

**Test Plan For:**

**Data for Road Incident Visualization, Evaluation, & Reporting. This is the official name of the application(DRIVER)**

**Prepared By:** [Takia Maliha]

**Version History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| **Version** | **Date** | **Change** | **Author** | **Reviewed by** |
| 1.0.0 | 18/9/2023 | Initial Stage | Takia Maliha | Abdul Qadir |
| 1.0.1 | 18/9/2023 | Scope of testing, All feature | Takia Maliha | Abdul Qadir |
| 1.0.2 | 19/9/2023 | Test Environment, Schedule update | Takia Maliha | Abdul Qadir |

**Abbreviation List**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Term** | **Abbreviation** | | | |
| DRIVER | Data for Road Incident Visualization, Evaluation, & Reporting. This is the official name of the application | | | |
| RCF | Road Crash Form. Special Entry screen to input brief information. This is seen on the Form input section | | | |
| ARF | Accident Report Form. Detail Incidence Information Entry Screen in WebInstance of DRIVER. It is similar to the Accident Report Form (ARF) used by the Dhaka Metropolitan Police to record traffic accident data. | | | |
| Blackspot | Location in a road where the highest number of traffic accidents occurs is called a Black Spot. | | | |
| Incident (blue dots) | Locations where incidents have occurred are shown on the map as blue dots. | | | |
| GUI | Graphical user interface | | | |
| UI | User interface | | | |

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# **Introduction**

The World Bank and GRSF created the DRIVER open-source system to address the crucial issue of insufficient data on traffic accidents in low- and middle-income nations. DRIVER is a highly effective tool for enhancing traffic safety due to its flexible deployment, adaptability, and innovative analytical tools. A public-facing website, customizable data entry, geocoding, and support for multiple languages are some of its features.

This test plan intends to ensure the dependability and usefulness of DRIVER in improving data on road safety around the world.

# **Reference**

[ *Add the Document Reference which you have used to get the understanding to make this plan*]

|  |  |
| --- | --- |
| **Ref. No** | **Document Title** |
| 01 | [YSD\_Manual SQA The DRIVER Software \_Scope Clarification Q&A V 1.0.0](https://docs.google.com/spreadsheets/d/1a3XV702xxwhfjqzYQ1DuGiKsLZXu0wSf/edit?rtpof=true&sd=true#gid=2020464507) |
| 02 | [A Brief User Manual of the DRIVER System V 1.0.1](https://drive.google.com/file/d/1H3dxQs0K39RKJigyGbP3LncYn6F_PV1r/view?usp=drive_link) |
| 03 | [[DRSP] Technical Document for Deployment and Configuration of the DRIVER Software V 1.0.0.pdf](https://drive.google.com/file/d/1x7qzJe3L2nsQCMPE21aHnnZaAdRWdgU-/view?usp=drive_link) |
| 04 | [DRIVER\_RFP.pdf](https://drive.google.com/file/d/1TWx_M4Z3XvwH7XZoq46kolo_xKmYbU17/view?usp=drive_link) |
| 05 | [Takia Maliha Project Name\_Feature List & Estimation V 1.0.0](https://docs.google.com/spreadsheets/d/17_vhYXo7MLYKbWxKMPTOwnFo1KYYatT_YKnFVCYJw8E/edit#gid=1920417459) |

**Note:** The Project will be developed following a clone of Agile-based methodology. Each Sprint duration will be 2 weeks. This test plan may also be changed according to the changes at any phase of testing.

# **High-Level Test Objective**

Our Main purposes are to ensure the overall quality of the product after feature enhancement, new feature implementation, and issue fixing. There are some test objectives we will follow here:

* This objective aims to ensure that the DRIVER software is effectively set up to support the DMP's daily activities related to traffic accidents, offering user-friendly data collection forms, robust reporting capabilities, and analytical tools for better decision-making.
* Enable seamless data collection, reporting, and analysis of traffic accidents for the DMP by deploying and configuring the DRIVER software. This includes implementing the Accident Report Form (ARF) and Road Crash Form for data collection, as well as providing efficient dashboard and data analysis tools for insightful reporting.

# **Test Strategy**

## **Strategy**

To ensure the quality of the applications. testing will be conducted based on the following approaches:

* **System Testing Strategy:** To ensure the consistency of each module and feature, the system overall will be evaluated.
* **Functional Testing Strategies:** Each module and its features need to be tested to ensure the functionalities of the product are working as expected.
* **UI Testing Strategies:** We have to check the UI components Whether they are placed as per the client’s Figma design or not.

