Requirements Analysis:

1. **System Functionality:**
   - The system should support searching, filtering, sorting, and navigation of available workplaces based on various criteria.
   - It should validate input data before performing searches.
   - The interface should be user-friendly and provide search results without delay.
2. **Search Criteria:**
   - Workplaces can be searched based on date, floor, equipment, and smoking restrictions.
   - Searching without setting parameters should be allowed, implying a default search mode.
3. **Validation and Constraints:**
   - Date ranges should be restricted to future dates.
   - Sorting should be possible based on all available fields.
   - The search result table should be read-only.

Test Data and Test Cases:

1. **Search Functionality:**
   - Test Case 1: Verify that the system allows performing a search without setting any parameters.
   - Test Case 2: Check if the system allows searching workplaces by provided parameters.
   - Test Case 3: Ensure that the system validates provided data before initiating a search.
   - Test Case 4: Validate that the system provides search results without delay.
   - Test Case 5: Check if the system allows flexible navigation between search results.
   - Test Case 6: Verify that the system provides a user-friendly interface.
2. **Search Criteria:**
   - Test Case 7: Ensure that the system should allow search only for future dates.
   - Test Case 8: Check if workplaces can be filtered based on floor, equipment, and smoking restrictions.
3. **Sorting Functionality:**
   - Test Case 9: Verify that the system allow sorting search results by all available fields.
4. **Interface and Display:**
   - Test Case 10: Ensure that the search result table is read-only.
   - Test Case 11: Validate the readability and clarity of the search results on the interface.

Bad Requirements:

1. **Requirement 4:**
   - The requirement specifies that the system should allow search only for future dates. However, it doesn't specify how future dates are defined. This lack of clarity might lead to inconsistent interpretations and implementation.
2. **Requirement 6:**
   - While it's mentioned that the system should validate provided data before search, it's not clear what kind of validation should be performed. This ambiguity could result in inadequate validation checks or over-engineering.
3. **Requirement 7:**
   - The requirement states that the system should provide search results without delay, but what should be considered as "without delay" is subjective and not described. This lack of specifications could lead to unrealistic expectations or implementation challenges.

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Answer for Task 2:-

Work Breakdown Structure for Test Activities:

1. Test Planning

- **Identify testing objectives and scope.**
- **Define test strategy and approach.**
- **Develop a test plan document.**
- **Estimate resources and timelines.**

2. Test Case Design

- **Review user stories and requirements of product.**
- **Identify test scenarios and test cases according to functional requirment.**
- **Design test data and test environment setup.**
- **Create test case documents.**

3. Test Environment Setup

- **Provision test servers and databases.**
- **Install necessary software and tools.**
- **Configure test environments to mimic production.**

4. Test Execution

- **Execute test cases for user registration.**
- **Execute test cases for office place booking.**
- **Execute test cases for user roles (user and office manager).**
- **Execute test cases for native mobile applications.**
- **Record test results and defects.**

5. Test Reporting

- **Summarise test execution results.**
- **Document defects found during testing.**
- **Provide recommendations for improvements.**
- **Prepare a test summary report.**

Estimated Test Activities Sum-Up:

The test activities outlined above surround and hold within the entire testing process for the new features introduced in the application increment. Starting from planning and design, through environment setup and execution, to reporting and documentation, each phase is crucial in ensuring the quality of the application.

1. **Test Planning: This phase sets the direction for testing by defining objectives, scope, strategy, and timelines. It ensures alignment with project goals and customer expectations.**
2. **Test Case Design: By reviewing user stories and requirements, test scenarios and cases are identified to cover all aspects of the new features. Test data and environment setup details are also established during this phase.**
3. **Test Environment Setup: Provisioning and configuring test environments are essential to simulate real-world usage scenarios accurately. It ensures that testing can be conducted in a controlled and representative environment.**
4. **Test Execution: This phase involves the actual execution of test cases, focusing on user registration, office place booking, user roles, and mobile application functionality. Test results and defects are meticulously recorded for analysis.**
5. **Test Reporting: Summarising test execution results and documenting defects found during testing provides stakeholders with valuable insights into the quality of the application. Recommendations for improvements help in enhancing the overall user experience and satisfaction.**