## 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)** |
| **Add Subject-Function**  **(!head) empty list** | **Subject will be added at the very beginning of the list** |  |
| **Add Subject -Function**  **(head) not empty list** | **Subject will be added at the end of the list** |  |
| **Add Subject-Function**  **(duplicate data)** | **Subject will not be added to the list** |  |
| **Add Subject-Function**  **(Invalid data)** | **Subject will not be added to the list** |  |
| **Remove Subject -Function**  **(!head) empty list** | **Nothing will be removed from the empty list** |  |
| **Remove Subject-Function**  **(head) not empty list** | **Subject will be removed if it is in the list** |  |
| **Remove Subject -Function**  **(Invalid data)** | **Subject will not be removed** |  |
| **Remove Subject-Function**  **(duplicate data)** | **Subject will not be removed since it does not exist** |  |
| **Display Subject-Function**  **(empty list)** | **Nothing will be displayed** |  |
| **Display Subject-Function**  **(non-empty)** | **List of subjects will be displayed** |  |
| **Display-Top-Rated function**  **(no ratings)** | **No ratings will be displayed**  **List of Assistances empty** |  |
| **Display-Top-Rated function**  **(no top ratings exist)** | **No ratings will be displayed** |  |
| **Destructor**  **(empty list )** | **Nothing will be deleted** |  |
| **Destructor**  **(non-empty list)** | **Entire list will be deleted** |  |
| **Add-Assistance**  **(empty list)** | **New Assistance will be added to the front** |  |
| **Add-Assistance**  **(non-empty list)** | **New Assistance will be added to the end** |  |
| **Display-Assistance-Info**  **(empty no information)** | **No info will be displayed** |  |
| **Display-Assistance-Info**  **(Has information)** | **Assistance information will be displayed** |  |
| **Remove-Rating-Below-3**  **(empty list)** | **No assistances will be removed**  **Empty list** |  |
| **Remove-Rating-Below-3**  **(no ratings below 3 )** | **No assistances will be removed**  **No assistance exist below 3** |  |
| **Remove-Rating-Below-3**  **(multiple ratings below 3 )** | **Assistances will be removed that are 3 and lower** |  |
| **Edit Rating-Function**  **(assistance doesn’t exist)** | **No rating will be edited**  **Assistance does not exist** |  |
| **Edit Rating-Function**  **(user inputs higher number than 10)** | **Rating will not change because user entered invalid number** |  |

**Verify correctness:** Using the above test plan, create a test program that tests the interactions of all functions together.