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Test plan Document

By

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# Test case of Unit Test (UTC)

## **UTC-1 insertStudentInfo(stuId: int, stuUsername: string, stuPassword: string, stuName: string, stuFaculty: string, stuDepartment: string, stuAddress: string, stuEmail: string, stuTel: string): bool**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-1:** insertStudentInfo(stuId: int, stuUsername: string, stuPassword: string, stuName: string, stuFaculty: string, stuDepartment: string, stuAddress: string, stuEmail: string, stuTel: string): bool

**Description :** The test case is used for testing insertStudentInfo method in StudentRepository. This method is used for inserting a student account to the database.

**Prerequisites or Test Data**

**:** None

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 1.1 | Test if student information provided is added into the database successfully. Test for a successful case. | studentId = 542115021  studentUsername = "tanadol"  studentPassword = "123456"  studentName = "Mr.Tanadol Parn-ong"  studentFaculty = "CAMT"  studentDepartment = "Software engineering"  studentAddress = "Chiang mai, Thailand"  studentEmail = [se542115021@vr.camt.info](mailto:se542115021@vr.camt.info)  studentTel = "0833201787" | Assert.True(actual); | True |
| 1.2 | Test if student information provided is added into the database successfully. Test for an unsuccessful case: providing duplicate studentId in the database. | studentId = 542115021  studentUsername = "tanadol"  studentPassword = "123456"  studentName = "Mr.Tanadol Parn-ong"  studentFaculty = "CAMT"  studentDepartment = "Software engineering"  studentAddress = "Chiang mai, Thailand"  studentEmail = [se542115021@vr.camt.info](mailto:se542115021@vr.camt.info)  studentTel = "0833201787" | Assert.False(actual); | False |

## **UTC-2 updateStudentInfo(stuId: int, stuPassword: string, stuName: string, stuFaculty: string, stuDepartment: string, stuAddress: string, ,string, stuTel: string) : bool**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-2:** updateStudentInfo(stuId: int, stuPassword: string, stuName: string, stuFaculty: string, stuDepartment: string, stuAddress: string, ,string, stuTel: string) : bool

**Description :** The test case is used for testing updateStudentInfo method in StudentRepository. This method is used for updating student information into the database.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115021 |
| 1.2 | student\_username | string | tanadol |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | Mr.Tanadol Parn-ong |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | Software engineering |
| 1.7 | student\_address | string | Chiang mai, Thailand |
| 1.8 | student\_email | string | se542115021@vr.camt.info |
| 1.9 | student\_tel | string | 0833201787 |
| 1.10 | student\_approvment | bit | 0 |

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 2.1 | Test if student information provided is updated into the database successfully. Test for a successful case. | studentId = 542115021  studentUsername = "tanadol"  studentPassword = "123456"  studentName = "Mr.Tanadol Parn-ong"  studentFaculty = "CAMT"  studentDepartment = "Animation"  studentAddress = "Chiang mai, Thailand"  studentEmail = [se542115021@vr.camt.info](mailto:se542115021@vr.camt.info)  studentTel = "0833201787" | Assert.True (actual); | True |
| 2.2 | Test if student information provided is updated into the database successfully. Test for an unsuccessful case: providing studentId that do not have in the database. | studentId = 9999999  studentUsername = "tanadol"  studentPassword = "123456"  studentName = "Mr.Tanadol Parn-ong"  studentFaculty = "CAMT"  studentDepartment = " Animation "  studentAddress = "Chiang mai, Thailand"  studentEmail = [se542115021@vr.camt.info](mailto:se542115021@vr.camt.info)  studentTel = "0833201787" | Assert.False(actual); | True |

## **UTC-3 viewStudentInfo(stuId : int) : Student**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-3:** viewStudentInfo(stuId : int) : Student

**Description :** The test case is used for testing viewStudentInfo method in StudentRepository. This method is used for viewing student information into the database.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115096 |
| 1.2 | student\_username | string | studentone |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | student one |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Chiang mai |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0832335899 |
| 1.10 | student\_approvment | bit | 0 |

**Expected result**

**Student parameter form.**

Student (int student\_id, string student\_name, string student\_username, string student\_password, string student\_faculty, string student\_department, string student\_address, string student\_email, string student\_tel, int student\_approvement);

