**Unit test**

1. **Class name: UserServiceImpl**

**UTC-01:** addUser(User user): Boolean

**Description:** This test case is used for adding a new user to the database via hibernate query. The parameters for this method are User object, which consists of {Long userid, String username, String password, String email}

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **User object** |
| **1** | Test by input User object with all parameters defined. | {3l, “ABC”, “abc”, “abc@abcmail.com”} | **True** |
| **2** | Test by input User object with some parameters defined. | {1l, “”, “abc”, “abc@abcmail.com”} | **False** |
| **3** | Test by not input object. | - | **False** |
| **4** | Test by input User object which are existed username from Appendix A | {1l, “Janessy1”, “1234”, “jane.park@gmail.com”} | **False** |

**UTC-02:** getAllUser(): List<User>

**Description:** This test case is used for getting a list of users in database via hibernate query.

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |
| --- | --- | --- |
| **ID** | **Description** | **Expected Result**  **(List of User object)** |
|
| **1** | Get a list of user object from Appendix A | {1l, “Janessy1”, “1234”, “jane.park@gmail.com”}  {2l, “adamm”, “ad1234”, “adammy@gmail.com”} |

**UTC-03:** getUserbyId(Long userid): User

**Description:** This test case is used for getting the user from database via hibernate query.

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **Long userid** |
| **1** | Test by input id = 1l which existed in Appendix A | 1l | {1l, “Janessy1”, “1234”, “jane.park@gmail.com”} |
| **2** | Test by not input id | - | Null |
| **3** | Test by input id = 1 which is not existed in Appendix A | 1 | Null |

1. **Class name: HistoryServiceImpl**

**UTC-04:** getHistory(): History

**Description:** This test case is used for getting the temple’s history from the database via hibernate query.

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |
| --- | --- | --- |
| **ID** | **Description** | **Expected Result**  **(List of User object)** |
|
| **1** | Get the history object from Appendix A. | {“Construction on Wat Phra Singh began in 1345 when King Phayu, the fifth king of the Mangrai dynasty, had a chedi built to house the ashes of his father King Kham Fu. ”} |

**UTC-05:** editHistory(History history): Boolean

**Description:** This test case is used for editting the temple’s history from the database via hibernate query.

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **History history** |
| **1** | Test by input History object with all parameters defined. | {“Wat Phra Singh is located in the western part of the old city centre of Chiang Mai, which is contained within the city walls and moat. The main entrance, which is guarded by Singhs (lions), is situated at the end of the main street (Rachadamnoen road) of Chiang Mai. The road runs east from the temple, via Tapae Gate, to the Ping River.”} | **True** |
| **2** | Test by not input object. | - | **True** |
| **3** | Test by input History object which are existed username from Appendix A | {“Construction on Wat Phra Singh began in 1345 when King Phayu, the fifth king of the Mangrai dynasty, had a chedi built to house the ashes of his father King Kham Fu. ”} | **True** |

**3. Class name: ActivityServiceImpl**

**UTC-06:** getAllActivity() : List<Activity>

**Description:** This test case is used for getting a list of activity from the database via hibernate query. The parameters for this method are Activity object, which consists of {Long aid, String aname, String adescription, Char lang}

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |
| --- | --- | --- |
| **ID** | **Description** | **Expected Result**  **(List of User object)** |
|
| **1** | Get the Activity object from Appendix A. | {2201, “Suspected migrant graveyard discovered in Songkhla”, “At least 32 graves were discovered yesterday at what is thought to be a human-trafficking camp for Rohingya migrants near the Malaysian border.”, “en”}  {2202, “ไฟไหม้ปริศนานับร้อยครั้ง!?”, “เกิดไฟไหม้ปริศนาโดยไม่มีสาเหตุ โดยเด็กอายุสองขวบสามารถทำนายการเกิดไฟไหม้ได้ คาดอาจเป็นร่างทรงกลับชาติมาเกิด”, “th”} |

