  Parse page. |
| **Prerequisite** | A lecturer opens the Login page in the system.  - The lecturer must have registered CMU account. |
| **Test Steps** | 1. The lecturer open url: https://localhost/9527.     2. The lecturer clicks Sign in with CMU Account button.    3. The lecturer input username and password.    4. The lecturer arrives parseFile page. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-02.1** | Username is empty. | "username": "",  "password": "123456" | The system will display an error message “Please enter a username” |
| **STC-02.2** | Password is empty. | "username":” Jiajun\_Tao@cmu.ac.th",  "password": "" | The system will display an error message “Please enter a password” |
| **STC-02.3** | Log into the system with the incorrect password. | "username": "\*@cmu.ac.th",  "password": "123" | The system will display an error message “username or password not match” |
| **STC-02.4** | Log into the system with an unregistered username. | " username":"adminadmin ",  "password": "123456" | The system will display a toast error message "username or password not match" |
| **STC-02.5** | Log into the system with a registered CMU account. | "username”: “  Jiajun\_Tao @cmu.ac.th ",  "password": "123456" | The system will back to Login page, and show the massage ” Logging in, please wait a moment” than direct into the parseFile page, show the user type and user name in the upper right corner. |

**STC-03: Administrators or lecturers can logout from the system.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the administrators or lecturers can log out from the system by clicking the “Log Out” button at the most right of the navigation bar. |
| **Prerequisite** | The administrators or lecturers already login the system. |
| **Test Steps** | 1. The administrators or lecturers clicking the “Log Out” button at the most right of the navigation bar.   –   1. The administrators or lecturers redirect to the Login page. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-03.1** | The administrators or lecturers already login the system. | The administrators or lecturers clicking the “Log Out” button at the most right of the navigation bar. | The system will go back to Login page. |

**4.2 System test for Table and cell detection and text extraction and parsing System**

**STC-04: Administrators or lecturers can add files from local.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the administrators or lecturers can add file to system from local by drag the file, or manually select. |
| **Prerequisite** | The administrator or lecturers log in the system and at ParseFile page already. |
| **Test Steps** | 1.The administrator or lecturers drags the file in particular area, or manually select file  .  2. The administrator or lecturers see the file name under upload panel. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-04.1** | The administrator or lecturers upload file by drags the file in particular area. | Midterm\_Examination\_Online\_2-2563.pdf | The system will display the file:  ” Midterm\_Examination\_Online\_2-2563.pdf” under the upload panel. |
| **STC-04.2** | The administrator or lecturers upload file by manually select. | Midterm\_Examination\_Online\_2-2563.pdf | 1. The system will display a file selection window.  2. The system will display the file:  ” Midterm\_Examination\_Online\_2-2563.pdf” under the upload panel. |

**STC-05: Administrators or lecturers can upload file and parse the uploaded file.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test the administrators or lecturers can upload file and parse the uploaded file. |
| **Prerequisite** | The administrator or lecturers sees the file displayed on the page. |
| **Test Steps** | 1. The administrator or lecturers clicks the “Click Upload” button.    2. The administrator or lecturers see the process of file recognition.  The process will be divided into:  a. Being parse    b. Parse failed    c. Parse success |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-05.1** | Upload PDF file. | Midterm\_Examination\_Online\_2-2563.pdf | The system will be parsing file and “Being parse” button is shown. |
| **STC-05.2** | Upload files in .png format. | Midterm\_Examination\_Online\_2-2563.png | The system will display a message “file type does not meet the requirement, only is application/pdf” and “Parse failed” button is shown. |
| **STC-05.3** | Upload files in .xls format | Midterm\_Examination\_Online\_2-2563.xls | The system will display a message “file type does not meet the requirement, only is application/pdf” and “Parse failed” button is shown. |
| **STC-05.4** | Upload files size is exceeding max size. | Midterm\_Examination\_Online\_2-2563.pdf | The system will display a message “the request was rejected because its size (Uploaded file real size) exceeds the configured maximum (15728640)”and “Parse failed” button is shown. |
| **STC-05.5** | Upload empty pdf file. | Midterm\_Examination\_Online\_2-2563.pdf | The system will display a message “The file is empty” and “Parse failed” button is shown. |
| **STC-05.6** | Parse successfully. | - | The system will show message:” Parse success” and “Parse success” button, “Download Excel” button is shown. |

**STC-06:** **Administrators or lecturers can download parsed file.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the administrators or lecturers can download parsed file as excel. |
| **Prerequisite** | After the administrator or lecturers selecting the file to parsed and the system parses successfully. |
| **Test Steps** | 1. The administrator or lecturers clicks the “Download Excel” button. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-06.1** | No file was uploaded, or parsing failed. | - | The "Download Excel" button is banned, and cannot be clicked. |
| **STC-06.2** | The administrator or lecturers clicks the “Download Excel” button. | - | The system will download file as excel. |

