

# System Test Plan

**Instructions.** In this section, you must provide your system test plan with at least 5 test cases. **If you want to provide more than 5 test cases, add an appendix at the end of this document with the 6th, 7th, etc. test cases so that page numbers for all sections match the required template!**

Make sure:

- You provide your sample test data
- Test IDs are uniquely identified and descriptive
- Test descriptions are fully specified with complete inputs, specific values, and preconditions
  - Be sure to provide SPECIFIC INPUTs and VALUEs so that your test cases are repeatable
- Expected results are fully specified with specific output values
- All tests cover scenarios based on the problem statement
- All tests cover unique scenarios for the system
- All strategies for system testing are demonstrated in the tests (testing equivalence classes, testing boundary values, testing exceptions/unexpected inputs)

## Test Data:

roomsInfo.txt:

```
ROOM_ID, LENGTH, WIDTH
Office, 12, 14
Dining Room, 15, 15
Kitchen, 18, 20
Bedroom, 17, 16
```

cleaningInfo.txt:

```
TIMESTAMP, ROOM_ID, PERCENT_CLEANED
06/01/2021 13:39:01, Office, 78
05/31/2021 09:27:45, Dining Room, 89
05/23/2021 11:51:19, Bedroom, 77
```

roomEmpty.txt:

ROOM\_ID, LENGTH, WIDTH

cleaningEmpty.txt:

TIMESTAMP, ROOM\_ID, PERCENT\_CLEANED

largeRoomInfo.txt:

ROOM\_ID, LENGTH, WIDTH

Big Room, 12, 440

largeCleaningInfo.txt:

TIMESTAMP, ROOM\_ID, PERCENT\_CLEANED

06/01/2021 15:00:00, Big Room, 99

06/01/2021 14:30:00, Big Room, 1

06/01/2021 14:00:00, Big Room, 1

Test ID	Description	Expected Results	Actual Results
<b>Test #1</b> <b>testLoadInputFiles</b> <b>(Unexpected inputs - loading room and cleaning info from file)</b>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>• CleaningManager has been loaded successfully.</li> <li>• The files roomsInfo.txt and cleaningInfo.txt exists.</li> <li>• The file notReal.txt does not exist.</li> </ul> <p><b>Steps:</b></p> <ol style="list-style-type: none"> <li>1. When prompted to specify the input file for the room information, type “notReal.txt” and submit.</li> <li>2. <i>Check results</i></li> <li>3. Input “input/cleaningInfo.txt” and submit.</li> <li>4. <i>Check results</i></li> <li>5. Input “input/roomsInfo.txt” and submit.</li> <li>6. <i>Check results</i></li> <li>7. Enter “input/cleaningInfo.txt” and submit</li> <li>8. <i>Check results</i></li> <li>9. Close CleaningManager</li> </ol>	<p>Software should prompt the user to specify the input file for cleaning log info</p> <p>Software should display an error message that one of the specified files could not be found.</p> <p>Software should prompt the user to specify a new file for cleaning log information.</p> <p>Software should no longer prompt the user to specify an input file.</p>	<p>Software prompts the user to specify the cleaning log file pathway.</p> <p>Software outputs that at least one of the files could not be found.</p> <p>Software prompts the user to specify the file pathway for cleaning info.</p> <p>Software doesn't prompt the user for a file pathway, instead, the system outputs “Please input a number between 1-4, inclusive...”</p>
<b>Test #2</b> <b>testFrequentlyCleanRoomsReport</b>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>• All steps of Test #1 have passed except for the last step (do not close CleaningManager)</li> </ul>		

<p>(Equivalence classes &amp; boundary values - input number of rooms in frequency report)</p> <p>(Unexpected input - input invalid number of rooms in report</p>	<p><b>Steps:</b></p> <ol style="list-style-type: none"> <li>1. Select view report of the most frequently cleaned rooms.</li> <li>2. Input 0 when prompted to enter the number of rooms included in the report.</li> <li>3. <i>Check results</i></li> <li>4. Select view report of the most frequently cleaned rooms.</li> <li>5. Input -1 when prompted to enter the number of rooms included in the report.</li> <li>6. <i>Check results</i></li>   <li>7. Input 5 when prompted to enter the number of rooms included in the report.</li> <li>8. <i>Check results</i></li> <li>9. Select view report of the most frequently cleaned rooms.</li>   <li>10. Input 1 when prompted to enter the number of rooms in the report.</li> <li>11. <i>Check results</i></li> <li>12. Close CleaningManager</li> </ol>	<p>System reports “Number of rooms must be greater than 0” then takes the user back to the menu.</p> <p>System reports “Number of rooms must be greater than 0” then takes the user back to the menu.</p> <p>System outputs the following: Frequency of Cleanings [ Bedroom has been cleaned 1 times Dining Room has been cleaned 1 times Office has been cleaned 1 times Kitchen has been cleaned 0 times] ]</p> <p>System outputs the following: Frequency of Cleanings [ Bedroom has been cleaned 1 times] ]</p>	<p>System reports “Number of rooms must be greater than 0” then takes the user back to the menu asking them to enter a number between 1-4, inclusive.</p> <p>System reports “Number of rooms must be greater than 0” then takes the user back to the menu.</p> <p>System outputs the following: Frequency of Cleanings [ Bedroom has been cleaned 1 times Dining Room has been cleaned 1 times Office has been cleaned 1 times Kitchen has been cleaned 0 times] ]</p> <p>System outputs the following: Frequency of Cleanings [ Bedroom has been cleaned 1 times] ]</p>
<p>Test #3</p> <p>testCleaningReportbyRoom</p> <p>(Equivalence Class - check report for rooms that have not been cleaned or do not exist)</p>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>• CleaningManager has been loaded successfully.</li> <li>• The files roomsInfo.txt, cleaningInfo.txt, roomEmpty.txt, and cleaningEmpty.txt exists.</li> </ul> <p><b>Steps:</b></p>		

