Assumption:
Online PC parts store that has warehouses at Tokyo, Shanghai, Singapore and Delhi. It purchases the PC parts from vendors across worldwide.
Request: *want to customize the product records*
Operation

1. Add the information of the recently purchased CPU into the system.
   The company purchases a new CPU model (Intel Core i7-6950X) which is not listed in the system.
   Currently, there is no way to add a new product into the system.
   The product information has to be inserted by technical staff at the server side.

2. Remove a motherboard product from the Inventory List.
   The company has no stock for H110M-HDV motherboard and decides not to purchase it anymore.
   The product will remain on the Inventory List as there is no way to delete it.
   If the product is deleted by technical staff at the server side, there will be no way to retrieve its information anymore.

3. Convert the purchase price from foreign currency.
   The company has vendors from China and Korea and has warehouses in Singapore and Japan. Therefore, the company wants to convert the price from CNY and KRW dollars into SGD and JPY for tax and accounting purpose.
   The exchange rates change every day, and different products are purchased by different currency.
   The prices have to be calculated product by product based on different exchange rates.

4. Find the products that should be re-ordered.
   The company neither want to re-order a product too late when it is out-of-stock nor want to re-order a product too early as it takes space and money to store them.
   When to re-order a product is decided by many factors, e.g. maximum selling amount, average selling amount, safety stock. And the value of the factors is different for different products.
   Finding the re-order point are done by the calculation product by product.

5. Find the economic order quantity (EOQ) during procurement.
   The company wants to find the “right” price and amount to purchase. Suppliers often promise price-quantity break (the more you order, the lower the price is). However, lower prices are not always better. More stock means more spending on storage facilities and a higher risk of having product going out-of-date.
   Both the EOQ is determined by the demand of the product. And the demand is forecasted by the information of previous months.
   The economic order quantity needs to be calculated product by product.

Problem:

1. There is no function for adding or deleting a product information in the system.
2. There is no place to store the past product information. Once a product is deleted, its information is gone forever.
3. Showing the prices of products in another currency is troublesome.
4. It is hard to decide when to place a new order by just monitoring the stocks of the products.
5. It is troublesome to forecast the demand and then determine the EOQ of each product.

User A
Position: Inventory Officer (Alice)
Situation: Maintain the the products information.
IT Literacy: Basic knowledge of computer operation.
Business Operation:

Purpose of using the software: Alice want to input the information of the recently purchased CPU (Intel Core i7-6950X) into the system.
Situation of using the software: Intel Core i7-6950X is a new CPU model that is not recorded in the current system. In current system, there is no function for adding a new product into the system. Alice has to ask the technical staff to insert the product information into database at the server side.
Frequency: Very high

Expectation:

(1) There is a function for inputting a new product information into the system.
(2) There is a GUI for the function so it is easy to operate.
(3) The inputted information will be updated automatically and displayed on Inventory List page.

Proposal Solution:

(1) Provide a GUI form for Alice to input the product information.
(2) Save the Alice's input information automatically and displayed on Inventory List page.

Business Operation:

Purpose of using the software: Alice want to remove the information of H110M-HDV motherboard from the Inventory List.
Situation of using the software: The company has no stock for H110M-HDV motherboard and decides not to purchase it anymore. For current system, this motherboard will remain in the Inventory List. To remove it from Inventory List, Alice has to ask the technical staff to delete the product from the database at the server side. However, once the product is deleted, there will be no way to retrieve its information anymore.
Frequency: Very high

Expectation:

(1) There is a function for removing the inactive product from Inventory List.
(2) The product is just removed from the Inventory List but not from the database, so that its information can still be used for analysis.

Proposal Solution:

(1) Allow users to mark a product to be inactive so the product will be removed from the Inventory List.
(2) The removed product will be displayed on another page called Inactive Products.
(3) Users can active the product listed on Inactive Products page, so the product removed from Inactive Products page and displayed on Inventory List again. All its information will be remained.

User B
Position: Tax Accountant (Bob)
Situation: Calculate and declare import duty to Customs.
IT Literacy: Basic knowledge of computer operation.
Business Operation:

Purpose of using the software: Find the purchase prices of products. Convert the prices into local currency for calculating the import duty.
Situation of using the software: The company want to import the PC parts produced in China to the warehouse in Singapore. In order to calculates the import duty payed to Singapore

Customs, Bob needs to convert the purchase prices into SGD.
Frequency: Very high

Expectation:
(1) The system stores the purchase price of each product in the currency purchasing it.
(2) The system can convert the price into a selected currency automatically.
Convert the price into the currency of the country where the product is imported to.

Proposal Solution:
(1) The system will store the purchase price of each product in the currency purchasing it.
(2) Users can select which currency to use to display the prices.
(3) The system will convert the price into the selected currency automatically based on current exchange rate.

User C
Position: Procurement Officer (Charles)
Situation: Place orders to keep sufficient stocks of products
IT Literacy: Basic knowledge of computer operation.
Business Operation:
Purpose of using the software: Find the products that need to re-order.
Situation of using the software: Charles wants to avoid the popular products to be out-of-stock. To do so, he has to monitor the stock of products everyday so that he can find the products that are selling fast and are going to out-of-stock.
Frequency: Very high

Expectation:
(1) The system can calculate the re-order stock for each product based on user-defined formula.
(2) When the stock of a product reaches the re-order stock, the system will alter the user to re-order this product.

Proposal Solution:
(1) Allow users to define a formula for calculating the re-order stock for each product.
(2) The system saves the user-defined formula and apply the formula to calculate the re-order stock for each products automatically.
(3) The system highlights the products whose stock are equal or less than the re-order stock.

Business Operation:
Purpose of using the software: Find the economic order quantity (EOQ) during procurement
Situation of using the software: Suppliers often promise price-quantity break (the more you order, the lower the price is). Charles want to find the EOQ so that he can minimize the carrying costs while matching customer demand as much as possible. However, the EOQ is determined by the demand of each product. To find the demand of each product, Charles has to find the selling history of the product and do calculation one by one.
Frequency: Very high

Expectation:
(1) The system can analyze the demand of each product based on its selling history.
(2) The system can calculate the EOQ of each product automatically.
(3) The EOQ result is displayed together with the products.

Proposal Solution:
(1) The system will retrieve the selling history of each products and analyze the demand of that product automatically.
(2) The system will calculate the EOQ of each product based on its demand.
(3) The system will display the EOQ result together with the product.