**Test Plan**

**Test Plan For:** DRIVER (Data for Road Incident Visualization Evaluation and Reporting)

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**Version History**

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| **Version** | **Date** | **Change** | **Author** | **Reviewed by** |
| 1.0.0 | 19-09-2023 | Initial Testing phase  Abbreviation list  Added Heading description  Formatted the document  Test Strategy  Test Criteria  Test Environment | Mir Mohaiminul Islam | A.F.M.M Abdul Qadir |
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|  |  |  |  |  |
| **Term** | **Abbreviation** | | | |
| DRIVER | Data for Road Incident Visualization, Evaluation, & Reporting. | | | |
| RCF | Road Crash Form. | | | |
| ARF | Accident Report Form. | | | |
| DMP | Dhaka Metropolitan Police | | | |
| QA | Quality Assurance | | | |
| DRSP | Dhaka Road Traffic Safety Project | | | |
| GUI | Graphical User Interface | | | |
| UI | User Interface | | | |

**Abbreviation List**

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# Introduction

This test plan aims to evaluate **DRIVER (Data for Road Incident Visualization Evaluation and Reporting)**, a specialized software tool designed for the purpose of collecting and analyzing road accident data.

DRIVER is an open-source, free web application that will enhance data collection, analysis, management, and reporting of traffic collision accidents. It is made to collect and examine information about incidents that take place in a specific location, including crimes or traffic accidents. The software offers some tools for entering data, such as graph and map interfaces, customized report and filter tools, simultaneous editing by many users, and data exports. The project's core objective is to deploy and configure the DRIVER software for the exclusive use of the **Dhaka Metropolitan Police (DMP)**, the project's sole stakeholder.

This test plan outlines the process of testing the functionality of DRIVER. The main purpose of this document is to ensure the overall Quality assurance plan, Test Procedure, Test schedule, Test acceptance criteria, Test Reporting etc.

# Reference

The following documents are used to prepare the DRIVER's Test Plan.

|  |  |
| --- | --- |
| **Ref. No** | **Document Title** |
| 1.0 | [[DRSP] Technical Document for Deployment and Configuration of the DRIVER Software V 1.0.0](https://nextcloud.bjitgroup.com/index.php/s/oqNqYX9QS33Ec2b?dir=undefined&path=%2FManual_SQA_Project_Docs&openfile=2362907) |
| 2.0 | [Brief user Manual of the DRIVER system V1.0.0](https://nextcloud.bjitgroup.com/index.php/s/oqNqYX9QS33Ec2b?dir=undefined&path=%2FManual_SQA_Project_Docs&openfile=2362909) |
| 3.0 | [DRIVER RFP](https://nextcloud.bjitgroup.com/index.php/s/oqNqYX9QS33Ec2b?dir=undefined&path=%2FManual_SQA_Project_Docs&openfile=2362908) |
| 4.0 | [DRIVER Module List](https://nextcloud.bjitgroup.com/index.php/apps/onlyoffice/s/oqNqYX9QS33Ec2b?fileId=2362906) |
| 5.0 | [QA Estimation Document](https://docs.google.com/spreadsheets/d/1FJQYO38txfYK_x9YJ3bSjYbuurUUcXMj/edit?usp=drive_link&ouid=103597001858289623603&rtpof=true&sd=true) |

# High Level Test Objective

Our high-level goals are to check DRIVER for feature improvement, issue fixing, and further maintenance work. We define the following test objectives:

❖ Verify that the application functions according to the specified SRS Document.

❖ Prevent defects and ensure issue fixing.

❖ Achieve customer trust by delivering a high-quality product.

❖ Ensure that the outcome aligns with the stipulated requirements.

❖ Establish and effectively communicate the quality standard to instill a sense of assurance.

# Test Strategy

## Strategy

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

* **System Testing Strategy**
* **Functional Testing Strategies**
* **UI Testing Strategies**

## Test Level

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

**System Testing:**

The whole system of DRIVER software will be tested after getting the software build. Here the overall functionality and the user interface (UI) of DRIVER will be tested thoroughly with modules and their submodules.

## Test Types

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

**Functional Testing:**

Functional testing of the **DRIVER** software will be conducted after composing test cases for each module and its respective sub-modules. Each functionality will be tested considering the positive and negative scenario & ensure the functionality works as defined as requirement.

**GUI Test:**

In this testing stage, we will thoroughly examine the **DRIVER** software’s graphical user interface (GUI) to ensure its flawless alignment with the provided UI specifications. The main focus of GUI testing is to assess the interaction between users and the application. This entails scrutinizing how the application handles user inputs and how it renders various on-screen elements, including text, images, buttons, menus, dialog boxes, icons, toolbars, and various graphical elements, to guarantee a seamless user experience.

