**TEST PLAN & TESTING METRICS**

1. **Introduction:**

The test plan outlines the purpose, scope, objective, test deliverables and schedule of testing activities. The Cloud Notepad application underwent comprehensive testing to ensure its functionality, compatibility, and performance across various platforms and devices. The testing process aimed to identify key findings, address issues, and provide recommendations for further enhancements. It identifies the items and features to be tested: types of testing resources requirements and an approach to project management.

* 1. **Purpose:**

The purpose of this test plan is to ensure the quality and reliability of the Cloud Notepad application across multiple platforms (Mobile, Web, Desktop).

* 1. **Scope:**

This test plan covers functional, non-functional, and compatibility testing of the CloudNotepad application on various supported environments.

* 1. **Objectives:**
* Validate the core functionality of note creation and non-formatted text handling.
* Verify the application's performance, security, and compatibility across supported environments.

1. **Test Items:**

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| Test Items | Features to be Tested |
| 2.1 | * Note creation and editing |
|  | * Non-formatted text handling |
|  | * Cross-platform compatibility (Mobile, Web, Desktop) |
|  | * Performance and responsiveness |

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| Test Items | Features not to be Tested |
| 2.2 | * Advanced text formatting |
|  | * Collaboration features (if not part of the core functionality) |

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1. **Test Deliverables:**

The test deliverables for the Cloud Notepad application include comprehensive test cases to validate note creation, editing, and cross-platform compatibility. Test data will be provided to assess performance and responsiveness. Additionally, a detailed defect report will be generated, documenting any issues encountered during testing.

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| **Test Deliverables** | **Description** |
| 3.1 Test Cases | Detailed test cases for functional and non-functional requirements. |
| 3.2 Test Data | Sample data for testing note creation and manipulation |
| 3.3 Defect Reports | Reports on any defects found during testing |

1. **Testing Approach:**

The test approach for the Cloud Notepad application encompasses multiple testing levels, including Unit Testing, Integration Testing, System Testing, and Acceptance Testing. It incorporates diverse testing types such as Functional Testing to ensure feature robustness, Compatibility Testing for cross-platform performance, Performance Testing for responsiveness, and Security Testing for data protection.

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| Testing Approach | Testing Levels | Description |
| 4.1 Testing Approach | Unit Testing | Evaluates individual units or components of the Cloud Notepad application to ensure their proper functionality. |
|  | Integration Testing | Verifies the interaction and collaboration between integrated components to identify and resolve any interface issues. |
|  | System Testing | Tests the complete system, ensuring that all components work together as intended and meet specified requirements. |
|  | Acceptance Testing | Tests the complete system, ensuring that all components work together as intended and meet specified requirements |
| 4.2 Testing Types | Functional Testing | Assesses the core functionality of the Cloud Notepad application, including note creation, editing, and overall user experience. |
|  | Compatibility Testing | Ensures the application works seamlessly across various platforms, such as Mobile, Web, and Desktop. |
|  | Performance Testing | Evaluates the speed, responsiveness, and overall performance of the Cloud Notepad application under different conditions. |
|  | Security Testing | Identifies and addresses potential vulnerabilities to ensure the confidentiality and integrity of user data. |

1. **Test Environment:**

To ensure thorough testing coverage for the Cloud Notepad application, the test environment includes a range of hardware and software components, including support for mobile devices, desktop browsers (Chrome, Firefox, Edge), and mobile browsers (Safari, Chrome, Firefox) across various operating systems (iOS, Android, Windows, MacOS, Linux).

5.1 Hardware:

* Mobile devices (iOS and Android).
* Desktop machines (Windows, MacOS, Linux).

5.2 Software:

* Mobile browsers (Safari, Chrome, Firefox).
* Desktop browsers (Chrome, Firefox, Edge).
* Operating systems (iOS, Android, Windows, MacOS, Linux).

1. **Testing Metrics:**

During the testing process, testing metrics are quantitative measurements that are used to evaluate the efficacy and quality of the Cloud Notepad programme. The amount of flaws in relation to the size or complexity of the application is quantified by defect density. Test Coverage quantifies the portion of the application's functionality that test cases cover. The percentage of test cases that pass during testing is shown by the execution pass rate, which offers information about the overall efficacy of the testing process. These metrics aid in evaluating the effect of flaws found, the reliability of the application, and the extent of testing.

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| Test Metrics | Metrics | Description |
| 6.1 Defect Density | Number of defects per size or complexity of the application. | Defect density provides insight into the quality of the codebase by measuring the number of defects relative to the size or complexity of the Cloud Notepad application. |
| 6.2 Test Coverage | Percentage of the application covered by test cases. | Test coverage measures the extent to which the Cloud Notepad application is tested, expressed as a percentage of the total application functionality covered by test cases. |
| 6.3 Execution Pass Rate | Percentage of test cases passed during execution. | Execution pass rate reflects the effectiveness of testing efforts, indicating the proportion of test cases that successfully passed during the testing phase for the Cloud Notepad application. |

1. **Risks/Assumptions:**

Identify the risks associated with test plan, including contingency strategies. The following table identifies any probable risks and assumptions that may impact the success of the testing process.

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| Category | Risk/ Assumption | Description |
| Network Connectivity | Risk: Unstable internet connection for web testing. | Potential disruptions or variations in network connectivity may impact the reliability of web testing for the Cloud Notepad application. |
|  | Assumption: Stable internet connection for web testing. | It is assumed that a stable internet connection will be available for conducting web testing without interruptions. |
| Personnel | Risk: Variability in mobile device configurations. | Diverse configurations among mobile devices may lead to compatibility issues that need to be addressed during testing. |
|  | Assumption: Devices meet minimum system requirements. | It is assumed that all testing devices meet the minimum system requirements specified for the Cloud Notepad application. |
| Schedule | Risk: Potential delays in the testing schedule. | Unforeseen factors may cause delays in the testing process, impacting the overall project timeline for the Cloud Notepad application. |
| Technical | Risk: Browser inconsistencies. | Inconsistencies across different browsers may pose challenges in ensuring a consistent user experience and functionality. |
| Requirements | Risk: Unclear or changing requirements. | Ambiguous or evolving requirements may lead to confusion and necessitate adjustments during the testing phase for the Cloud Notepad application. |

1. **Schedule:**

This plan sets out a hypothetical timeline for every phase of the testing process, giving the Cloud Notepad application two weeks for setup, three weeks for testing, and two weeks for reporting. The requirements and characteristics of the project may affect the actual timeframe.

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| Testing Phase | Timeline | Description |
| Test Preparation | Week 1 - Week 2 | Develop detailed test plans, test cases, and test data. |
| Execution | Week 3 - Week 5 | Actively execute test cases across various platforms, browsers, and devices for comprehensive coverage. |
| Reporting | Week 6 - Week 7 | Document and communicate test results, including defect reports and metrics. Ensure stakeholders are informed about the testing outcomes. |

1. **Approvals:**

This test plan requires approval from relevant stakeholders before the testing phase begins.

**9.1** **Project Manager Approval:**

Name:

**9.2 QA Lead Approval:**

Name:

1. **Test Summary:**

Provide a summary of the test results, emphasizing the important discoveries, problems, and suggestions for future development.

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