**Purpose of the Document**

The purpose of this Test Plan is to outline the testing strategy and procedures for the "Excellentable Charts" feature. The objective is to ensure that the feature functions correctly, is user-friendly, and meets the specified requirements.

**Version Control:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Name** | **Role** | **Version** | **Comments** |
| 12/10/2023 | Shiv Kumar Pal | Test Engineer | 1.0 | Initial draft |

Table of Contents

[1 Introduction 3](#_Toc147960222)

[1.1 Project Overview 3](#_Toc147960223)

[2 Scope 3](#_Toc147960224)

[2.1 In-Scope 3](#_Toc147960225)

[2.2 Out-of-Scope 4](#_Toc147960226)

[3 Testing Strategy 4](#_Toc147960227)

[3.1 Test Objectives 4](#_Toc147960228)

[3.2 Test Assumptions 4](#_Toc147960229)

[3.3 Data Approach 5](#_Toc147960230)

[3.4 Level of Testing 5](#_Toc147960231)

[4 Execution Strategy 5](#_Toc147960232)

[4.1 Entry Criteria 5](#_Toc147960233)

[4.2 Exit criteria 6](#_Toc147960234)

[4.3 Validation and Defect Management 6](#_Toc147960235)

[5 Environment Requirements 7](#_Toc147960236)

[5.1 Test Environments 7](#_Toc147960237)

[6 Risk And Dependencies 8](#_Toc147960238)

[7 Distribution List 9](#_Toc147960239)

# Introduction

## Project Overview

This project involves testing the "Excellentable Charts" feature, which allows users to create, customize, and analyze data visualizations within Excel spreadsheets. Charts are an integral part of data analysis and reporting, and this feature aims to enhance data presentation and interpretation.

The primary objectives of this project include:

* Ensuring the accuracy and reliability of chart generation and data visualization.
* Verifying that the feature is user-friendly and intuitive.
* Confirming that the feature complies with specified requirements and works seamlessly with existing Excellentable functionalities.

# Scope

## In-Scope

Following aspects will be in scope of testing the Excellentable charts feature:

* **Basic Chart Functionality**: Test the core functionality of creating, editing, and deleting charts as described in the user guide. Verify that users can add different types of charts (e.g., bar charts, line charts, pie charts) and customize their properties.
* **Data Input and Validation**: Ensure that the data input methods described in the user guide work as expected. Validate that the charts handle various types of data, such as numbers, dates, and categories, without errors.
* **Chart Customization**: Test the customization options for charts, such as changing colors, labels, titles, legends, and axis settings. Verify that these changes are reflected correctly in the charts.
* **Data Integration**: If the user guide mentions data integration with external sources or APIs, test these integrations to ensure data retrieval and synchronization are functioning correctly.
* **Export and Sharing**: Verify that users can export charts in the specified formats (e.g., image, PDF) and share them as described in the user guide.
* **Cross-Browser and Cross-Device Testing**: Ensure that Excellentable Charts work consistently on different web browsers (e.g., Chrome, Firefox, Edge) and devices (e.g., desktop, mobile, tablet).
* **Performance Testing**: Test the performance of charts with a large dataset, ensuring that the application remains responsive and loads charts efficiently.
* **Accessibility Testing**: Check if the charts are accessible to users with disabilities. Ensure that they can be used with screen readers and assistive technologies.
* **Error Handling**: Test error scenarios, such as entering invalid data, exceeding chart data limits, or encountering network issues. Verify that the system handles these gracefully and provides appropriate error messages

## Out-of-Scope

Following aspects will be out of scope from Excellentable chart’s testing:

* **Third-Party Browser Issues**: Issues related to browser-specific bugs or limitations that are beyond the control of the application.
* **User Training**: Training users on how to use Excellentable Charts is generally out of scope. This is typically the responsibility of the users or the organization providing training.
* **Compatibility with Unmentioned Software**: Compatibility with software or tools not mentioned in the user guide is out of scope unless it's essential for your organization.
* **Extensive Security Testing**: If security testing is required, it might be a separate phase of testing beyond the user guide validation.
* **Testing Future Updates**: Any features, enhancements, or changes not documented in the current user guide should be out of scope.

# Testing Strategy

## Test Objectives

The objective of this testing strategy is to validate the Excellentable Charts feature for functionality, compatibility, performance, accessibility, and usability.

**Tasks and Responsibilities:**

* **Test Manager**: Responsible for overall test planning, coordination, and reporting.
* **Test Lead**: Coordinates test execution, assigns tasks to test analysts, and ensures adherence to the test plan.
* **Test Analysts**: Responsible for test case design, execution, defect reporting, and documentation.

## Test Assumptions

It is assumed that:

* Adequate and representative test data will be available for functional and user acceptance testing.
* The development team will provide timely bug fixes based on the testing results.
* The test environment and necessary tools will be accessible during the testing phase.

## Data Approach

Test data in QA environments will be created, maintained, and refreshed to support functional and user acceptance testing. Data sets will include various data types (numeric, date, category) for testing different chart scenarios.