**Student Object result.**

student1 = {542115096, "student one", "studentone", "123456", "CAMT", "SE", "Chiang mai", "SE@gmail.com", "0832335899", 0}

student2 = {0, null, null, null, null, null, null, null, null, 0}

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 3.1 | This case tests to get the student object information from the database, which is contained in the database | student\_id = 542115096 | Assert.AreEqual(student1, actual); | student1 |
| 3.2 | This case tests to get the student information from the database, which is not contained in the database. | student\_id = 111111 | Assert.AreEqual(student2, actual); | student2 |

## **UTC-4 viewListStudentFromStudentId(stuId : string) : List<Student>**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-4:** viewListStudentFromStudentId(stuId : string) : List<Student>

**Description:** The test case is used for testing viewListStudentFromStudentId method in StudentRepository. This method is used for viewing a list of student information into the database.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115095 |
| 1.2 | student\_username | string | ploy |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | ploy sree |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Thailand |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0863225885 |
| 1.10 | student\_approvment | bit | 1 |

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 2.1 | student\_id | int | 542115096 |
| 2.2 | student\_username | string | studentone |
| 2.3 | student\_password | string | 123456 |
| 2.4 | student\_name | string | student one |
| 2.5 | student\_faculty | string | CAMT |
| 2.6 | student\_department | string | SE |
| 2.7 | student\_address | string | Chiang mai |
| 2.8 | student\_email | string | SE@gmail.com |
| 2.9 | student\_tel | string | 0832335899 |
| 2.10 | student\_approvment | bit | 0 |

**Expected result**

**Student parameter form.**

Student (int student\_id, string student\_name, string student\_username, string student\_password, string student\_faculty, string student\_department, string student\_address, string student\_email, string student\_tel, int student\_approvement);

**Student Object.**

student1 = {542115095, “ploy sree”, “ploy”, “123456”, “CAMT”, “SE”, “Thailand”, “SE@gmail.com”, “0863225885”, 1}

student2 = {542115096, "student one", "studentone", "123456", "CAMT", "SE", "Chiang mai", "SE@gmail.com", "0832335899", 0}

**List Student Object result.**

studentListExpected1= {student1, student2};

studentListExpected2 = {};

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 4.1 | This case tests to get the list of student object information from the database, which is contained in the database | studentId = "542115095,542115096"; | CollectionAssert.AreEqual(studentListExpected1, actual); | studentListExpected1 |
| 4.2 | This case tests to get the list of student information from the database, which is not contained in the database. | studentId = null; | CollectionAssert.AreEqual(studentListExpected2, actual); | studentListExpected2 |

## **UTC-5 approveStudentStatus (stuId: string): string**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-5:** approveStudentStatus (stuId: string): string

**Description:** The test case is used for testing approveStudentStatus method in StudentRepository. This method is used for approving student\_approvement information into the database.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115095 |
| 1.2 | student\_username | string | ploy |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | ploy sree |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Thailand |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0863225885 |
| 1.10 | student\_approvment | bit | 1 |

**Expected result**

studentIdExpected = “542115021”

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 5.1 | This case tests for updating student approvement in the database. (Successful) | studentId = 542115095 | Assert.AreEqual(studentIdExpected, actual); | studentIdExpected |

## **UTC-6 viewStudentNotAvailable (): List<Student>**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-6:** viewStudentNotAvailable (): List<Student>

**Description:** The test case is used for testing viewStudentNotAvailable method in StudentRepository. This method is used for viewing a list of student information that have approvement\_status equal false from the database.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115096 |
| 1.2 | student\_username | string | studentone |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | student one |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Chiang mai |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0832335899 |
| 1.10 | student\_approvment | bit | 0 |

**Expected result**

**Student parameter form.**

Student (int student\_id, string student\_name, string student\_username, string student\_password, string student\_faculty, string student\_department, string student\_address, string student\_email, string student\_tel, int student\_approvement);

**Student Object.**

student1 = {542115096, "student one", "studentone", "123456", "CAMT", "SE", "Chiang mai", "SE@gmail.com", "0832335899", 0}

**List Student Object result.**

studentListExpected= {student1};

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 6.1 | This case tests to get the list of student object information from the database, which student approval equal false. | None | CollectionAssert.AreEqual(studentListExpected, actual); | studentListExpected |

## **UTC-7 viewStudenAvailable (): List<Student>**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-7:** viewStudentAvailable (): List<Student>

**Description:** The test case is used for testing viewStudentNotAvailable method in StudentRepository. This method is used for viewing a list of student information that have approvement\_status equal true from the database.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115095 |
| 1.2 | student\_username | string | ploy |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | ploy sree |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Thailand |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0863225885 |
| 1.10 | student\_approvment | bit | 1 |