**UTC-07:** editActivity(Long aid, Activity activity): Boolean

**Description:** This test case is used for edit an activity to the database via hibernate query. The parameters for this method is long aid and Activity object , which consists of {Long aid, String aname, String adescription, Char lang}

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **Long aid, Activity object** |
| **1** | Test by input aid and Activity object with all parameters defined. | 2202, {2202, “ไฟไหม้ปริศนานับร้อยครั้ง!?”, “เกิดไฟไหม้ปริศนาโดยไม่มีสาเหตุ โดยเด็กอายุสองขวบสามารถทำนายการเกิดไฟไหม้ได้ คาดอาจเป็นคนร้ายก่อเหตุจุดเพลิงตั้งแต่ต้น โดยคาดหวังชื่อเสียงจากการก่อเหตุ”, “th”} | **True** |
| **2** | Test by input aid and Activity object with some parameters. | 2202,{2202, “ไฟไหม้ปริศนานับร้อยครั้ง!?”, “”, “th”} | **False** |
| **3** | Test by not input aid | {2202, “ไฟไหม้ปริศนานับร้อยครั้ง!?”, “เกิดไฟไหม้ปริศนาโดยไม่มีสาเหตุ โดยเด็กอายุสองขวบสามารถทำนายการเกิดไฟไหม้ได้ คาดอาจเป็นคนร้ายก่อเหตุจุดเพลิงตั้งแต่ต้น โดยคาดหวังชื่อเสียงจากการก่อเหตุ”, “th”}  {2202, “ไฟไหม้ปริศนานับร้อยครั้ง!?”, “”, “th”} |  |
| **3** | Test by not input Activity object | 2202 | **False** |

**UTC-08:** addActivity(Activity activity): Boolean

**Description:** This test case is used for adding a new activity to the database via hibernate query. The parameters for this method are Activity object, which consists of {Long aid, String aname, String adescription, Char lang}

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **Activity  object** |
| **1** | Test by input Activity object with all parameters defined with non existed aid from Appendix A.. | {2203, “วัดพระสิงห์ซิงกิ้งคอนเทสท์”, “พระสิงห์ซิงกิ้งคอนเทสท์ โดยเมตตาพระเดชพระคุณพระราชสิงหวรมุนีเป็นอุปถัมภ์ รอบชิงชนะเลิศ ประจำปี ๒๕๕๗  ”, “th”} | **True** |
| **2** | Test by input Activity object with some parameters defined | {2203, “วัดพระสิงห์ซิงกิ้งคอนเทสท์”, “”, “”} | **False** |
| **3** | Test by not input object | - | **False** |

**UTC-09:** deleteActivity(Long aid): Boolean

**Description:** This test case is used for deleting the activity object from the database by using activity id(aid) via hibernate query.

**Prerequisite or input required**

The test data is available at Appendix A

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **Lond aid** |
| **1** | Test by input aid which is existed in Appendix A. | 2202 | **True** |
| **2** | Test by not input object | - | **False** |
| **3** | Test by input aid which is non existed in Appendix A. | 2209 | **False** |

**UTC-10:** getActivityByID(Long aid): Activity

**Description:** This test case is used for adding a new activity to the database via hibernate query. The parameters for this method are Long ‘aid’

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **Long aid** |
| **1** | Test by input id = 2201 which existed in Appendix A | 2201 | {2202, “ไฟไหม้ปริศนานับร้อยครั้ง!?”, “เกิดไฟไหม้ปริศนาโดยไม่มีสาเหตุ โดยเด็กอายุสองขวบสามารถทำนายการเกิดไฟไหม้ได้ คาดอาจเป็นร่างทรงกลับชาติมาเกิด”, “th”} |
| **2** | Test by not input id | - | Null |
| **3** | Test by input id = 2210 which is not existed in Appendix A | 2210 | Null |

