

**Test Plan on**

Data for Road Incident Visualization, Evaluation, and Reporting

Prepared By:

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**Version History**

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| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Change** | **Author** | **Reviewed by** |
| 1.0.0 | 19.09.2023 | Initial creation and Phase-1 Testable Features added. | Rana Tabassum | Abdul Qadir |
| 1.0.1 | 22.09.2023 | Phase-2 Testable Features, test activity and schedule added. | Rana Tabassum | Abdul Qadir |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Term** | **Abbreviation** | | | |
| DRIVER | Data for Road Incident Visualization, Evaluation, and Reporting | | | |
| ARF | Accident Report Form | | | |
| RCF | Road Crash Form | | | |
| DMP | Dhaka Metropolitan Police | | | |
| DMA | Dhaka Metropolitan Area | | | |
| SRS | Software Requirement Specification | | | |
| UI | User Interface | | | |
| OS | Operating system | | | |
| PM | Project Manager | | | |
| PC | Personal Computer | | | |

**Abbreviation List**

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# Introduction



The DRIVER (Data for Road Incident Visualization, Evaluation, and Reporting) is an open-source system that has been already developed and deployed by the World Bank and GRSF. This project aims to deploy and configure software that collects and analyzes and reports data related to road incidents and is intended for use by the Dhaka Metropolitan Police (DMP). Specifically, it is designed to improve the reporting and analysis of road accident data and statistics in the Dhaka Metropolitan Area (DMA).

This test plan serves as a comprehensive overview of the testing process and ensures the quality and reliability of the software before it is deployed for use by the Dhaka Metropolitan Police .So, The main purpose of this document is to ensure the overall Quality assurance plan, scope for the deployment and configuration, test Procedure, testing approach, test schedule, test environment, test acceptance criteria, test Reporting, roles and responsibilities etc.

# Reference



| **Ref. No** | **Document Title** |
| --- | --- |
| ref\_01 | [DRIVER\_RFP.pdf](https://drive.google.com/file/d/14vsM1ejFwdv_NRZh2wYORBTKh8iOPhKs/view?usp=drive_link) |
| ref\_02 | [[DRSP] Technical Document for Deployment and Configuration of the DRIVER Software V 1.0.0.pdf](https://drive.google.com/file/d/1x14KddNoLBHxcgRXtbWNR7Rge4ZcsE3n/view?usp=drive_link) |
| ref\_03 | [DRIVER\_Module list.xlsx](https://docs.google.com/spreadsheets/d/1ydH52ZTY0tuqE_D22ZKW1iGj1-8Mr7GV/edit?usp=drive_link&ouid=116595956964802507778&rtpof=true&sd=true) |
| ref\_04 | [A Brief User Manual of the DRIVER System V 1.0.1.pdf](https://drive.google.com/file/d/1RtNIk3lW_jlK097qzwdWstkH1JNKUL6U/view?usp=drive_link) |

**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



The high-level objectives of the DRIVER (Data for Road Incident Visualization, Evaluation, and Reporting) test plan are to ensure the quality, reliability, and functionality of the DRIVER software. These objectives guide the testing process and help achieve the desired outcomes for the Dhaka Road Traffic Safety Project (DRSP). Here are the high-level objectives of the DRIVER test plan:

* **Quality Assurance:** Ensure that the DRIVER software meets the requirements and high-quality standards.
* **Functional Validation:** Verify that all functions and features work correctly and as expected.
* **Bug Identification:** Identify and report any defects, issues in the software.
* **Risk Mitigation:** Mitigate potential risks by identifying and addressing issues early in the testing process.
* **Test Reporting:** Generate comprehensive test reports that document test cases, test results, issue reports etc.
* **Test Closure:** Ensure that all testing activities are properly done, and exit criterias are met before the software is ready for deployment.
* **Acceptance Criteria:** Confirm that the software meets the acceptance criteria defined for its release to the DMP and gain the confidence of the customers by providing them a quality product

# Test Strategy



## Strategy

The test strategy for the DRIVER (Data for Road Incident Visualization, Evaluation, and Reporting) system encompasses various testing approaches to ensure the software's quality and functionality. Below are the key testing strategies for DRIVER:

* **Functional Testing Strategies:** Functional testing will be done to verify that the software functions according to its specifications and requirements.
* **System Testing Strategy:** The primary objective of system testing is to evaluate the entire system's behavior, ensuring that all its components work together seamlessly.
* **UI Testing Strategies:** UI testing focuses on validating the software's graphical user interface (GUI) to ensure it aligns with design specifications and provides a user-friendly experience.

