**AUTOMATIONFEASIBILITYREPORT**

DISTRICT

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| --- | --- | --- | --- |
| Details | Prepared By | Reviewed By | Approved By |
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| Role | Quality Assurance Interns | Batch Trainer |  |

Table: Group Description

# Tools and Frameworks Used

* **Selenium WebDriver** – Browser automation
* **TestNG** – Test execution and management
* **Cucumber** – BDD and readable test cases
* **Maven** – Build and dependency management
* **Allure** – Test reporting
* **Apache POI** – Excel data handling
* **Log4j** – Logging
* **Visual Studio Code** – Development environment

# Automation Feasibility:

The first step in this process needs to be the feasibility analysis. Automation Feasibility analysis in automation testing refers to a checklist on basis of which we can decide whether we should proceed with the automation of the test cases or not.

## Automation Feasibility Checklist (AFC)

Automation Feasibility Checklist is used to identify whether the manual test case is feasible for automation or not. The following are the criteria to determine the automation feasibility of the test cases:

### Essential Criteria:

* Test cases are repeatable and stable.
* Application UI is accessible to automation tools (e.g., Selenium).
* Test data can be controlled and managed.
* Clear expected outcomes for each test case.

### Optional Criteria:

* Support for cross-browser and cross-platform testing.
* Integration with CI/CD pipelines.
* Availability of APIs for backend validation.
* Minimal use of CAPTCHAs or complex authentication.

### Benefits of Automation Feasibility Checklist:

* Identifies which test cases are suitable for automation.
* Helps prioritize automation efforts for maximum ROI.
* Reduces maintenance by focusing on stable, automatable scenarios.
* Ensures efficient use of automation resources and tools.

# Automation Feasibility Checklist Model:

|  |  |  |
| --- | --- | --- |
| S.NO | READINESS CHECK | (YES/NO) |
| 1 | Product Stable? | YES |
| 2 | Any Planned enhancement in near future? | NO |
| 3 | Won't any bug fixes impact major functionalities? | YES |
| 4 | Are the test condition and precondition detailed? | YES |
| 5 | Test case and test data analysis done? | YES |

# Feature-wise Automation Feasibility

|  |  |  |
| --- | --- | --- |
| Feature | Scenario | Status |
| User Authentication | Automate login and verify successful authentication | Completed |
| Event and Activity Listings | Sort and filter events/activities by user input | Completed |
| Contact Form Automation | Validate error messages for invalid form submissions | Completed |
| Social Media Link Check | Verify social media links and page titles | Completed |
| Data-Driven Testing | Parameterize tests using external data sources | Completed |
| Reporting | Generate and validate test execution reports | Completed |

This table focuses on the total workflows in our project District. It gives the details of the total workflows in the project and the status of the workflows.

# Automation Feasibility Tables for District Workflows

## Automation Feasibility for Requirement – 1: User Authentication

|  |  |  |  |
| --- | --- | --- | --- |
| S.NO | FUNCTIONALITY NAME | TEST CASE FOR PARTICULAR FUNCTIONALITY | TEST ENVIRONMENT AVAILABLE FOR AUTOMATION (YES/NO) / POSSIBILITY FOR AUTOMATION (YES/NO) |
| 1 | Navigate to login page | 1 | YES / YES |
| 2 | Enter valid user credentials | 1 | YES / YES |
| 3 | Submit login form | 1 | YES / YES |
| 4 | Handle OTP authentication | 1 | YES / YES |
| 5 | Verify successful login and logout | 1 | YES / YES |

This workflow focuses on User Authentication by District.

## Automation Feasibility for Requirement – 2: Event and Activity Listings

|  |  |  |  |
| --- | --- | --- | --- |
| S.NO | FUNCTIONALITY NAME | TEST CASE FOR PARTICULAR FUNCTIONALITY | TEST ENVIRONMENT AVAILABLE FOR AUTOMATION (YES/NO) / POSSIBILITY FOR AUTOMATION (YES/NO) |
| 1 | Navigate to Events /Activities page | 1 | YES / YES |
| 2 | Redirect to Events / Activities listing page | 1 | YES / YES |
| 3 | Retrieve list and count of events/activities | 1 | YES / YES |
| 4 | Click on a specific event /activity | 1 | YES / YES |
| 5 | Enter filter or sort criteria | 1 | YES/YES |
| 6 | Apply filter/sort and display results | 1 | YES / YES |

This workflow focuses on Event and Activity Listings by District.

