







**Version History**

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| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Change** | **Author** | **Reviewed by** |
| 1.0.0 | 19/09/2023 | Initial version with all features | Mahmud Iftekhar Asef | Abdul Quadir |
| 1.0.1 | 21/09/2023 | Schedule updated, Features to be tested updated, Test environment section added | Mahmud Iftekhar Asef | Abdul Quadir |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Term** | **Abbreviation** | | | |
| GUI | Graphical User Interface | | | |
| DRIVER | Data for Road Incident Visualization, Evaluation, and Reporting | | | |
| DRSP | Dhaka Road Traffic Safety Project | | | |
| ARF | Accident Report Form | | | |
| RCF | Road Crash Form | | | |
| DMP | Dhaka Metropolitan Police | | | |
| OS | Operating System | | | |
| PM | Project Manager | | | |

**Abbreviation List**

**Table of contents**



[1. Introduction 4](#_gjdgxs)

[2. Reference 4](#_30j0zll)

[3. High Level Test Objective 5](#_1fob9te)

[4. Test Strategy 5](#_3znysh7)

[Strategy](#_2et92p0) 6

[Test Types 6](#_tyjcwt)

[5. Features to be Tested](#_3dy6vkm) 7

[6. Features not to be Tested](#_4d34og8) 8

[7. Test Estimation](#_2s8eyo1) 8

[8. Release Procedure](#_17dp8vu) 9

[9. Test Suspension Criteria](#_3rdcrjn) 9-10

[10. Test Acceptance Criteria:](#_26in1rg) 10

[11. QA Task List and Testing Process](#_lnxbz9) 10

[12. Test Environment 1](#_35nkun2)1

[Hardware Requirement: 1](#_1ksv4uv)1

[Software Requirement: 1](#_44sinio)1

[Network Requirement: 1](#_2jxsxqh)1

[Tools to be used: 1](#_z337ya)1

[13. Schedule 1](#_3j2qqm3)2

[14. QA Summary Report 1](#_1y810tw)3

[15. Roles and Responsibilities 1](#_4i7ojhp)3

[16. Risk and Contingencies](#_2xcytpi) 14

[17. Test Exit Criteria 1](#_1ci93xb)4

[18. Bug Status Explanation 1](#_3whwml4)5

[19. Test Deliverables 1](#_2bn6wsx)6

[20. Test Plan Approvals 1](#_qsh70q)6

# Introduction



The DRIVER (Data for Road Incident Visualisation, Evaluation, and Reporting) web application is a platform that prioritizes the needs of the user and is designed to assist the Dhaka Metropolitan Police (DMP) in their efforts to promote road safety. It provides them with crucial tools for gathering, analyzing, and reporting accident data.

Our thorough testing process aims to ensure the software's quality and functionality while reducing any potential problems before deployment. This test plan underscores our unwavering commitment to the success of the DRIVER website. We want to proactively address any problems, improve user experience, and ensure long-term operation through extensive functional testing. Our primary mission is to secure the effectiveness and reliability of the DRIVER website.

# Reference



| **Ref. No** | **Document Title** |
| --- | --- |
| 1.0 | Client Provided DRIVER\_RFP  [DRIVER\_RFP](https://nextcloud.bjitgroup.com/index.php/s/oqNqYX9QS33Ec2b?dir=undefined&path=%2FManual_SQA_Project_Docs&openfile=2362908) |
| 2.0 | PM Provided DRIVER\_Module list  [DRIVER\_Module list](https://nextcloud.bjitgroup.com/index.php/apps/onlyoffice/s/oqNqYX9QS33Ec2b?fileId=2362906) |
| 3.0 | [DRSP] Technical Document for Deployment and Configuration of the DRIVER Software V 1.0.0  [Technical Document](https://nextcloud.bjitgroup.com/index.php/s/oqNqYX9QS33Ec2b?dir=undefined&path=%2FManual_SQA_Project_Docs&openfile=2362907) |
| 4.0 | A Brief User Manual of the DRIVER System V 1.0.1  [User Manual](https://nextcloud.bjitgroup.com/index.php/s/oqNqYX9QS33Ec2b?dir=undefined&path=%2FManual_SQA_Project_Docs&openfile=2362909) |

