1. **User Management**

**Use Case 1.1 – Sign Up the System:** The user opens the web-site and requests to sign up the system by defining the name, email, company name, license number and validity period. The system calculates and displays the payment amount. The user enters the credit card information and requests to pay. Credit payment service accepts or rejects the payment. If the payment is accepted, the system displays a success message and the sign up process is completed. Otherwise, the system displays an error message and requests the user to check the payment information.

**Use Case 1.2 – Login to the System:** The user opens the web-site and enters his user information and requests to login. If the user information is incorrect, the system gives an error message and prompts the user to re-enter the information. Otherwise, the user information is correct, the user logs into the system. If the user is logging into the system for the first time, the system requests the user to change the password defined by the system admin.

**Use Case 1.3 – Manage User Roles:** The system admin wants to manage the user roles. The admin requests to define a new user role. If the user already exists, then admin selects the user and the role to assign. Otherwise, first the admin should define the user profile by defining the user identifier, name, username and password.

1. **Material Management**

**Use Case 2.1 – Manage Raw Material:** The stock manager wants to manage the raw materials. The system displays the raw material list. The stock manager requests to add a new raw material by defining part number, part name, part category, overstock level, safety stock level and lead time. The stock manager requested to save the raw material. The system stores the material. The stock manager can delete or update the raw material. If the stock manager requests to delete the raw material, confirmation of the deletion is asked by the system.

**Use Case 2.2 – Manage Product:** The stock manager wants to manage the products. The system displays the product list. The stock manager requests to add a new product by defining product number, product name. The stock manager requested to save the product. The system stores the product. The stock manager can delete or update the product. If the stock manager requests to delete the product, confirmation of the deletion is asked by the system.

**Use Case 2.3 – Manage Inventory Bindings:** The stock manager wants to manage the products. The system displays the product list. The stock manager requests to update a product. The system displays the product with initialized attributes. The stock manager requests a new product breakdown by binding product and raw materials with quantities. The stock manager requests to add the product breakdown and requests to update the product. The system stores the product with inventory binding. The stock manager can remove or update the inventory binding. If the stock manager requests to remove the inventory binding, confirmation of the deletion is asked by the system.

1. **Inventory Management**

**Use Case 3.1 – Manage Stock Requests:** The stock manager wants to manage stock requests to check if there is enough material in stock for production. The system displays the stock request management screen. The stock manager requests to check whether there is enough material for production or not by defining the product and production quantity. The system compares the material required for production with the current number of materials in stock, using the inventory binding information recorded for the product and displays the numbers and the comparison based on the calculation. If the stock levels are enough for the production, the stock manager can authorize the production. The system updates the stock levels *(Refer to Use Case 3.1 - Manage Stock Levels)*

**Use Case 3.2 – Manage Stock Levels:** The stock manager wants to manage the stock levels. The system displays the inventory list. The stock manager requests to add a new inventory by defining raw material and the additional quantity. The stock manager requests to save the inventory. The system stores the inventory and updates the current number in stock. The stock manager can delete or update the inventory to update the stock levels, manually. If the stock manager requests to delete the product, confirmation of the deletion is asked by the system. In addition, if there is an authorized production, based on the production request, the system automatically reduces the stock levels of the inventory items that are mapped with the product.

**Use Case 3.3 Receive Alerts for Stock Levels:** The system compares the current stock levels of the raw materials with their specified overstock and safety stock levels when the stock levels are updated. If the stock levels beyond the specified threshold, the system receives alerts for under or overstocking items.

**Use Case 3.4 Generate Inventory Status Notifications:** The system notifies the user about inventory status including current stock levels, lead times, safety stock and overstock levels via email on a daily basis.

**Use Case 3.5 Generate Inventory Reports:** The stock manager wants to manage the reports. The system displays the report generation screen. The stock manager requests to generate a report by defining a time interval. The system displays the stock level movements on the specified time interval.

**Use Case 3.6 Manage Stock Forecasting:**  The stock manager wants to manage the stock forecasting. The system displays the stock forecastings. The stock manager requests to add a new stock forecasting by defining estimated or upcoming production demand. The stock manager requests to save the stock forecasting. The system stores the forecasting and displays the required stock numbers of the raw materials based on the forecasting.