	<ol style="list-style-type: none"> <li>1. Enter "input/roomEmpty.txt" and submit.</li> <li>2. Enter "input/cleaningEmpty.txt" and submit.</li> <li>3. Select option to produce a report of the dates and times each room has been cleaned.</li> <li>4. <i>Check results</i></li> <li>5. Close and restart CleaningManager.</li> <li>6. Enter input/roomsInfo.txt and submit.</li> <li>7. Enter input/cleaningInfo.txt and submit.</li> <li>8. Select option to produce a report of the dates and times each room has been cleaned.</li> <li>9. <i>Check results</i></li> <li>10. Close CleaningManager</li> </ol>	<p>System reports "No rooms have been cleaned."</p> <p>System outputs the following:</p> <p>Room Report [</p> <ul style="list-style-type: none"> <li>Bedroom was cleaned on [ 05/23/2021 11:51:19 ]</li> <li>Dining Room was cleaned on [ 05/31/2021 09:27:45 ]</li> <li>Kitchen was cleaned on [ (never cleaned) ]</li> <li>Office was cleaned on [ 06/01/2021 13:39:01 ]</li> </ul> <p>]</p>	<p>System reports that no rooms have been cleaned then returns back to the menu.</p> <p>System outputs the following:</p> <p>Room Report [</p> <ul style="list-style-type: none"> <li>Bedroom was cleaned on [ 05/23/2021 11:51:19 ]</li> <li>Dining Room was cleaned on [ 05/31/2021 09:27:45 ]</li> <li>Kitchen was cleaned on [ (never cleaned) ]</li> <li>Office was cleaned on [ 06/01/2021 13:39:01 ]</li> </ul> <p>]</p>
<b>Test #4</b> <b>testReportVacuumBagRemainingLife</b> <i>(Equivalence Class - input different dates/times vacuum was replaced)</i> <i>(Unexpected input - enter improperly formatted date)</i>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>• All steps of Test #1 have passed except for the last step (do not close CleaningManager)</li> </ul> <p><b>Steps:</b></p> <ol style="list-style-type: none"> <li>1. Choose to view a report of the estimated remaining vacuum bag life.</li> <li>2. When prompted to enter the date/time the bag was replaced, input "typo" and submit.</li> <li>3. Check results</li> <li>4. When prompted again, enter "06/01/2022 12:00:00" and submit</li> <li>5. Check results</li> </ol>	<p>System should report "Date &amp; time must be in the format: MM/DD/YYYY HH:MM:SS"</p> <p>System outputs the following:</p> <p>Vacuum Bag Report (last replaced 06/01/2022 12:00:00) [ Bag is due for replacement in 5280 SQ FT</p>	<p>System outputs "Date &amp; time must be in the format: MM/DD/YYYY HH:MM:SS"</p> <p>System outputs the following:</p> <p>Vacuum Bag Report (last replaced 06/01/2022 12:00:00) [ Bag is due for replacement in 5280 SQ FT</p>

	<ol style="list-style-type: none"> <li>6. Choose to view a report of the remaining vacuum bag life.</li> <li>7. Input "06/01/2021 14:00:00" and submit</li> <li>8. Check results</li> </ol>	<p>Bag is due for replacement in 5280 SQ FT</p> <p>]</p> <p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 14:00:00) [</p> <p>Bag is due for replacement in 5280 SQ FT</p> <p>]</p>	<p>]</p> <p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 14:00:00) [</p> <p>Bag is due for replacement in 5280 SQ FT</p> <p>]</p>
<b>Test #5</b> <b>testReportVacuumBagRemainingLife</b>  <b>(Equivalence Class - input date/time such that vacuum would require replacement)</b>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>• CleaningManager has been loaded successfully.</li> <li>• The files largeRoomInfo.txt and largeCleaningInfo.txt exists.</li> </ul> <p><b>Steps:</b></p> <ol style="list-style-type: none"> <li>1. When prompted to specify the input file for the room/cleaning information, enter input/largeRoomInfo.txt then input/largeCleaningInfo.txt.</li> <li>2. Choose to view a report of the estimated vacuum bag life.</li> <li>3. When prompted to enter the date/time the bag was replaced, input "06/01/2021 14:45:00" and submit.</li> <li>4. <i>Check results</i></li> <li>5. Choose to view another report of remaining vacuum bag life.</li> <li>6. Enter "06/01/2021 14:00:11" and submit.</li> <li>7. <i>Check results</i></li> <li>8. Choose to view another report of remaining vacuum bag life.</li> <li>9. Enter "06/01/2021: 13:00:00" and submit.</li> </ol>	<p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 14:45:00) [</p> <p>Bag is due for replacement in 53 SQ FT</p> <p>]</p> <p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 14:00:11) [</p> <p>Bag is due for replacement in 1 SQ FT</p> <p>]</p> <p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 13:00:20) [</p> <p>Bag is overdue for replacement!</p> <p>]</p>	<p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 14:45:00) [</p> <p>Bag is due for replacement in 53 SQ FT</p> <p>]</p> <p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 14:00:11) [</p> <p>Bag is due for replacement in 1 SQ FT</p> <p>]</p> <p>System outputs the following: Vacuum Bag Report (last replaced 06/01/2021 13:00:20) [</p> <p>Bag is overdue for replacement!</p> <p>]</p>

	<p>10. <i>Check results</i> 11. Close CleaningManager</p>		
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