**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 testing activities on the "DRIVER" project are guided by the high-level test objectives. These aims are in line with the project's objectives to improve features, introduce new functionality, fix problems, and uphold overall product quality. Making sure the application satisfies the required specifications and offers a smooth user experience is the main goal of testing. We outline the following test goals:

**Optimal Performance of the Functionalities:**

* We aim to provide assurance that the app's core features, including data collection, analysis, reporting, user authentication, and any newly added functionalities, remain in optimal working condition, delivering a reliable and effective tool for the (DMP) and DRSP.

**Requirement Validation:**

* Conduct comprehensive testing to validate that all features and components align with the established requirements.
* Identify any discrepancies or non-compliance and ensure they are appropriately addressed to maintain project integrity.

**Data Integrity Verification:**

* Implement rigorous data validation and verification procedures to ensure the accuracy and consistency of accident data collected by the app.
* Identify and rectify any discrepancies to maintain data integrity.

**Issue Resolution:**

* Identify and resolve any defects or issues carried over from previous versions of the DRIVER app.
* Verify that reported problems are effectively addressed and that the software remains free of newly introduced issues.

**Quality Assurance:**

* Maintain a focus on application quality by consistently testing and validating all updates and maintenance work.
* Ensure that these efforts do not compromise the stability or performance of the existing features, thus upholding the overall quality of the DRIVER app.

# Test Strategy



## Strategy

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

* **System Testing Strategy:** The system testing strategy for the DRIVER app involves validating the integration and functionality of all modules and components to ensure they collectively meet project requirements
* **Functional Testing Strategies:** Prioritize testing efforts to comprehensively cover all critical functional aspects of the DRIVER app, ensuring that each feature and module is thoroughly validated.
* **UI Testing Strategies:** Assess the graphical user interface (GUI) for consistency in design, layout, and usability. Ensure that GUI elements are intuitive and responsive, contributing to a positive user experience.
* **User-Centric Validation:** Place a strong emphasis on user-centric validation, ensuring that the DRIVER app aligns with user expectations and is user-friendly in terms of functionality and GUI design
* **Iterative Testing Strategy:** Testing will be performed in iterations, with each iteration focusing on specific features or functionalities.

## Test Level

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

**System Testing:** At the system testing level, the entire DRIVER software is tested as a whole to ensure it meets the specified requirements and functions correctly in its intended environment.

## Test Types

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

**Functional Testing:**

It focuses on verifying whether individual components or functionalities of the web application perform as intended. It aims to ensure that each function or feature operates correctly, adhering to specified requirements and delivering the expected outcomes within the application.

**GUI Test:**

This testing will include the graphical user interface of the programme to guarantee perfect implementation in accordance with the UI standard. The goal of GUI testing is to evaluate user and application interaction. This relates to the way the programme manages user input as well as how it presents text, graphics, buttons, menus, dialogue boxes, icons, toolbars, and other elements on the screen.

# Features to be Tested.



| **Phases** | **Sprint** | **Features** |
| --- | --- | --- |
| 01 | 01 | * Log In * DRIVER * Black Spots by Severity * 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 * Account Information * Potential Duplicate Records * 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) * Graphs * Export > Export CSV * Filter Bar * Weather * View * Edit * Incident Location & Time * RCF (Road Crash Form) * ARF (Accident Report Form) * ARF (Accident Report Form) > VEHICLES / যানবাহনগুলি * ARF (Accident Report Form) > PASSENGER / যাত্রীদের বিবরণ * ARF (Accident Report Form) > PEDESTRIAN / পথচারীদের বিবরণ |
|
|
| Note:Test plan and execution may vary depending on the development progress and release. | | |

# Features not to be Tested.



| **Phases** | **Features** |
| --- | --- |
| 01 | * Security Features * Regulatory Compliance * Acceptance Testing * Performance Testing * Hardware Compatibility * Other users except analyst * Regression Testing * Retesting |
|
|
|
|

# Test Estimation



Testing effort may depend on several factors including.