**Expected result**

**Student parameter form.**

Student (int student\_id, string student\_name, string student\_username, string student\_password, string student\_faculty, string student\_department, string student\_address, string student\_email, string student\_tel, int student\_approvement);

**Student Object.**

student1 = {542115095, “ploy sree”, “ploy”, “123456”, “CAMT”, “SE”, “Thailand”, “SE@gmail.com”, “0863225885”, 1}

**List Student Object result.**

studentListExpected= {student1};

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 7.1 | This case tests to get the list of student object information from the database, which student approval equal true. | None | CollectionAssert.AreEqual(studentListExpected, actual); | studentListExpected |

## **UTC-8 viewStudentByUsernamePassword (stuUsername : string, stuPassword : string): Student**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-8:** viewStudentByUsernamePassword (stuUsername : string, stuPassword : string): Student

**Description:** The test case is used for testing viewStudentByUsernamePassword method in StudentRepository. This method is used for viewing student information from the database by using student username and student password for searching.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115095 |
| 1.2 | student\_username | string | ploy |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | ploy sree |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Thailand |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0863225885 |
| 1.10 | student\_approvment | bit | 1 |

**Expected result**

**Student parameter form.**

Student (int student\_id, string student\_name, string student\_username, string student\_password, string student\_faculty, string student\_department, string student\_address, string student\_email, string student\_tel, int student\_approvement);

**Student Object.**

studentExpected1 = {542115095, “ploy sree”, “ploy”, “123456”, “CAMT”, “SE”, “Thailand”, “SE@gmail.com”, “0863225885”, 1}

studentExpected2 = {0, null, null, null, null, null, null, null, null, 0}

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 8.1 | This case tests to get the student object information from the database, which student\_username and student\_password are existed in. | student\_username = "ploy"  student\_password = "123456" | Assert.AreEqual(studentExpected1, actual); | studentExpected1 |
| 8.2 | This case tests to get the student object information from the database, which student\_username and student\_password are not existed in. | student\_username = “johny”  student\_password = "123456" | Assert.AreEqual(studentExpected2, actual); | studentExpected2 |

## **UTC-9** **viewStudentIdByUsername (stuUsername: string): int**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-9:** viewStudentIdByUsername (stuUsername: string): int

**Description:** The test case is used for testing viewStudentIdByUsername method in StudentRepository. This method is used for viewing student id from the database by using student username for searching.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115095 |
| 1.2 | student\_username | string | ploy |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | ploy sree |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Thailand |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0863225885 |
| 1.10 | student\_approvment | bit | 1 |

**Expected result**

**Student parameter form.**

Student (int student\_id, string student\_name, string student\_username, string student\_password, string student\_faculty, string student\_department, string student\_address, string student\_email, string student\_tel, int student\_approvement);

**Student Object.**

studentIdExpected1 = 542115095

studentIdExpected2 = 0

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 9.1 | This case tests to get the student id from the database, which student\_username and student\_password are existed in. | student\_username = "ploy" | Assert.AreEqual(studentExpected1, actual); | studentIdExpected1 |
| 9.2 | This case tests to get the student id from the database, which student\_username and student\_password are not existed in. | student\_username = “johny” | Assert.AreEqual(studentExpected2, actual); | studentExpected2 |

## **UTC-10** **deleteStudent** **(studentId: int): bool**

**Package:** Repository

**Class:** StudentRepository

**Unit Test Case-10:** deleteStudent (studentId: int): bool

**Description:** The test case is used for testing deleteStudent method in StudentRepository. This method is used for deleting student information in the database.

**Prerequisites or Test Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Data name** | **Data type** | **Data value** |
| 1.1 | student\_id | int | 542115095 |
| 1.2 | student\_username | string | ploy |
| 1.3 | student\_password | string | 123456 |
| 1.4 | student\_name | string | ploy sree |
| 1.5 | student\_faculty | string | CAMT |
| 1.6 | student\_department | string | SE |
| 1.7 | student\_address | string | Thailand |
| 1.8 | student\_email | string | SE@gmail.com |
| 1.9 | student\_tel | string | 0863225885 |
| 1.10 | student\_approvment | bit | 1 |

**Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Assertion** | **Expected Result** |
| 10.1 | This case tests to delete the student information in the database. | student\_id = 542115095 | Assert.True(actual); | True |