**Acceptance Test Report**

**Project Information:**

* **Project Name:** NBP Crasher
* **Project Manager:** Przemysław Kowalski
* **Report Date:** 19.01.2025
* **Tester Environment:** Fedora Linux (41)

**Scope of Testing:**

* **Objective:** Acceptance tests were conducted to validate the system against the **functional** and **non-functional requirements** provided. All test cases were executed to confirm compliance with the stated requirements.

**Functional Requirements:**

| ****Requirement**** | ****Description**** | ****Result**** | ****Comments**** |
| --- | --- | --- | --- |
| **2.1.1 Integration** | Integration with the NBP API, daily updates, historical data retrieval (no older than 02.01.2002). | Passed | System retrieves and processes data correctly within the specified constraints. |
| **2.1.2 Supported Currencies** | Analysis supported for USD, EUR, GBP, JPY, CHF, and PLN. | Passed | All specified currencies were validated successfully during tests. |
| **2.2.1 Supported Time Periods** | Time ranges include predefined and custom periods (no later than 02.01.2002, not future). | Passed | All tested time periods, including custom ranges, yielded correct results. |
| **2.2.2 Session Change Buckets** | Session changes categorized into 14 buckets based on dynamic step calculation. | Passed | Bucket calculations and classifications were accurate for all tested datasets. |
| **2.2.3 Session Analysis** | Counts of increasing, decreasing, and no-change sessions for specified time periods. | Passed | Results matched expectations for all predefined and custom time ranges. |
| **2.2.4 Statistical Measures** | Median, mode, standard deviation, and coefficient of variation calculations. | Passed | Calculations were validated against expected values and external tools for accuracy. |
| **2.2.5 Distribution Analysis** | Histogram and table representation of change distributions for selected pairs pai | Passed | Visual and tabular representations were accurate and met user expectations. |

**Non-Functional Requirements:**

| ****Requirement**** | ****Description**** | ****Result**** | ****Comments**** |
| --- | --- | --- | --- |
| **3.1 Hardware Requirements** | System deployed on hardware meeting the specified requirements | Passed | Hardware met all requirements; no performance issues observed. |
| **3.2 Performance** | Calculation time ≤ 2 minutes; support for 10 concurrent users. | Passed | Average calculation time: ~2 seconds; tested with 10 simultaneous users without issues. |
| **3.3 Security** | Input validation and rate limiting to prevent misuse. | Passed | Rate limits successfully enforced; Input validated correctly. |

**Key Observations:**

* **Integration Success:** The system integrated seamlessly with the NBP API and handled real-time and historical data accurately.
* **Statistical and Visual Outputs:** All statistical calculations and visual data representations were accurate and user-friendly.
* **Performance Metrics:** The system consistently met performance expectations, with room to support higher loads if required.
* **Security Measures:** User inputs were validated, and rate limits were enforced, preventing excessive API calls.

**Conclusion:**

* All acceptance tests were successfully completed, and the system meets all functional and non-functional requirements. The application is ready for production deployment and client handover.