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Practical No: 9

**1)Designing test plan for notepad.**

**Test Plan for Notepad:**

1. **Preparing test plan:**
   * Testing of Notepad is a process of testing functionalities of notepad like user interactions are well. The main purpose of testing is to ensure the quality, meeting the specified expectations, reducing the risk or errors and customer satisfaction. Notepad should be capable of being an editor in which we can write any code.
2. **Scope management**
   * The scope of Notepad testing is defined at the beginning of the testing process. A project team should clearly understand what features and functions to be tested and which ones are out of scope. To determine the scope of testing, a manager must take into consideration the project specification, budget and customer’s requirements.
   * Testing will cover all core functionality of Notepad, including text input, formatting, file handling, and keyboard shortcuts.
   * **Functional testing:**
     + To validate every shortcut in notepad whether it’s working properly or not.
     + To validate that the page scrolling scenarios are being enabled in the application if necessary.
     + To validate whether we are able to change the font size and style like an editor.
     + The find feature should work properly and should be able to find the occurrences as well as perform operations on all the occurrences.
     + To validate whether the application provides an available user guide for those who are not familiar to the app. It provides help option which should take us to the website where other people can help us with our queries.
     + It should be able to save the files in different formats for different program execution. (.html, .c, .cpp, .java, etc.)
   * **Factors for prioritization of features:**
     + Features that is new and critical for release.
     + Features which are extension of earlier features.
     + Features which have constraints on time.
3. **Deciding test approach**
   * **Compatibility testing:**
     + Compatibility testing on different laptops or PC’s is performed to ensure that since Laptops have different size, resolution, screen, version and hardware so the application should be tested across all the devices to ensure that the application works as desired.
     + To validate that the user Interface of the application is as per the screen size of the device, no text/control is partially invisible or inaccessible.
     + To ensure that the text is readable and editable in all devices.
     + To ensure that notepad supports being an editor of almost every programming language.
   * **Useability testing:**
     + To ensure that the shortcuts are easy to remember so that it is user friendly.
     + To ensure that the application provides a method for going back or undoing an action.
     + To ensure that the application can be used to create and edit different programs.
     + To ensure that it provides an environment for editing programs easily.
4. **Setting up criteria for testing**
   * Specifies the criteria that denote a successful completion of a test phase
   * Pass / fail criteria, Suspend criteria and Resume criteria
   * If 40% of test cases failed, suspend testing until the development team fixes all the failed cases.
   * Resume testing when all failed test cases has been fixed.
5. **Identifying responsibility**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Team manager** | **Program manager** | **Developer team** | **Test team** | **Client** |
| **Acceptance test documentation and execution** | **X** | **X** | **-** | **X** | **X** |
| **System/Integration test** | **X** | **-** | **X** | **X** | **-** |
| **Unit test documentation and execution** | **X** | **-** | **X** | **X** | **-** |
| **System design review** | **X** | **X** | **X** | **X** | **X** |
| **Detail design review** | **X** | **X** | **X** | **X** | **-** |
| **Test procedure and rules** | **X** | **X** | **X** | **X** | **-** |
| **Screen and report reviews** | **-** | **-** | **X** | **X** | **X** |
| **Change control and regression testing** | **X** | **X** | **X** | **X** | **-** |

1. **Staffing and training needs**

|  |  |  |
| --- | --- | --- |
| **Task** | **Members** | **Estimate effort** |
| **Create the test Specification** | **Test Designer** | **170 man-hours** |
| **Perform Test Execution** | **Tester, Test Administrator** | **80 man-hours** |
| **Test Report** | **Tester** | **10 man-hours** |
| **Test Delivery** |  | **20 man-hours** |
| **Total** |  | * 1. **man-hour** |

1. **Resource requirements**
2. Requirement Tracking Tool:
   * Jira
   * Zephyr
   * IBM Engineering Requirements Management DOORS Next
   * Orcanos
3. Bug Tracking Tool:
   * Bugzilla
   * RedMine
   * TestRail
   * GitLab
4. Automation Tool:
   * GitLab [CI/CD]
   * Robot Framework [Acceptance Testing]
   * AWS CloudFormation [Managing code & infrastructure on AWS]
   * Cucumber
   * TestComplete
5. **Test deliverables**

**The deliverables include following:**

1.Test Plan document

2.Test cases

3.Test design specification

4.Tools and their outputs

5.Simulators

6.Static and dynamic generators

7.Error logs and execution logs

8.Problem reports and corrective actions

**9.Test summary reports.**

1. **Testing task**
   * Task required to perform testing.
   * All tasks for planning and executing testing.
   * Identifying interdependency among different testing related tasks.
   * Size estimation: determine amount of testing that need to be done. Size of product release, Extents of automation, No. of platforms increase testing work.