## Level of Testing

Following levels of testing will be performed:

|  |  |  |
| --- | --- | --- |
| **Test Type** | **Description** | **Responsible Parties** |
| Unit Testing | Testing individual components and features of the Excellentable Charts. | Test Manager, Test Lead, Test Analysts |
| Functional Testing | Testing the core functionality, customization, and performance of Excellentable Charts. | Test Manager, Test Lead, Test Analysts |
| User Acceptance Testing | Validating the user-friendliness of Excellentable Charts during chart creation. | Test Manager, Test Lead, Test Analysts |
| Regression Testing | Ensuring that existing functionality is not affected by new updates. | Test Manager, Test Lead, Test Analysts |

# Execution Strategy

## Entry Criteria

* Access to the user documentation for Excellentable Charts.
* Reviewers have a clear understanding of the feature's purpose and functionality

|  |  |  |  |
| --- | --- | --- | --- |
| **Entry Criteria** | **Test Team** | **Technical Team** | **Notes** |
| Test environment(s) is available | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| Test data is available | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| Code has been merged successfully | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| Development has completed unit testing | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| Test scripts are completed, reviewed and approved by the Project Team | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |

## Exit criteria

* A comprehensive review of the documentation has been conducted.
* Any identified issues or discrepancies have been documented.
* Recommendations for improvements have been made

|  |  |  |  |
| --- | --- | --- | --- |
| **Exit Criteria** | **Test Team** | **Technical Team** | **Notes** |
| 100% Test Scripts executed | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| 90% pass rate of Test Scripts | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| No open Critical and High severity defects | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| All remaining defects are either cancelled or documented as Change Requests for a future release | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| All expected and actual results are captured and documented with the test script | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| All test metrics collected based on reports from daily and Weekly Status reports | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| All defects logged in Defect Tracker/Spreadsheet | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| Test environment cleanup completed and a new back up of the environment | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |

## Validation and Defect Management

* **Test Case/Scenario Validation**: All test cases and scenarios should be thoroughly validated to ensure the accuracy and completeness of testing.

The validation process involves the following steps:

1. Testers execute all the test scripts as defined in the test plan for each testing cycle.
2. Testers compare the actual results with the expected results to identify discrepancies.
3. Any inconsistencies or deviations from expected behavior are documented as defects in the defect tracking system

* **Defect Tracking:** Defects found during testing will be systematically tracked using a Defect Tracker or a Spreadsheet.

**Defect Information**: Each defect report should include the following information:

* Defect title or description
* Severity/priority level
* Steps to reproduce
* Environment details
* Attachments (e.g., screenshots)
* Assignee (if applicable)

Defects found during the Testing should be categorized as below:

|  |  |
| --- | --- |
| **Severity** | **Impact** |
| *1 (Critical)* | * Functionality is blocked and no testing can proceed * Application/program/feature is unusable in the current state |
| *2 (High)* | * Functionality is not usable and there is no workaround but testing can proceed |
| *3 (Medium)* | * Functionality issues but there is workaround for achieving the desired functionality |
| *4 (Low)* | * Unclear error message or cosmetic error which has minimum impact on product use. |

* **Retesting and Closure**
* **Retesting**: After a defect is resolved, the tester who reported the defect is responsible for retesting the specific scenario where the defect was identified. This ensures that the issue has been successfully resolved without introducing new problems.
* **Closure:** Once a defect has been retested and found to be resolved, the tester is responsible for closing the defect in the defect tracking system. The defect's status should be updated to "Closed" or an equivalent status to indicate its resolution.
* **Reporting and Documentation:** Testers should generate defect reports regularly to provide visibility to the team and stakeholders. These reports may include statistics on defect status, age, and priority.

# Environment Requirements

## Test Environments

* Functional testing would be performed in Test Environment
* User Acceptance Testing would be performed in Pre-Production Environment.

# Risk And Dependencies

|  |  |  |
| --- | --- | --- |
| **Risk** | **Mitigation** | **Owner** |
| Incomplete or inaccurate test data can affect the quality of testing | Ensure the availability of representative test data and establish data validation procedures |  |
| Different browsers and devices may behave differently, leading to compatibility issues | Different browsers and devices may behave differently, leading to compatibility issues |  |
| The application may not perform well with large datasets or under heavy usage | Conduct performance testing to identify and address potential bottlenecks or scalability issues. |  |
| Data security and privacy concerns may arise. | Perform security testing to identify vulnerabilities and ensure data protection |  |
| Integration with external data sources or APIs may lead to integration issues | Validate data integration thoroughly and coordinate with external systems' owners |  |
| A high volume of defects may impact testing progress and schedule. | Manage defects efficiently, prioritize critical issues, and establish clear criteria for defect closure |  |
| A shortage of resources, including skilled testers and testing tools, can hinder testing efforts | Ensure that the testing team is adequately staffed and equipped with the necessary tools |  |
| Testing is dependent on the completion of development tasks | Collaborate closely with the development team to synchronize testing efforts with development milestones |  |
| Testing may require specific datasets to conduct tests effectively | Ensure that the required test data is available when needed, and establish data generation and provisioning processes |  |
| If the feature integrates with external systems or APIs, ensure that these are accessible and functional. | Coordinate with external system owners and confirm their availability for testing |  |
| Security testing may require specialized resources or expertise. | Engage with security experts or consultants as needed for thorough security testing. |  |

# Distribution List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Name** | **Role** | **Version** | **Approved** |
| 12/10/2023 |  | Test Manager/Lead | 0.1 | Y/N |
| 12/10/2023 |  | Project Manager | 0.1 | Y/N |
| 12/10/2023 |  | Product Owner | 0.1 | Y/N |
| 12/10/2023 |  | Technical Lead | 0.1 | Y/N |