**Demo 2**

**Technical Documentation**

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**Integration Tests:**

The intent of integration testing is to test the interactions and integration between different components or modules of an application to ensure that they work correctly together. In the case of the tool renting application, the integration tests are designed to test the integration and interactions between the different modules of the application, such as the user module, tool module, rental module, and registration module.

The integration tests are designed to test various scenarios such as successful and unsuccessful tool renting, successful and unsuccessful tool returning, successful and unsuccessful tool registration, and successful and unsuccessful user registration. These tests are intended to ensure that the application functions correctly and all modules work together as expected. The integration tests also cover scenarios such as tool deletion, which tests whether a tool can be successfully deleted from the system, and tool availability, which tests whether a tool is available for renting or not. These tests are important to ensure that the application is reliable and functional for end-users. However, since we still working on the functionality, here is the list that our website that have tested on.

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| **Test Case ID** | **Test Case Name** | **Description** | **Input** | **Expected Output** | **Coverage** |
| IT001 | Successful tool renting | Test that a tool can be rented successfully by a user | User ID, Tool ID, Rental start date, Rental end date | Success message | User, Tool, Rental |
| IT002 | Unsuccessful tool renting | Test that a tool cannot be rented if it is already rented by someone else | User ID, Tool ID, Rental start date, Rental end date | Error message | User, Tool, Rental |
| IT004 | Unsuccessful tool return | Test that a tool cannot be returned if it has not been rented by the user | User ID, Tool ID, Return date | Error message | User, Tool, Rental |
| IT005 | Successful tool registration | Test that a new tool can be registered successfully | Tool name, Tool description, Tool category | Success message | Tool |
| IT006 | Unsuccessful tool registration | Test that a tool cannot be registered without a name | Tool description, Tool category | Error message | Tool |
| IT007 | Successful user registration | Test that a new user can be registered successfully | User name, User email, User phone number | Success message | User |
| IT008 | Unsuccessful tool updating | Test that a tool cannot be updated if it is currently rented | Tool ID, Tool name, Tool description, Tool category | Error message | Tool, Rental |

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| --- | --- | --- | --- | --- | --- |
| IT009 | Successful tool availability check | Test that a user can check if a tool is available for rent on a specific date range | Tool ID, Rental start date, Rental end date | Available or Unavailable message | Tool, Rental |
| IT010 | Unsuccessful tool availability check | Test that a user cannot check availability of an invalid tool | Invalid tool ID, Rental start date, Rental end date | Error message | Tool, Rental |
| IT011 | Successful rental history retrieval | Test that a user can view their rental history | User ID | List of past rentals | Rental |
| IT012 | Unsuccessful rental history retrieval | Test that a user cannot view rental history if they have no past rentals | User ID with no past rentals | Error message | Rental |
| IT012 | Successful tool update | Test that a tool owner can update tool information | Tool ID, Updated information | Success message | Tool |
| IT014 | Successful user login | Test that a registered user can log in | User email, Password | Success message | User |