**Project Acceptance Tests**

## **UWA Farm Ridgefield Research Database**

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**About Test**

We will use html, js to edit web pages, python as the controller and mysql as the database control language.

When we are coding the Controller, we are planning to use Django.

**Performance of Database Testing**

* Information displaying
* Used to check that the fields in the test UI table are the same as the fields in the database.
* Data update in the table
* CRUD
* C: Create - Use the insert operation to save the client user.
* R: Read - Use the SELECT operation when the client user is viewing or searching.
* U: Update - Use Update to upload data when a client user is editing an existing record.
* D: Delete - When a record is deleted from the database, the output command is executed.
* **ACID operation properties testing:**
* **Atomicity** means that a transaction either fails or passes. This means that even if a single part of the transaction fails- it means that the entire transaction has failed. Usually, this is called the “all-or-nothing” rule.
* **Consistency**: A transaction will always result in a valid state of the DB
* **Isolation**: If there are multiple transactions and they are executed all at once, the result/state of the DB should be the same as if they were executed one after the other.
* **Durability**: Once a transaction is done and committed, no external factors like power loss or crash should be able to change it
* Data privacy and security
* Satisfy customer's request
* **Database test main attribute**

1. **Transactions:**

BEGIN TRANSACTION TRANSACTION#

END TRANSACTION TRANSACTION#

ROLLBACK TRANSACTION#

SELECT \* FROM TABLENAME

1. **Database suggestion:**

Information management structures, table descriptions, and column descriptions (Types, Thresholds Value, Connections of the tables)

1. **Trigger:**

After triggering something, it will trigger something and run automatically.

1. **Process:**

A set of parameters or symbols used to participate in the management of data or information in a database.

* **Test performance**
* Stress
* Stability
* Volume Concurrency
* Endurance
* Page Loading test
* **Safety Test**

**Django Test:**

Could use the unittest module to test using a class-based approach.

* **Unit testing Framework**
* **Text fixture:**
* A test fixture represents the preparation required to execute a test (which can be one or more), and the associated cleanup operations.
* **Text Case:**
* Test case will use an individual unit for testing. It will detect the special specific response that will be in the input set. Unitest provides a class, TestCase may create new test cases.
* **Test suite:**
* Test suite is a collection, it could use the text case or text fixture, maybe both, executed together.
* **Test runner:**
* Test runner is a component, this is a coordinated test, and the results of the test are provided to the user at the same time. It could be use the graph, text or others to return the tests.

Unit Testing – Integration Testing – System Testing — Acceptance Testing

**Test website:**

* Documentation test
* Demand
* Test plan
* Cases of test
* Traceability Matrix
* Test function of the website
* Test link
* Outbound links
* Correct of the internal links
* No link is leading to the same link
* Site admins got the emails from the links
* Links are not broken
* The pages are not referenced
* All pages test forms
* Test Cookies
* HTML/CSS Validation
* Different Database
* Test UI usability
* introductory
* visualization
* And more
* Test compatibility of different devices
* Test does it work on different system, different browsers
* Test performance
* Stress
* Stability
* Volume Concurrency
* Endurance
* Page Loading test
* Safety Test

**IEEE Citation:**

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Website: Software testing help, Data Accessed: August 11, 2022, Data published: August 07, 2022

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