Part I. Overall Test Plan

The first half of the test strategy focuses on testing each form of insertion to the database and verifying the insertions by directly viewing the database file. The second half of the test strategy focuses on verifying the displaying of data from the database in the application. The groups system of the application is tested for simple functionality, and the search system of the application is tested for accuracy of returned results. The majority of tests involve multiple components and so are integration tests.

Part II. Test Case Descriptions

1.1 Database Creation Test

1.2 This test will test if the database is created the first time the application is run.

1.3 This test will start then close the application from a clean install. The generated database file will then be taken from the program's user-data directory to verify correctness.

1.4 Inputs: Start then close the application from a clean install.

1.5 Outputs: A database file is created with the correct tables and columns.

1.6 Boundary

1.7 Whitebox

1.8 Functional

1.9 Unit

2.1 Group Insertion Test

2.2 This test will test if a group will be correctly added to the database when created.

2.3 This test will start with the database empty. The tester navigates to the group creation page and creates a group. The database file is then viewed to verify that the group was successfully added.

2.4 Inputs: Create a group while the database is empty.

2.5 Outputs: The new group is added to the database.

2.6 Normal

2.7 Whitebox

2.8 Functional

2.9 Unit

3.1 Word Insertion Test-Simple

3.2 This test will verify that a word that is stored using only the word table is successfully saved into the database.

3.3 This test will start with the database empty. The tester navigates to the create word page and saves a word with no definition or assigned group. The database file is then viewed to verify that the word was successfully added.

3.4 Inputs: Create a word while the database is empty.

3.5 Outputs: The new word is added to the database.

3.6 Boundary

3.7 Whitebox

3.8 Functional

3.9 Unit

4.1 Word Insertion Test-With Definitions

4.2 This test will verify that a word stored with one or more definitions is successfully saved into the database.

4.3 This test will start with the database empty. The tester navigates to the create word page and saves a word with one definition. The tester then saves a second word with multiple definitions. The database file is then viewed to verify that the words and definitions were successfully added.

4.4 Inputs: Create multiple words with definitions starting with the database empty.

4.5 Outputs: The new words and definitions are added to the database.

4.6 Normal

4.7 Whitebox

4.8 Functional

4.9 Integration

5.1 Word Insertion Test-With Groups

5.2 This test will verify that a word stored with one or more assigned groups is successfully saved to the database.

5.3 The test will start with multiple groups in the database. The tester navigates to the create word page and saves a word assigned to one group. The tester then saves a second word assigned to multiple groups. The database file is then viewed to verify that the words and group assignments were successfully added.

5.4 Inputs: Create multiple words with assigned groups starting with the database containing multiple groups.

5.5 Outputs: The new words and word-definition pairings are added to the database.

5.6 Normal

5.7 Whitebox

5.8 Functional

5.9 Integration

6.1 ViewGroups Page Test

6.2 This test will test if a group added to the database shows its preview in the ViewGroups page.

6.3 The test will start with the database empty. The tester navigates to the group creation page and creates some number of groups. As each group is saved, that group appears in the ViewGroups page. The tester then creates and assigns multiple words to each group. Up to six of the assigned words for each group then appear in the corresponding previews in the ViewGroups page.

6.4 Inputs: Create multiple groups and assign new words to those groups starting with the database empty.

6.5 Outputs: The created groups and paired words appear in the ViewGroups page. Up to six assigned words appear in each group preview.

6.6 Normal

6.7 Blackbox

6.8 Functional

6.9 Integration

7.1 GroupWordList Page Test

7.2 This test will test if words added to a group appear in the GroupWordList page for the group.

7.3 The database will start with one group saved. The tester navigates to the create word page and creates some number of words, each assigned to the group. The tester then navigates to the GroupWordList page for that group from the ViewGroups page. Each word added appears in the list on the page.

7.4 Inputs: Words are added to an existing group.

7.5 Outputs: The words appear in that group's word list.

7.6 Normal

7.7 Blackbox

7.8 Functional

7.9 Integration

8.1 Word Search Test-Kanji

8.2 This test will test how well the search function works when Kanji are input into the search bar.

8.3 This test will start with the database empty. The tester will add some number of words with the Kanji field filled. The tester will then enter kanji into the search function. The search results will contain only words that contain the searched input, sorted by how well they match.

8.4 Inputs: Add words into the empty database. Search for a word using its kanji form.

8.5 Outputs: The best-matching word appears first in the search results. Lesser matches follow.

8.6 Normal

8.7 Blackbox

8.8 Performance

8.9 Integration

9.1 Word Search Test-Kana

9.2 This test will test how well the search function works when hiragana/katakana are input into the search bar.

9.3 This test will start with the database empty. The tester will add some number of words with the Kana field filled. The tester will then enter hiragana or katakana into the search function. The search results will contain only words that contain the searched input, sorted by how well they match.

9.4 Inputs: Add words into the empty database. Search for a word using its hiragana/katakana form.

9.5 Outputs: The best-matching word appears first in the search results. Lesser matches follow.

9.6 Normal

9.7 Blackbox

9.8 Performance

9.9 Integration

10.1 Word Search Test-Definition

10.2 This test will test how well the search function works when a definition is input into the search bar.

10.3 This test will start with the database empty. The tester will add some number of words with at least one definition each. The tester will then enter a definition into the search function. The search results will contain only words that contain the searched input, sorted by how well they match.

10.4 Inputs: Add words into the empty database. Search for a word using its definition.

10.5 Outputs: The best-matching word appears first in the search results. Lesser matches follow.

10.6 Normal

10.7 Blackbox

10.8 Performance

10.9 Integration

11.1 WordDetail Page Test

11.2 This test will test if the details page for a word displays information correctly.

11.3 This test will start with the database empty. The tester will create some number of groups. The tester will then create a word with all fields filled and having some number of definitions and assigned groups. The tester will then navigate to the WordDetail page for that word. All details saved for that word will be displayed.

11.4 Inputs: Add a word with all fields filled to the database and navigate to that word's detail page.

11.5 Outputs: All information saved for the saved word displays.

11.6 Normal

11.7 Blackbox

11.8 Functional

11.9 Integration

Part III. Test Case Matrix

Test Case	Normal/Abnormal	Blackbox/Whitebox	Functional/Performance	Unit/Integration
1	Boundary	Whitebox	Functional	Unit
2	Normal	Whitebox	Functional	Unit
3	Boundary	Whitebox	Functional	Unit
4	Normal	Whitebox	Functional	Integration
5	Normal	Whitebox	Functional	Integration
6	Normal	Blackbox	Functional	Integration
7	Normal	Blackbox	Functional	Integration
8	Normal	Blackbox	Performance	Integration
9	Normal	Blackbox	Performance	Integration
10	Normal	Blackbox	Performance	Integration
11	Normal	Blackbox	Functional	Integration