# Features to be Tested.

|  |  |  |
| --- | --- | --- |
| **Phases** | **Sprint** | **Features** |
| **01** | **01** | * Login * My Account, Account Information * **Dashboard:** Total economic loss and societal harm: Last 90 days, Black Spot by Severity, Incidents: Last Two Weeks map. Number of incidents, Time of Day, Day of Week: Last 90 Days, Saved Filters. * Manage Duplicate Record, Potential Duplicate Records, date, time, location * **Map:** Filter type, Control Layer Toggle, Zoom in & zoom out icon, Zoom to, Draw a polygon, Draw a rectangle, Layer Edit, Layer Delete, Footer, Loss amount (In number) * **Record List**: filter bar * **Add a Record:** Incident Location & Time, Location field, Location map, Latitude (Mandatory field), Longitude (Mandatory field), Occurred (Mandatory field), Weather dropdown, Light, ARF, RCF |
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# Features not to be Tested.

The following features will not be tested during the following phases:

|  |  |
| --- | --- |
| **Phases** | **Features** |
| 01 | * **Admin Module** won’t be tested * **Retesting** won’t be conducted. * **Partial or Full Regression testing** won’t be conducted. * **Testing in Mobile & tablet environments** will not be conducted. |
|
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# Test Estimation

Testing effort for DRIVER software may depend on several factors including.

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

# Release Procedure

Below procedures will be followed for Release:

* Step-1: Requirement Analysis
* Step-2: Start Development and make internal release for QA on Sprint first day
* Step-3: QA continue testing and report bug
* Step-4: Developer complete the rest of development and start fixing current sprint Bugs
* Step-5: Make a Final Release for current Sprint on Sprint closing day
* Step-6: QA Confirm last release bugs fixed in Final Release
* Step-7: QA make complete respective Sprint Testing Scope and record bugs
* Step-8: If there do not have any blocking issue and bug Severity is low, Application goes release otherwise release will not be done.
* Step-9: Remaining bugs will be fixed in next Sprint release

# Test Suspension Criteria

Testing will be suspended, and 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 will happen then QA have to raise issue to respective stakeholders

# Test Acceptance Criteria:

* DRIVER software UI should match as per provided UI specification.
* Application does not have any blocking issue.
* Test Coverage of the software has to be more than or equal to 85%
* DRIVER Software have covered supported browsers (Google Chrome).

# QA Task List and Testing Process

Below Tasks will be performed by the QA Team during the testing of DRIVER software:

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

# Test Environment

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

## Hardware Requirement:

* **PC**

## Software Requirement:

* **Operating System**: Windows 10 or above
* **Microsoft Office**
* **Browser: Google Chrome**

## Network Requirement:

* Internet connectivity to PC

## Tools to be used:

* **Test Case management: Microsoft Excel**
* **Document management: NextCloud**
* **Project management: Redmine**

Device oriented testing will be conducted as per following plan:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Platform | Browser/OS | Device | Details | Comments |
| Windows 10 | Chrome  version:  117.0.5938.92 (Official Build) (64-bit) | PC | Screen resolution: 1366\*768 |  |

# Schedule

Schedule will be updated as Sprint feature release:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Phase** | **Feature Name** | **No of Test Items** | **Test Case Design** | **Internal QA Release** | **Final Release** |
| 01 | * Login, * My Account, Account Information * **Dashboard:** Total economic loss and societal harm: Last 90 days, Black Spot by Severity, Incidents: Last Two Weeks map. Number of incidents, Time of Day, Day of Week: Last 90 Days, Saved Filters. * Manage Duplicate Record, Potential Duplicate Records, date, time, location * **Map:** Filter type, Control Layer Toggle, Zoom in & zoom out icon, Zoom to, Draw a polygon, Draw a rectangle, Layer Edit, Layer Delete, Footer, Loss amount (In number) * **Record List**: filter bar * **Add a Record:** Incident Location & Time, Location field, Location map, Latitude(Mandatory field), Longitude(Mandatory field), Occurred(Mandatory field), Weather dropdown ,Light, ARF, RCF | 07 | 125 | 25-09-2023 | 29-09-2023 |
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# QA Summary Report

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

|  |  |
| --- | --- |
| **Version** | **URL** |
| 1.0.0 | [QA Summary Report](https://drive.google.com/drive/folders/1PXwbZZVrL-nNJSASrF7GIrAe3-X5j0m0?usp=drive_link) |

# Roles and Responsibilities

|  |  |
| --- | --- |
| **Resource Name** | **Responsibilities** |
| N/A | General Manager |
| N/A | Business Analyst |
| A.F.M.M Abdul Qadir | Project Manager |
| N/A | Programmer |
| N/A | QA Lead |
| Mir Mohaiminul Islam | QA |

# 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 implementation of new features and function enhancements in the application can result in unintended side effects, which, in turn, may disrupt the functionality of existing features due to limited testing resources and time constraints.
* Well defined testing scope along with sufficient testing time are needed to mitigate issues.

**Application Risk:**

* DRIVER software may behave abnormally, and major functions may not work in non-supported devices/interfaces. Application may also not work expectedly in latest browsers for which application is not 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 and spec preparation

**Test Deliverables after Testing**

❖ Test execution report

❖ Bug report

❖ Test report

Note: Known issues are needed to be well mentioned in each Phase release note.

# Test Plan Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Roles** | **Signature** | **Date** |
| A.F.M.M Abdul Qadir | Project Manager | A.F.M.M Abdul Qadir | 21/09/2023 |