## Test Level

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

**System Testing:** System testing is the primary level of testing for the DRIVER software.

## Test Types

Following types of testing will be conducted to ensure the quality:

**Functional Testing:**

Functional test will be conducted considering the positive and negative scenarios. In this level, to ensure that target Infrastructure, application must meet its Scope Statement.

**GUI Test:**

This testing will cover the application's graphical user interface, to ensure flawless implementation based on UI specification. GUI testing intent to test how the application and the user interact. This includes how the application handles user input and how it displays screen text, images, buttons, menus, dialog boxes, icons, toolbars and more.

# Features to be Tested



| **Phases** | **Sprint** | **Features** |
| --- | --- | --- |
| 01 | 01 | * Complete UI of DRIVER Software * Login * Dashboard   + Navigation bar   + Incidents: Last Two Weeks map   + Total economic loss and societal harm: Last 90 days   + Number of incidents   + Time of Day, Day of Week: Last 90 Days   + Saved Filters * My Account * Manage Duplicate Records * Map   + Filter type   + Control Layer Toggle   + Zoom functionality   + Draw a polygon and rectangle feature   + Footer   + Loss amount * Record List   + Filter Bar * Add a record   + Incident Location & Time   + RCF (Road Crash Form)   + ARF (Accident Report Form) |
| Note:  Test plan and execution may vary depending on the development progress and release. | | |

# 

# Features not to be Tested



| **Phases** | **Features** |
| --- | --- |
| 01 | * Pixel Perfection testing * Scope Testing * Admin and Public User group * Non-Functional Testing * Full Integration Testing * User Acceptance Testing * Retesting * Regression Testing * Hardware failure * External Hardware Device Compatibility |
|
|
|
|

# Test Estimation



Testing effort may depend on several factors including.

* Quality of the Test basis
* Scope of Testing
* Project Schedule
* Size of the product
* Continuous Monitoring and Updating
* Complexity of the problem domain
* Requirements for documentation
* Time pressure
* Number of defects

# Release Procedure



Below procedures will be followed for Release:

**Step 1:** Conduct a comprehensive analysis of project requirements.

**Step 2:** Initiate the development phase and create an internal release for QA testing.

**Step 3:** QA team performs thorough testing and reports any identified bugs.

**Step 4:** Developers address reported bugs and issues.

**Step 5:** Prepare a final release for the ongoing project phase.

**Step 6:** QA verifies that all reported bugs have been effectively fixed in the final release.

**Step 7:** QA conducts complete testing according to the designated phase scope and documents any identified bugs.

**Step 8:** If there are no critical issues and low-severity bugs, proceed with the release. Otherwise, postpone the release.

**Step 9:** Address any remaining bugs in the subsequent project phase.

# Test Suspension Criteria



Testing will be put on hold, and the QA team will reject the receivables if they meet the following requirements:

* Identification of a critical defect that significantly impacts the application's main functionalities and prevents further testing.
* uncontrolled changes in project scope or requirements
* Lack of necessary testing resources.
* Upon major security issue finding.
* Release is without release note.
* Previous bug is not fixed

Note: If any case will happen then QA have to raise the issue to respective stakeholders.

