

UC Name	<i>Real-Time Inventory Management</i>
Summary	Accurate and up-to-date inventory of available cars from manager side
Dependency	<i>This system req. derives from Inventory Tracking System Error Handling and Data Consistency and Efficiency.</i>
Actors	Administrators/Managers
Preconditions	For this req. to be set on action the System should have stable Network Infrastructure, Communication channels integrations (API / live chats) and Data Consistency.
Description of the Main Sequence	<p>1.Retrieve Inventory Data</p> <ul style="list-style-type: none"> - The e-commerce platform initiates the inventory management process by retrieving inventory data from integrated inventory tracking systems or databases. - The platform updates its internal inventory database with the retrieved data, reflecting the current stock levels of different car models and variants. - The platform synchronizes the updated inventory data with the inventory tracking systems to ensure consistency and accuracy across all systems. - Data integrity checks are performed to verify the accuracy and completeness of the synchronized inventory data, ensuring that no discrepancies exist between systems. <p>2. Inventory Monitoring and Notification:</p> <ul style="list-style-type: none"> - The platform continuously monitors stock levels of car models and variants in real-time, tracking changes such as sales, restocks, or backorders. - When a car model or variant goes out of stock, the platform identifies the affected items and triggers an alert/notification mechanism. - Notifications are sent to both suppliers and customers: <ul style="list-style-type: none"> - Suppliers are informed about out-of-stock items, prompting them to provide restocking information. - Customers are notified about the unavailability of certain items and provided with information on when the items are expected to be back in stock. <p>3. Supplier Interaction and Replenishment:</p> <ul style="list-style-type: none"> - Upon receiving notifications about out-of-stock items, suppliers are notified through predefined communication channels (e.g., email, API). - Suppliers provide restocking information, including expected availability dates, quantities, and delivery schedules for the requested items. - The platform updates inventory status based on the information provided by suppliers, reflecting the expected availability dates and quantities of restocked items. - Customers are notified about the availability of restocked items, enabling them to make informed purchasing decisions or pre-orders/backorders if desired.

Description of the Alternative Sequence	<p>1. Detection of Data Transmission Failure:</p> <ul style="list-style-type: none"> - In this sequence, the system detects a failure in data transmission between the e-commerce platform and the inventory tracking system. - The failure could be due to network issues, system downtime, or errors in data synchronization. <p>2. Fallback Mechanism Activation:</p> <ul style="list-style-type: none"> - If the initial attempts to recover from the data transmission failure are unsuccessful, the system activates a fallback mechanism. - The fallback mechanism may involve using cached inventory data, implementing manual inventory updates, or displaying a message to users indicating temporary unavailability of real-time stock information.
Non functional requirements	<p><i>Network Stability, Data Manipulation Efficiency and Error Handling</i></p>
Postconditions	<p><i>The inventory information displayed to customers accurately reflects the real-time stock levels of cars available for sale.</i></p>