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## **Test Level**

Only the following test levels will be conducted to ensure the quality:

* **System Testing:** The system will be tested as a whole to ensure consistency with each module and feature.

**Test Types**

The following types of testing will be conducted to ensure quality:

**Functional Testing:**

Functional testing will be performed taking both the positive and negative circumstances into view. The application has to align with its Scope Statement at this level to ensure that the target Facilities.

**GUI Test:**

To make sure that the application's graphical user interface is implemented exactly according to the UI standard, this testing will cover it. The goal of GUI testing is to evaluate user and application interaction. This covers the manner in which the program manages user input and presents text, graphics, buttons, menus, dialog boxes, icons, toolbars, and other elements on the screen.

**Features to be Tested.**

|  |  |
| --- | --- |
| **Phases** | **Features** |
|  | * Login Page * Dashboard * Add a record feature * Map Page * Record List Page * Manage Duplicate Records Page * Analyst Account |
| Note:  Test plan and execution may vary depending on the development progress and release. | |

# **Features not to be Tested.**

|  |  |
| --- | --- |
| **Phases** | **Feature** |
| **01** | * Security Testing will not be conducted * Regression Testing * Retesting * Integration Testing * Unit Testing * Test in Android app * Test in Mobile App * Test in Tablets * Test in Mac * Test in Microsoft Edge * Test in Opera * Download in Audit Logs * Admin Site * User Site |
|
|
|

# **Test Estimation**

Testing effort may depend on several factors including.

* Quality of the Test basis
* Size of the product
* Complexity of the problem domain
* Requirements for documentation
* Time pressure
* Number of defects and the amount of rework required.
* Retesting testing

# **Release Procedure**

To Release the product, we will follow below procedures:

● **Step 1:** Requirement Analysis Analyzing project requirements to establish a clear understanding of scope and objectives.

● **Step 2:** Development and Internal Release for QA Beginning development based on the analyzed requirements. Create an internal release for Quality Assurance (QA) testing.

● **Step 3**: QA Testing and Bug Reporting The QA team rigorously will test the internal release. Identify and report any issues or bugs encountered during testing.

● **Step 4**: Bug Fixing by the Developer's Development team will address and fix reported bugs.

● **Step 5:** Final Release for the Current Phase We will prepare and release the final version of the app for the current development phase.

**● Step 6:** QA Verification of Bug Fixes QA will validate that the reported bugs from the internal release have been successfully fixed in the final release.

● **Step 7**: Comprehensive Phase Testing and Bug Recording The QA team will perform comprehensive testing of the entire phase, recording any remaining bugs or issues.

● **Step 8:** Release Evaluation The QA team will assess the status of the project: if there are no blocking issues and low-severity bugs remain, proceed with the release. Otherwise, the release will be postponed until issues are resolved.

● **Step 9:** Future Phase Bug Resolution Any outstanding bugs that were not addressed for the current phase will be prioritized for resolution in the next development phase.

# **Test Suspension Criteria**

Testing will be suspended, and the QA team will reject the receivables upon the following criteria:

* During testing blocking issues are identified.
* Respective bug is not fixed in the dedicated release.
* Release without release note

**Note:** If any case happens then QA has to raise an issue to respective stakeholders

# **Test Acceptance Criteria:**

* Application UI should match per provided UI specification.
* The application does not have any blocking issues.
* Application has 85% Test case coverage.
* Application has covered supported browsers (Windows Chrome).

# **QA Task List and Testing Process**

Below Tasks will be performed by the QA Team:

* Requirement analysis
* Identify Test areas.
* Test Case writing on identified test areas.
* Prepare the Test environment.
* Execute Test Cases
* Bug reporting/retest
* Deliver Test report.
* Perform Test closure activity.
* Daily morning meeting
* Spec grooming meeting

# **Test Environment**

To prepare the test bed for **the** project following are the requirements:

## **Hardware Requirement:**

* PC (Widows)

**Software Requirement:**

* **Google Chrome**

## **Network Requirement:**

* + - Internet connectivity to PC /Laptop

## **Tools to be used:**

* + - **Test Case management**: Microsoft Excel
    - **Document management**: NextCloud
    - **Project management**: Redmine
    - **Design Tool**: Figma

Device oriented testing will be conducted as per following plan:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Platform** | **Browser/OS** | **Device** | **Details** | **Comments** |
| Windows 10 | Chrome | PC | Screen resolution: 1920 x 1080 |  |

