**Software Requirements Specification**

**For project e-Furniture**

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**5. External Interface Requirements**

**5.1 User interfaces**

UI-1: The website will allow complete navigation and selection of furniture items using a mouse alone or in addition to using a mouse and keyboard combination.

**5.2 Software interface**

SI-1: Furniture inventory system

* SI-1.1: Home-furniture will transmit the quantity of furniture ordered to the System through the programming interface.
* SI-1.2: Home-furniture checks the quantity and condition of furniture for customers to place orders

**6. Quality Attributes**

**6.1 Usability Requirements**

* USE-1: The web application shall provide clear and intuitive navigation menus and links to allow users to easily browse through product categories, view product details, and add items to their shopping cart.
* USE-2: The system shall ensure that all text, buttons, and interactive elements have appropriate contrast ratios and font sizes to ensure readability and accessibility for users with visual impairments.
* USE-3: The web application shall support responsive design principles and shall be compatible with a range of devices and screen sizes, including desktops, laptops, tablets, and smartphones.
* USE-4: The system shall provide users with the option to customize their browsing experience, including the ability to filter products by price, category, brand, and other relevant attributes.
* USE-5: The web application shall provide informative and helpful error messages to users in case of form submission errors or invalid input, guiding them on how to correct the issue.
* USE-6: The system shall offer multiple payment options, including credit/debit cards, PayPal, and other popular payment gateways, to accommodate user preferences and enhance convenience.
* USE-7: The web application shall include a user-friendly checkout process with clear steps and progress indicators, allowing users to review their order details, apply discounts, and select shipping options before completing the purchase.
* USE-8: The system shall provide users with the ability to track the status of their orders in real-time, including order processing, shipping, and delivery updates, via email notifications and a dedicated order tracking page.
* USE-9: The web application shall offer comprehensive help documentation and support resources, including FAQs, tutorials, and contact information for customer support, to assist users in resolving issues and inquiries promptly.
* USE-10: The system shall allow users to provide feedback and ratings for products and overall shopping experience, facilitating continuous improvement and enhancing user engagement and satisfaction.

**6.2 Performance Requirements**

* PER-1: The system shall accommodate a total of 500 users and a maximum of 150 concurrent users during the peak usage time window of 10:00 A.M. to 12:00 P.M. local time, with an estimated average session duration of 10 minutes.
* PER-2: 90% of webpages generated by the eFurniture System shall download completely within 3 seconds from the time the user requests the page over a 50Mbps or faster Internet connection.
* PER-3: The system shall display confirmation messages to users within an average of 2 seconds and a maximum of 5 seconds after the user submits information to the system.

**6.3 Security Requirements**

* SEC-1: All network transactions that involve financial information or personally identifiable information shall be encrypted using TLS 1.2 or higher per industry standards.
* SEC-2: Users shall be required to log in to the eFurniture System for all operations except browsing product catalog pages.
* SEC-3: Only authorized administrators shall be permitted to manage user accounts and system configurations, per the RBAC (Role-Based Access Control) model.
* SEC-4: The system shall enforce strong password policies, including a minimum length of 8 characters, with a combination of uppercase letters, lowercase letters, numbers, and special characters.
* SEC-5: The system shall implement rate limiting mechanisms to prevent brute force attacks on login pages, with a maximum of 5 failed login attempts allowed within a 5-minute window.

**6.4 Availability Requirements**

* AVL-1: The e-Furniture shall be available at least 98% of the time between 5:00 A.M. and midnight local time and at least 90% of the time between midnight and 5:00 A.M. local time, excluding scheduled maintenance windows.
* AVL-2: The eFurniture system claims 99.99% annual uptime without problems.
* AVL-3: The e-furniture system requires recovery within 30 minutes from the time of failure.
* AVL-4: The eFurniture system requires a data backup and recovery process in place to ensure recovery after problems.
* AVL-5: The e-furniture system requires the ability to automatically switch to a backup system when the main system fails.
* AVL\_6: The eFurniture system requires monitoring and alerts when the system has problems, sent via email or text message,...

**6.5 Robustness Requirements**

* ROB-1: If the connection between the user and the eFurniture System is broken before a new order is either confirmed or terminated, the eFurniture System shall enable the user to recover an incomplete order and continue working on it.
* ROB-2: If a payment transaction fails, the eFurniture System shall notify the user of the failure, provide a clear reason for the failure, refund expenses and vouchers if used, recover, and continue working on an incomplete order.
* ROB-3: If a user's session times out due to inactivity, the eFurniture System shall securely log the user out, preserving the shopping cart contents. Upon re-login, the system should prompt the user to restore the previous session or start a new one.
* ROB-4: The eFurniture system will support 5000 concurrent users without sacrificing performance. In case the system capacity is reached, the platform will display an overload message, store unfinished processes if any, and ask the user to redo the operation later.