**Task 1: Requirements Analysis and Coverage**

**Assumption:**

1.The requirement "System shall allow searching without setting search parameters" implies that all workplaces should be listed when no search criteria are set.

2.The search results should be presented in a table format.

3.The sorting functionality works in both ascending and descending order.

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| **Test Case ID** | **Test Scenario** | **Pre-Conditions** | **Test Steps** | **Step Description** | **Expected Result** | **Actual Result** | **Status (Pass/Fail)** |
| TC01 | Search with all fields blank | The system is operational, and the  search functionality is accessible. | 1 | Navigate to the search interface | Verify User navigate to search interface |  |  |
| 2 | Check all fields, including date range,  floor number, equipment, and smoking restriction | Ensure that all fields, including date range, floor number,  equipment, and smoking restriction, are blank |
| 3 | Click the 'Search' button | Verify The system displays all available workplaces  without any filters applied |
| TC02 | Search with only date range  provided | The system has records of workplaces  for various dates | 1 | Navigate to the search interface. | Verify User should navigate to search interface |  |  |
| 2 | Set a future date range in the  '21.12.2024' and '21.12.2025' date fields. | Future date should be set |
| 3 | Check all Other fields | Verify all other fields should be blank. |
| 4 | Click the 'Search' button | Verify The system displays workplaces available within  the specified date range. |
| TC03 | Search with only floor number provided | The system has records of workplaces  on multiple floors. | 1 | Navigate to the search interface | Verify User should navigate to search interface |  |  |
| 2 | Enter a specific floor number in the floor field | Verify Specific floor number should be entered |
| 3 | Check all Other fields | Verify all other fields are blank. |
| 4 | Click the 'Search' button. | Verify The system displays workplaces located  on the specified floor |
| TC04 | Search with only equipment selected | The system has records of workplaces  with various equipment options. | 1 | Navigate to the search interface | Verify User navigate to search interface |  |  |
| 2 | Select specific equipment from the equipment  options (e.g., PC, Phone, Flip Chart Board, Projector) | Verify Specific equipment number is entered |
| 3 | Check all Other fields | Verify all other fields are blank. |
| 4 | Click the 'Search' button | Verify The system displays workplaces that  have the selected equipment available. |
| TC05 | Search with only smoking restriction  selected | The system has records of both smoking  and non-smoking workplaces. | 1 | Navigate to the search interface. | Verify User should navigate to search interface |  |  |
| 2 | Check the 'Smoking allowed' box if searching for smoking areas,  or leave it unchecked for non-smoking areas | Box should be checked /uncheck |
| 3 | Check all Other fields | Verify other fields should be blank. |
| 4 | Click the 'Search' button | Verify The system filters and lists workplaces where smoking is allowed or not, according to the checkbox status |  |  |
| TC06 | Search with a date range in the future | The system is operational and has future  dates available for searching | 1 | Navigate to the search interface. | Verify User navigate to search interface |  |  |
| 2 | Enter a valid future date in the From '01.01.2024' To '01.03.2024'date field | Verify User is allowed to enter date in the filed |
| 3 | Click the 'Search' button. | Verify The system displays workplaces available  within the specified future date range. |
| TC07 | Verify the system can search for workplaces  available on the current date | The system is operational and has records  for the current date. | 1 | Navigate to the search interface | User should navigate to search interface |  |  |
| 2 | Enter today's date in both the TO '21.12.2023' and From '21.12.2023' date fields. | User should be allowed to enter date in the filed |
| 3 | Click the 'Search' button | The system displays workplaces available for the current date. |
| TC08 | Search with a date range in the past | The system is designed to restrict searches to current and future dates only. | 1 | Navigate to the search interface | User should navigate to search interface |  |  |
| 3 | Enter a past date that is after the  From '12.11.2023'in the To '12.10.2023'date field. | User should be allowed to enter date in the filed |
| 4 | Click the 'Search' button. | The system does not perform a search and displays an **error message** indicating that the date range is in the past and invalid |
| TC09 | Search with an invalid date format | The system requires a specific date format for  the search functionality (e.g., MM/DD/YYYY). | 1 | Navigate to the search interface. | User should navigate to search interface |  |  |