**4. Class name: QuestionAnswerDAOImpl**

**UTC-11**: getQuestion():  List<QuestionAnswer>

**Description:** This test case is used for get a list of Dharma question from database via hibernate query.

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |
| --- | --- | --- |
| **ID** | **Description** | **Expected Result**  **(List of QuestionAnswer object)** |
|
| **1** | Get a list of QuestionAnswer object from Appendix A | {1101, “How can I become buddhist?”, “”, “true”}  {1102, “Today is a good day, right?”, “Maybe”, “false”} |

**UTC-12**: deleteQA(Long qid): Boolean

**Description:** This test case is used for deleting a Dharma question which has newQ value as ‘True’ from database via hibernate query. The parameters for this method is question and answer ID (qid).

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Boolean newQ**  **(See: Appendix A)** | **Expected Result** |
| **Long qid** |
| **1** | Test by input QuestionAnswer object which are existed from Appendix A with value of newQ as “true” | 1101 | true | **True** |
| **2** | Test by input QuestionAnswer object which are existed from Appendix A with value of newQ as “false” | 1102 | false | **False** |
| **3** | Test by not input object. | - | - | **False** |

**UTC-13**: answer(Long qid, String answer): Boolean

**Description:** This test case is used for adding an answer on selected Dharma question which has newQ value as ‘True’ and change value of newQ to ‘False’ to database via hibernate query. The parameters for this method are Long ‘qid’ and String ‘answer’

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **Long qid, String answer** |
| **1** | Test by input qid and answer which are existed from Appendix A with value of newQ as “true” | {1101, “No, leave me alone”} | **True** |
| **2** | Test by input qid and answer which are existed from Appendix A with value of newQ as “false” | {1102, “Yes”} | **False** |
| **3** | Test by not input object. | Null | **False** |

**UTC-14**: askQuestion(QuestionAnswer questionAnswer): Boolean

**Description:** This test case is used for adding a new Dharma question to database via hibernate query. The parameters for this method are QuestionAnswer object, which consists of {Long qid, String qname, String answer, Boolean newQ}

**Prerequisite or input required**

The test data is available at Appendix A.

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Input** | **Expected Result** |
| **QuestionAnswer objec**t |
| **1** | Test by input QuestionAnswer object with all parameters defined. | {1104, “Will you mary me?”, “”, “true”} | **True** |
| **2** | Test by input QuestionAnswer object with some parameters defined | {1105, “”, “”, “false”} | **False** |
| **3** | Test by not input object | Null | **False** |
| **4** | Test by input QuestionAnswer object which are existed from Appendix A | {1101, “Do you want to build a snow man?”, “”, “true”} | **False** |

**Appendix A**

**Test data**

User table:

|  |  |  |  |
| --- | --- | --- | --- |
| **UserID** | **Username** | **Password** | **Email** |
| 1l | Janessy1 | 1234 | jane.park@gmail.com |
| 2l | adamm | ad1234 | adammy@gmail.com |

**History table:**

|  |
| --- |
| **hdescription** |
|
| Construction on Wat Phra Singh began in 1345 when King Phayu, the fifth king of the Mangrai dynasty, had a chedi built to house the ashes of his father King Kham Fu. |

**Activity table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **aid** | **aname** | **adescription** | **lang** |
| 2201 | Suspected migrant graveyard discovered in Songkhla | At least 32 graves were discovered yesterday at what is thought to be a human-trafficking camp for Rohingya migrants near the Malaysian border. | en |
| 2202 | ไฟไหม้ปริศนานับร้อยครั้ง!? | เกิดไฟไหม้ปริศนาโดยไม่มีสาเหตุ โดยเด็กอายุสองขวบสามารถทำนายการเกิดไฟไหม้ได้ คาดอาจเป็นร่างทรงกลับชาติมาเกิด | th |

**QuestionAnswer table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **qid** | **qname** | **Answer** | **newQ** |
| 1101 | Do you want to build a snow man? | - | true |
| 1102 | Today is a good day, right? | Maybe | false |