**Size Estimation:**

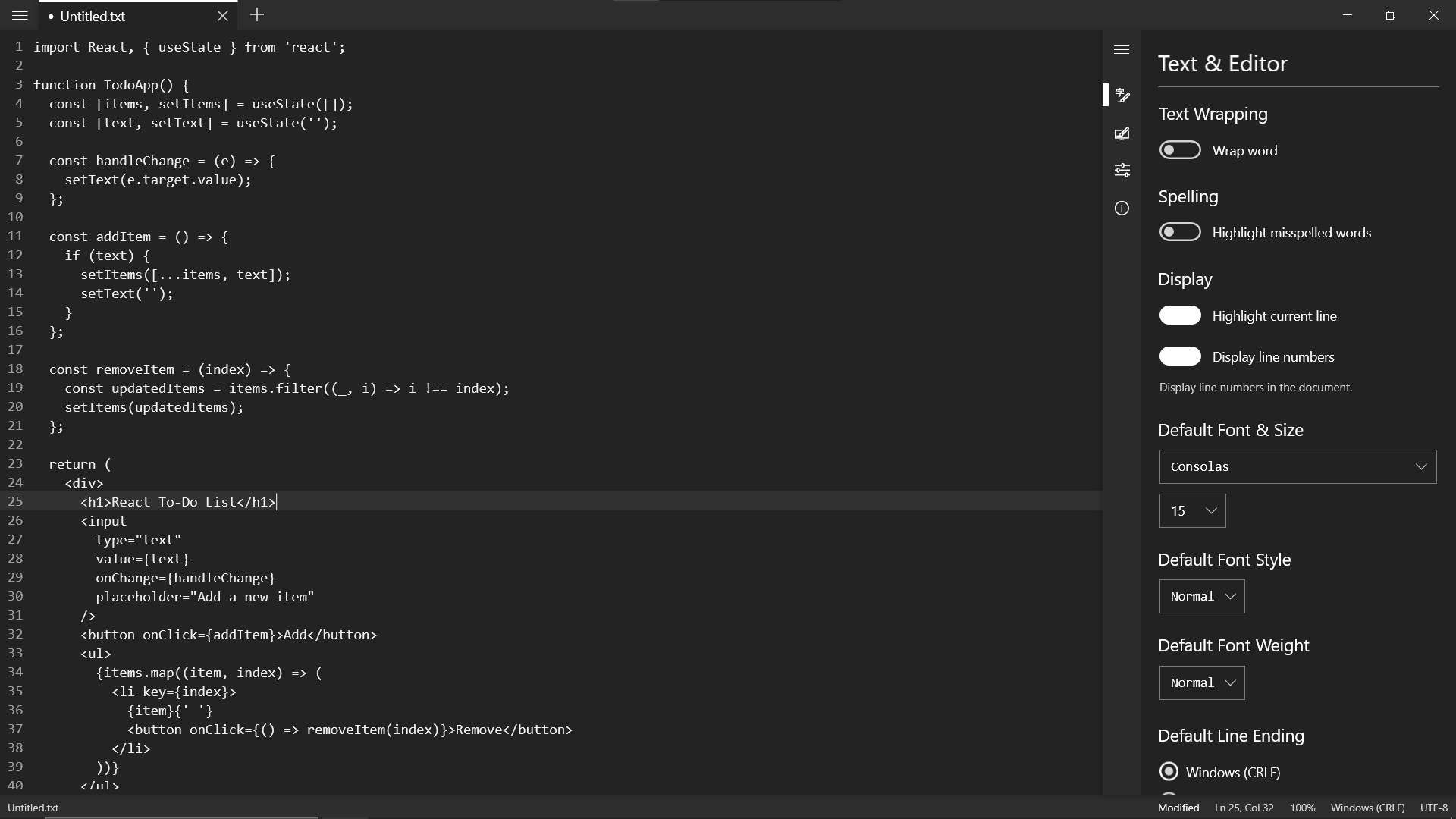
1. Determine the amount of testing needed for the project.
2. Size of Product Release:
   * **Lines of Code (LOC)**: This metric depends on the programming style and compactness of the code. It considers only the coding phase.
   * **Function Points (FP)**: Estimates the size of the application based on input, output, interfaces, number of screens, and reports.

**Effort Estimation:**

Effort estimation includes:

* Productivity Data: Refers to the speed at which various testing activities can be carried out, including:
  + Number of test cases that can be developed per day.
  + Number of test cases that can be run per day.

**OUTPUT:**

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