| 2 | Enter a date in an invalid format in the 'From' date field | User should be allowed to enter date in the filed |
| 3 | Enter a date in an invalid format in the 'To' date field | User should be allowed to enter date in the filed |
| 4 | Click the 'Search' button. | The system does not perform a search and displays an **error message** indicating that the date format is invalid. |
| TC10 | Sort results by each available field | The system is operational, has multiple records available for sorting, and sorting functionality is enabled for each field | 1 | Navigate to the search interface and perform a  search that has multiple results | User should navigate to serch interface |  |  |
| 2 | Click on each sortable column header one at a time in  the results table (e.g., Place, Floor, Room, Smoking Allowed, Equipment). | User should able to click on column header |
| 3 | Observe the order of results after each sort action | Each time a column header is clicked, the results are sorted according to that column's data in ascending order.  A second click on the same header should sort the data in descending order. |
| TC11 | Navigate through multiple pages of results | search query should returned multiple  pages of results. | 1 | Navigate to the search interface and perform a  search that has multiple results | User should navigate to search interface |  |  |
| 2 | Use the navigation controls  (e.g., 'Next', 'Prev', specific page numbers) to move through the pages. | User should able to click on navigation control |
| 3 | Observe the change in results with each navigation action. | The navigation controls accurately allow the user to move forward and backward through the results pages, as well as jump to specific pages. |
| TC12 | Sort results and then navigate through pages | The system is operational, has multiple records, sorting, and multiple pages of results are available | 1 | Navigate to the search interface and perform a  search that has multiple results | User should navigate to search interface |  |  |
| 2 | Sort the results using one of the available fields. | Sort result should be display |
| 3 | Navigate to a different page using the page navigation controls | User should navigate to different page |
| 4 | Observe if the sorting order persists after the navigation | the sorted order is maintained when  navigating to a different page of results. |
| TC13 | Search with an invalid floor number | The system must have defined criteria for valid floor numbers. | 1 | Navigate to the search interface. | User should navigate to search interface |  |  |
| 2 | Enter an invalid floor number(12qR@24) in the floor number field. | User should able to enter floor Number |
| 3 | Click the 'Search' button. | The system should not perform a search  and should display an error message indicating  the floor number is invalid. |
| TC14 | Search without required fields | The system must have certain fields that are  mandatory for performing a search | 1 | Navigate to the search interface. | User should navigate to search interface |  |  |
| 2 | Leave the required fields, as specified by the  business rules, blank and click on Click the 'Search' button. | system should not execute a search and  should display an error message  prompting the user to fill in the required fields. |
| TC15 | Measure the time taken to display the search results | The system is operational, and the dataset  is of a size representative of actual use. | 1 | Navigate to the search interface | User should navigate to search interface |  |  |
| 2 | Enter valid search criteria. | User should able to enter the criteria |
| 3 | Start a timer upon clicking the 'Search' button. | all the records should be display |
| 4 | Stop the timer as soon as the search results are  fully rendered on the screen. | Record the time taken. |
| TC16 | search result table is read-only and cannot  be modified by the user. | The user has performed a search, and the  search results are displayed on the screen. | 1 | Navigate to the search interface and perform a  search that has multiple results | User should navigate to search interface |  |  |
| 2 | Attempt to click into any cell or field within the search results table to edit the content (e.g., Place, Floor, Room, Smoking Allowed, Equipment). | User should not able to edit |
| 3 | Try to use the keyboard to type or change the data | user should not able to change the data |

**Bonuses: Bad Requirements**

**Requirement 4**:-"System shall allow searching only for the date range that is not in the past." This is potentially a bad requirement as there might be business needs to search for past dates for record-keeping or analysis.

**Requirement 7**:- "System shall provide search results without delay."

"Without delay" is not quantifiable. A better requirement would specify a maximum acceptable delay (e.g. within 2-4seconds).