**AUTOMATIONFEASIBILITYREPORT**

**Interest Amount for current year**

EMI Calculator

|  |  |  |  |
| --- | --- | --- | --- |
|  | Prepared By | Reviewed By | Approved By |
| Name | TribeVibe | Devathilagai |  |
| Role | Interns | Batch Trainer |  |

**1. Project Overview**The EMI Calculator helps users calculate their monthly loan repayment amounts (EMI), total interest, and total payment based on user inputs: loan amount, interest rate, and loan tenure.

**2. Objective of Automation**To automate testing and validation of EMI calculations, UI functionalities, and integration across platforms to:

|  |
| --- |
| * Ensure calculation accuracy * Validate form inputs and UI behavior * Improve test coverage * Save time on repetitive tasks |

**3. Feasibility Criteria**

|  |  |  |
| --- | --- | --- |
| **Area** | **Feasibility** | **Justification** |
| Functionality Stability | Feasible | EMI logic and UI elements are relatively stable and predictable |
| Repeatability | Feasible | Test cases (e.g., input combinations) are reusable and deterministic |
| Complexity | Feasible | Straightforward input-output validation makes it suitable for automation |
| Tool Support | Feasible | Compatible with tools like Selenium, TestNG |
| Data Dependency | Feasible | Inputs can be parameterized and externalized via Excel/JSON |
| Execution Time | Feasible | Tests run quickly and can be easily integrated into CI/CD pipelines |
| ROI | High | Saves manual effort and ensures accuracy of critical financial functions |

**4. Automation Scop - In-Scope for Automation:**

|  |
| --- |
| * EMI calculation logic validation with multiple combinations * UI field validation (e.g., numeric fields, input ranges) * Default values and field reset behavior * Navigation to calculator from menu * Total interest and total payment correctness * Responsive design checks (basic viewport adjustments) * Year-on-year amortization data extraction (for export) |

**5. Tools for Automation**

|  |
| --- |
| **Task Recommended Tools** UI Testing Selenium Test Management TestNG, JUnit, Allure Reports CI/CD Jenkins, GitHub Actions Data Handling ExcelUtils, CSV/JSON parsers |

**6. Benefits of Automation**

|  |
| --- |
| * Faster test cycles and faster go-to-market * Reduced manual errors in critical EMI computations * Easy to extend for other calculators (Home Loan, Personal Loan, Car Loan) * Ensures consistent user experience across devices * Easy reporting and regression coverage |

**7. Risks and Mitigations**

|  |
| --- |
| **Risk Mitigation** Frequent UI changes Use stable element locators (e.g., id, data-testid) Dynamic content issues Add waits and retry logic in test scripts |

**8. Conclusion**Automation is highly feasible and beneficial for the EMI Calculator Project. The predictable nature of calculations, simple UI, and high reusability of test cases make this project ideal for automation. Focus should be on testing core logic, validating input-output flows, and maintaining cross-browser compatibility.