## CS163 Test Plan

**Develop the test plan:** *For each member function that you plan to write, think about how to test it – what flow of control exists in the member function and how would you test out all conditions:*

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| **Test Case(s)** | **Expected Result** | **Verified?**  **(yes/no)** |
| **Create room (Read-in) – user tries to input a duplicate** | **Return a failed status** |  |
| **Create accessory (Read-in) – user tries to enter “ “ versus “light-switch”** | **Retry input from user** |  |
| **Retrieve room function is called and user attempts to retrieve a non-exist room** | **Return a false Boolean-value to the calling routine** |  |
| **Retrieve accessory from a room but room does not exist** | **Return a false Boolean-value to the calling routine** |  |
| **Display\_all\_accessory from a single room function is called but room does not exist** | **Return a false Boolean-value to the calling routine** |  |
| **Traverse\_room LLL is called but LLL room is empty** | **Return a false Boolean-value to the calling routine** |  |
| **Remove\_room function is called but user misspelled the room name** | **Return a false Boolean-value to the calling routine. In calling routine, message the user no matching room found** |  |
| **Insert\_accessory function is called but accessory already exists** | **Return a false Boolean-value to the calling routine and message the user accessory already exists** |  |
| **Insert\_room function is called with NULL values** | **Check first for NULL values and return a false Boolean-value to the calling routine. Messaging the user in the calling routine failed insertion.** |  |
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**Verify correctness:** Using the above test plan, create a test program that tests the interactions of all functions together.