Test Strategy for Coffee Machine

Objective The objective is to test the end-to-end functionality, usability and performance of the Coffee Machine and ensure it meets the business and technical requirements.

Scope

In scope:

- All customer workflows - Initial Setup, Preparation, Power on and Customization.
- Testing Dispensing.
- Quality Check.
- User Interface and Controls.
- Maintenance and Cleaning.
- Documentation and Feedback.
- Final Checks, Packaging and Delivery.

Focus Areas
- Functional correctness of flows
- UI/navigation
- Performance
- load, stress and scalability
- Security - vulnerabilities, encryption

- Compatibility - User-friendly
- Usability - ease of use, accessibility

Approach
- Black box and white box testing techniques
- Automated test cases using Selenium and Appium
- Exploratory testing for key workflows
- Load testing with JMeter for at least 1000 concurrent users - Security testing for OWASP Top 10 vulnerabilities.
- Cross browser compatibility testing on IE, Chrome, Firefox - Ease of use evaluation with at least 10 end users.

Deliverables

- Functional test cases and reports
- Performance test scripts and results - Security vulnerabilities report

- User acceptance testing report
- Test coverage and defect reports
- Automation regression suite

Team & Schedule Testing

- Team of 5 members needed for 4 months testing effort Proposed schedule:
- June: Functional and security testing
- July: Load/performance testing
- August: Compatibility testing, UAT - July: Regression testing

Entry & Exit Criteria User stories

- To be tested must meet the defined 'Ready for Testing' criteria.
- Testing is complete when all test cases execute with no critical defects outstanding.

Risks

Delay in test environment availability
- Lack of access to third party payment systems
- Complex workflows may require more time and resources.