# Test Acceptance Criteria:



* No High Priority Bug is open.
* No security issue.
* Application does not have any blocking issues.
* Application has 90% test coverage.
* All the test cases are at least executed once.
* Application UI should match Figma UI Specification.
* Application has covered supported required Devices and

# QA Task List and Testing Process



Below Tasks will be performed by the QA Team:

* Requirement analysis
* Scope understanding
* Identify Test areas.
* Test estimation
* Test Case writing on identified test areas.
* Prepare a Test environment.
* Execute Test Cases
* Test Data Management
* Bug reporting
* Deliver Test report.
* Perform Test closure activity.
* Knowledge Transfer Activities

# Test Environment



To prepare the test bed for the project followings are the requirement:

## Hardware Requirement:

* PC (Widows)

## Software Requirement:

* **DRIVER Software**
* **Operating System**: Windows 10 or 11
* **Microsoft Office**
* **Google Chrome**

## Tools to be used:

## Test Case management: Google Sheets

* **Document management:** NextCloud

## Project management: Redmine

## Network Requirement:

* + - Internet connectivity to PC /Laptop

Device oriented testing will be conducted as per following plan:

| **Platform** | **Browser/OS** | **Device** | **Details** | **Comments** |
| --- | --- | --- | --- | --- |
| Windows 11 | Chrome  Version 116.0.5845.180 | PC | Screen resolution: 1368 x 768 |  |

# 

# Schedule



Schedule will be updated as Sprint feature release:

| **Phase** | **Feature Name** | **Req. Analysis** | **No of Test Items** | **Test Case Design** | **Internal QA Release** | **Final Release** |
| --- | --- | --- | --- | --- | --- | --- |
| 01 | * Complete UI of DRIVER Software * Login * Dashboard   + Navigation bar   + Incidents: Last Two Weeks map   + Total economic loss and societal harm: Last 90 days   + Number of incidents   + Time of Day, Day of Week: Last 90 Days   + Saved Filters * My Account * Manage Duplicate Records * Map * Filter type * Control Layer Toggle * Zoom functionality * Draw a polygon and rectangle feature * Footer * Loss amount * Record List * Filter Bar * Add a record * Incident Location & Time * RCF (Road Crash Form) * ARF (Accident Report Form) |  | 24 | 108 | 25.09.2023 | 29.09.2023 |

# QA Summary Report



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

| **Sprint** | **URL** |
| --- | --- |
| 1.0.0 | <https://drive.google.com/drive/folders/1ZELC17UosetsGGtEV_TdRGPpyrLjGWYm> |

# Roles and Responsibilities



| **Resource Name** | **Responsibilities** |
| --- | --- |
| Abdul Qadir | Project Manager |
| Emon | Programmer |
| Rana Tabassum | QA |

# Risk and Contingencies



**Schedule:**

* Limited availability of key personnel or teams required for testing might impact the testing schedule.
* Poor communication and collaboration among cross-functional teams might lead to misunderstandings and delays.
* If SRS are not cleared as per the defined schedule, it could impact our ability to meet the testing deadline.
* Delayed releases of the application for testing may lead to challenges in meeting the testing deadline.
* Any changes to the project's requirements or scope could potentially impact the test schedule.
* Delays in receiving third-party components or integrations might lead to testing delays.

**Testing:**

* Introducing new features or function enhancements might inadvertently lead to side effects that affect the functionality of existing features due to inadequate testing time.
* The lack of proper testing scope and testing time might result in critical issues going unnoticed.

**Application Risk:**

* The application might exhibit abnormal behavior and major functions may not work as expected on non-supported devices or interfaces.
* Compatibility issues might arise, causing the application to not function as intended on the latest browsers for which it has not been modified and tested.

# Test Exit Criteria



Testing process of the DRIVER application will be ended if 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 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 **DRIVER** project:

**Test Deliverables before Testing:**

* Test Estimation
* Test Plan
* Test Cases

**Test Deliverables after Testing:**

* Bug Report
* Test report

# Test Plan Approvals

| **Name** | **Roles** | **Signature** | **Date** |
| --- | --- | --- | --- |
| Abdul Qadir | PM |  | 19.09.2023 |
| Abdul Qadir | PM |  | 22.09.2023 |