## Automation Feasibility for Requirement – 3: Contact Form Automation

|  |  |  |  |
| --- | --- | --- | --- |
| S.NO | FUNCTIONALITY NAME | TEST CASE FOR PARTICULAR FUNCTIONALITY | TEST ENVIRONMENT AVAILABLE FOR AUTOMATION (YES/NO) / POSSIBILITY FOR AUTOMATION (YES/NO) |
| 1 | Navigate to contact form page | 1 | YES / YES |
| 2 | Enter required details except valid contact | 1 | YES / YES |
| 3 | Enter an invalid email or phone number | 1 | YES / YES |
| 4 | Submit the contact form | 1 | YES / YES |
| 5 | Retrieve and display error message | 1 | YES / YES |

This workflow tests the Contact Form Automation.

## Automation Feasibility for Requirement – 4: Social Media Integration

|  |  |  |  |
| --- | --- | --- | --- |
| S.NO | FUNCTIONALITY NAME | TEST CASE FOR PARTICULAR FUNCTIONALITY | TEST ENVIRONMENT AVAILABLE FOR AUTOMATION (YES/NO) / POSSIBILITY FOR AUTOMATION (YES/NO) |
| 1 | Navigate to website homepage | 1 | YES / YES |
| 2 | Scroll down to website footer | 1 | YES / YES |
| 3 | Click on a social media link (e.g., Facebook, Instagram, YouTube) | 1 | YES / YES |
| 4 | Redirect to respective social media page | 1 | YES / YES |
| 5 | Verify social media page title and URL | 1 | YES / YES |

## This workflow validates the presence and functionality of social media links in the website footer. It ensures users are correctly redirected and that the linked pages are accessible and accurate.

## Automation Feasibility for Requirement – 5: Data-Driven Testing

|  |  |  |  |
| --- | --- | --- | --- |
| S.NO | FUNCTIONALITY NAME | TEST CASE FOR PARTICULAR FUNCTIONALITY | TEST ENVIRONMENT AVAILABLE FOR AUTOMATION (YES/NO) / POSSIBILITY FOR AUTOMATION (YES/NO) |
| 1 | Navigate to target page for data-driven test | 1 | YES / YES |
| 2 | Read test data from external source (e.g., Excel) | 1 | YES / YES |
| 3 | Perform actions using parameterized data | 1 | YES / YES |
| 4 | Retrieve and validate dynamic content | 1 | YES / YES |

## This workflow uses external data sources to drive test execution. It verifies that the application correctly processes various input scenarios and ensures comprehensive coverage through parameterized testing.

## Automation Feasibility for Requirement – 6: Reporting

|  |  |  |  |
| --- | --- | --- | --- |
| S.NO | FUNCTIONALITY NAME | TEST CASE FOR PARTICULAR FUNCTIONALITY | TEST ENVIRONMENT AVAILABLE FOR AUTOMATION (YES/NO) / POSSIBILITY FOR AUTOMATION (YES/NO) |
| 1 | Execute automated test suite | 1 | YES / YES |
| 2 | Generate test execution report | 1 | YES / YES |
| 3 | Validate report content and format | 1 | YES / YES |

## This workflow automates the generation and validation of test execution reports, ensuring that test results are accurately captured and presented for analysis and decision-making.

# Automation Vs Manual Testing

|  |  |  |
| --- | --- | --- |
| TEST PREFERENCES | TO AUTOMATE | NOT TO AUTOMATE |
| Are the requirements stable? | YES | NO |
| Does detailed test cases with predictable results available? | YES | NO |
| Tedious and repetitive | YES | NO |
| Non-Repetitive or Ad-hoc tasks | NO | YES |
| High Regression rate and changing | YES | NO |
| Low Regression rate and constant | NO | YES |