* Thoroughness and accuracy of tests
* Size of the product
* Complexity of the problem domain
* Requirements for documentation
* Time pressure
* Number of defects and the amount of rework required.

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

* During testing blocking issues are identified.
* Identification of a critical defect that significantly impacts the application's core functionality and prevents further testing.
* Respective bug is not fixed in the dedicated release.
* Lack of necessary testing resources.
* Release without release note

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

# Test Acceptance Criteria:

* Application UI should match as per provided UI specification.
* Application does not have any blocking issues.
* Application has 85% Test case coverage.
* Application has covered required supported browsers (Windows Chrome).
* All the test cases are at least executed once.
* No High Priority Bug is open.

# 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 Test environment.
* Execute Test Cases
* Bug reporting/retest
* Deliver Test report.
* Perform Test closure activity.
* Daily morning meeting
* Spec grooming meeting
* Lesson Learned Activities

# Test Environment



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

## Hardware Requirement:

* PC (Widows)

## Software Requirement:

* **Operating System**: Windows 10 or above
* **Google Chrome**

## Network Requirement:

* + - Internet connectivity to PC

## QA URLs:

* + - DRIVER Site: <https://driver.bjitacademy.com/>

## Tools to be used:

* + - **Test Case management**: Google Sheets
    - **Document management**: NextCloud, Google Drive
    - **Project management**: Redmine

Device oriented testing will be conducted as per following plan:

| Platform | Browser/OS | Device | Details | Comments |
| --- | --- | --- | --- | --- |
| Windows 11 | Chrome  Version: 117.0.5938.92 | PC | Screen resolution: 1366\*768 |  |

# Schedule

Schedule will be updated as Sprint feature release:

| Phase | Features/Modules | No of Test Items | Test Case Design | Internal QA Release | Final Release |
| --- | --- | --- | --- | --- | --- |
| 01 | * Log In * DRIVER * Black Spots by Severity * 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 * Account Information * Potential Duplicate Records * 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) * Graphs * Export > Export CSV * Filter Bar * Weather * View * Edit * Incident Location & Time * RCF (Road Crash Form) * ARF (Accident Report Form) * ARF (Accident Report Form) > VEHICLES / যানবাহনগুলি * ARF (Accident Report Form) > PASSENGER / যাত্রীদের বিবরণ * ARF (Accident Report Form) > PEDESTRIAN / পথচারীদের বিবরণ | 32 | 125 | 25/09/2023 | 29/09/2023 |
|
|

# QA Summary Report

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

| **Sprint** | **URL** |
| --- | --- |
| 01 | Reporting Documents  [Drive Link for Reporting Documents](https://drive.google.com/drive/folders/1WI8p-VbppGTFvtFEjwtgiuAfFzuIrpPW?usp=drive_link) |

# Roles and Responsibilities



| **Resource Name** | **Responsibilities** |
| --- | --- |
| Abdul Quadir | PM |
| Emon | Programmers |
| Mahmud Iftekhar Asef | 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.

**Testing:**

* The lack of proper testing scope and testing time might result in critical issues going unnoticed.
* The unavailability of representative test data can hinder comprehensive testing and limit the ability to uncover defects.

**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 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 Plan
* Test Estimation
* Test Cases

**Test Deliverables after Testing**

* Test Execution report
* Bug Report
* Test Report (Closure)

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

# Test Plan Approvals

| **Name** | **Roles** | **Signature** | **Date** |
| --- | --- | --- | --- |
| Abdul Quadir | PM |  | 19/09/20223 |
| Abdul Quadir | PM |  | 21/09/20223 |