# **The schedule**

will be updated as Sprint feature release:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Phase | Features / Modules | Test Iems | # of Test Cases | Start Date | Final Release |
| **1,2,3** | * UI/UX of Login page * Language * Create account   1. Analyst * Data Storage in account * Validation * Login User name * Login Password * UI/UX of Navigation Bar(Menu) * Visibility of these feature under navigation bar   1. Dashboard   2. Map   3. Record-list   4. Incident   5. All * UI/UX of DRIVER Dashboard Page * Black Spots on Map * Incidents on Map   1. Last Two Weeks as per setting   2. Total economic loss and societal harm * Incidents dates * Graph (Matrix) * Saved Filters | 16 | 71 | 20/9/23 | 29/9/23 |
| 4,5 | * UI/UX of Add a record feature * Plus icon for add a record * Under the plus icon need to check   + Incident Location & Time   + RCF Details form   + ARF Details form   + VEHICLES / যানবাহনগুলি   + PASSENGER PEDESTRIAN CONTRIBUTORY FACTOR * Blue Dots * View details a Record from Map Page * Edit a Record from Map Page * Filters [Apply Filter, Save a Filter, Filter with Thana & Delete Filter] * Export Recorded Incidents in CSV * Custom Report * Draw a Polygon/Rectangle from Map Page * Record List Page * Apply Filters in Record Page * Edit a Record from Record List * Manage Duplicate Records Page | 12 | 50 | 21/9/23 | 29/9/23 |

# **QA Summary Report**

From this report all stockholders can view and judge the current project Quality

|  |  |
| --- | --- |
| **Sprint** | **URL** |
| 1st Release (V-1.0.0) | https://drive.google.com/drive/folders/1-z0gg4bt\_7pJI5YCMXK18Tj\_UwQf-rmu?usp=drive\_link |

# **Roles and Responsibilities**

|  |  |
| --- | --- |
| **Resource Name** | **Responsibilities** |
| Abdul Qadir | Project Manager |
| Takia Maliha | Trainee SQA Engineer |

# **Risk and Contingencies**

**Schedule:**

* If SRS are not Cleared as per schedule, then we may not be able to meet the Testing deadline.
* If Releases for Testing are not provided as per schedule, then we may not be able to meet the deadline.
* Any changes to the requirements/scope could affect the test schedule.

**Testing:** The application may have side effects due to the implementation of new features and function enhancement and this may affect the functionality of existing features due to lack of proper testing time. Mitigation can be the proper testing scope and testing time.

**Application Risk:**

* Applications may behave abnormally, and major functions may not work in non-supported devices/interfaces.
* Application may also not work expectedly in the latest browsers for which the application is modified and tested.

# **Test Exit Criteria**

The Testing process of the DRIVER application will be ended if the following criteria are met:

* All specified functions are functioning properly.
* Major bugs are identified, resolved, and retested.
* All test cases are executed and passed.
* Testing is ongoing but the PM requested to release the system.

# **Bug Status Explanation**

We maintain the following status of the Bug in our Test Execution report:

**New:** SQAE creates a new bug. Sets the Assignee to PM/TL/SE

**Rejected:** If the reported bug is invalid, PM/TL changes the status to Rejected & Assignee to SQAE.

**Assigned:** PM/TL/SE changes the status to Assigned

**In Progress:** Assignee changes the status to InProgress when s/he starts working. Assignee records Spent Time every day.

**Submitted:** Assignee changes the status to Submitted when s/he finished the task & set the Assignee to PM/TL. Assignee Record Spent time.

**Feedback:** If the review isn’t successful PM/TL changes the status to Feedback & Assignee to SE.

**Reviewed:** Assignee reviews and changes the status to Reviewed and Assignee to SQAE

**Fixed but Failed:** Assignee (SQAE) retest and if not fixed then changes the status to Fixed but Failed and Assignee to PM/TL

**Resolved:** Assignee (SQAE) retest and if fixed then changes the status to Resolved and Assignee to PM/TL

**Close:** PM/TL (if assigned) will close the ticket if review is successful and clarified the feedback

**Reopen:** PM/TL can set the closed task status to Reopen, if necessary

# **Test Deliverables**

Followings are the deliverables from QA for the **DRIVER** project:

**Test Deliverables before Testing**

* Test Plan
* Test Cases

**Test Deliverables after Testing**

* Test execution report
* Test report (each sprint)

*Known issues are well mentioned in each sprint release note.*

# **Test Plan Approvals**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Roles** | **Signature** | **Date** |
| Abdul Qadir | Project Manager |  |  |
| xxx | Project Manager |  |  |