**STC-07: Check parse result.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test the contents of the downloaded Excel file and the uploaded PDF file. |
| **Prerequisite** | After downloading the parsed excel file. |
| **Test Steps** | 1. Drags file to the upload panel or manually select file.    2. Clicks the “Click Upload” button.    3. Waiting system recognition.    4. Clicks the “Download Excel” button.    5. Opens the parsed excel file.    6. Opens the uploaded pdf file.    7. Extract the same fields from the two files for comparison. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-07.1** | Check whether the number of identified data columns is consistent. | “id = 30” | Data with id equal to 30 in PDF file. |
| **STC-07.2** | Check that the number of identified data is consistent | “Total rows = 94” | Excel file have total 94 rows. |
| **STC-07.3** | Check that the number of identified data columns is consistent | “Total columns = 7” | Excel file have total 7 columns. |

**STC-08: Calculate the recognition rate of the PDF being recognized.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test calculate the recognition rate of the PDF being recognized. |
| **Prerequisite** | After the administrator downloading the parsed excel file. |
| **Test Steps** | 1. Opens the parsed excel file.  2. looks for missing parts of the file.  3. Calculate the recognition rate of the file. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-08.1** | Check for missing data. | “Midterm\_Examination\_Online\_2-2563.pdf  (94 groups of data)” | The recognition rate of the file is 100%. |
| **STC-08.2** | Check for misidentified data. | “Midterm\_Examination\_Online\_2-2563.pdf  (94 groups of data)” | The recognition rate of the file is Recognition rate = total number of completely correct identification / total number of actual identifications \* 100%. |

**4.3 System test for Dashboard System**

**STC-09: Administrators or lecturers can see the dashboard.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the administrators or lecturers can see the dashboard at Dashboard page. |
| **Prerequisite** | The administrator or lecturers log in the system and at Dashboard page already. |
| **Test Steps** | 1. The administrator or lecturers see the statistic title count.    2. Administrator or lecturers see the pie chart.    a. Group by date    b. Group by course    c. Group by profession |

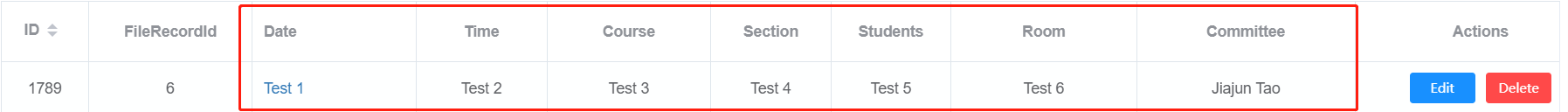
|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-09.1** | the statistic title count (course, committee, section) | - | The system will display a count table. |
| **STC-09.2** | the pie chart (Group by date, Group by course and Group by profession). | - | The system will display some pie chart. |

**4.4 System test for Notification System**

**STC-10: Administrators can edit exam info and send email to lecturer.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the administrators can edit exam info send email to lecturer. |
| **Prerequisite** | The administrator or lecturers log in the system and at ExamInfoList page already. |
| **Test Steps** | 1.The administrator edit exam info**.**    2. The administrator click “confirm”button.    3.. The administrator click “Send” buttion**,** confirm send. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-10.1** | Modify the date, time, course, section, students, room, committee. | “Test 1”, “Test 2”, “Test 3”, “Test 4”, “Test 5”, “Test 6”, “Jiajun Tao” | Figure 1 |
| **STC-10.2** | Modify the date, time, course, section, students, room, committee.  And send email. | “Test 1”, “Test 2”, “Test 3”, “Test 4”, “Test 5”, “Test 6”, “Jiajun Tao” |  |



**Figure 1**

**STC-11: Administrators can delete exam info and send email to lecturer.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether the administrators can delete exam info send email to lecturer. |
| **Prerequisite** | The administrator or lecturers log in the system and at ExamInfoList page already. |
| **Test Steps** | 1.The administrator delete exam info.    2. The administrator click “confirm” button. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-11.1** | Delete Exam info | **-** |  |
| **STC-11.2** | Confirm send email. | **-** |  |

**STC-12: Lecturer can receive email with exam information.**

|  |  |
| --- | --- |
| **Test Description** | The test case is used to test whether lecturer can receive email with exam information |
| **Prerequisite** | The lecturer has email. |
| **Test Steps** | 1. The lecturer opens email.    2. The lecturer checks own email whether there is an email with exam information. |

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **STC-12.1** | The lecturer received edit exam information notification | - |  |
| **STC-12.2** | The lecturer received delete exam information notification | - |  |