**Software Requirements Specification (SRS) for E-commerce Project**

**4. Non-Functional Requirements**

**4.1 Performance Requirements**

*4.1.1 Response Time*

* The system shall respond to user interactions within a maximum of 2 seconds for standard operations (e.g., loading product listings, adding items to the cart).

*4.1.2 Scalability*

* The system should be designed to handle a minimum of 1,000 concurrent users without significant degradation in performance.
* It must be scalable to accommodate future growth and increased user loads.

*4.1.3 Availability*

* The e-commerce platform shall have a minimum uptime of 99.9% for 24/7 availability, with planned maintenance windows communicated in advance.

**4.2 Security Requirements**

*4.2.1 Data Encryption*

* All sensitive data, including user credentials and payment information, must be transmitted and stored securely using industry-standard encryption protocols.

*4.2.2 Authentication and Authorization*

* User authentication and authorization mechanisms must be robust and ensure that only authorized users can access sensitive areas and perform specific actions.

*4.2.3 Regulatory Compliance*

* The system shall adhere to relevant data protection regulations, such as GDPR, ensuring the privacy of user data.

**4.3 Usability and User Experience**

*4.3.1 User Interface*

* The user interface (UI) must be intuitive and user-friendly, catering to users of varying technical expertise.
* It shall be responsive, adapting to different screen sizes and devices.

*4.3.2 Accessibility*

* The platform shall be designed to meet WCAG (Web Content Accessibility Guidelines) standards to ensure accessibility for users with disabilities.

*4.3.3 Performance Efficiency*

* Users should be able to complete typical tasks (e.g., product search, checkout) with minimal effort and time.

**4.4 Compatibility**

*4.4.1 Browser Compatibility*

* The platform shall be compatible with modern web browsers, including but not limited to Chrome, Firefox, Safari, and Edge.

*4.4.2 Mobile Compatibility*

* The system should provide a seamless user experience on both iOS and Android mobile devices.

**4.5 Reliability**

*4.5.1 Backup and Recovery*

* The system shall regularly back up data and have a robust disaster recovery plan to minimize data loss in case of system failures.

*4.5.2 Error Handling*

* The platform shall provide informative error messages and gracefully handle errors to prevent data loss or corruption.

**4.6 Load and Performance Testing**

*4.6.1 Testing*\*

* The system shall undergo load and performance testing to validate its ability to handle anticipated user loads and maintain acceptable response times.

*4.6.2 Testing Environment*\*

* Testing should simulate peak loads and test cases based on real-world usage scenarios.

**4.7 System Constraints**

*4.7.1 Technology Stack*

* The system shall be developed using the following technologies: [list of technologies and versions].
* It shall run on [specific operating systems or platforms].

*4.7.2 Data Storage*\*

* The system shall use [specific database technology] for data storage.

**5. Conclusion**

This section concludes the non-functional requirements outlined in this SRS document. Further sections of the SRS could include system constraints, user documentation, and any additional information relevant to the project. Non-functional requirements are essential for defining how the system should perform and the quality standards it must meet.