Global Part Services (GPS) Corporation is a large company that imports airplane parts from all over the world in order to fulfill its customer demands. GPS's customers consist of companies that repair airplanes.

You are a software engineer working for GPS, supporting their sales business unit. The company has been using a mainframe-base application, which is no longer reliable due to a large increase in sales from its customers.

The new system named, Request For Quotes (RFQ), must be able to keep track of GPS's customers, customer's request for quotes, and sales quotes and sales orders. All functions related to capturing customer's requests for quotes to accepting quotes must be replaced with a new system that is more robust and reliable. The new system must be accessible by GPS's authorized customers and employees. The new system must also interface with GPS's Accounts Receivable (AR), Sale Order Management (SOM) and Inventory Management (IM) systems.

All customers (again, a customer represents a business entity) must have an account before they can access the GPS's RFQ system in order to place a request for quote (RFQ).

At GPS, each sales manager is assigned a set of customers. A sales manager is responsible for providing (i.e. creating a customer account and notifying the customer) each of his customers with information to access to the new system. To create a new customer account, the manager enters the company name, company complete address for billing and shipping, first name, last name, email and phone number of the company's representative. The sales manager also indicates whether the customer can be auto-quote or manual-quote, and his (the manager's) email address and phone number. The system then creates a unique company identification number and password for each customer and notifies the customer's representative via an email of the account login information (company id and password.)

The customer's representative can then use the company's id and password to access the GPS's RFQ system to make a request for quote.

Request For Quote (RFQ)
To enter a request for quote, the representative must first log into the RFQ system. The customer may search for parts to get a part number before creating an RFQ. The RFQ function accepts a part number, the quantity for that part, and a required date. An RFQ may contain multiple parts.

Auto-Quote
If the customer's account was set up as auto-quote, the system calculates the quote and displays the results to the customer immediately. The generated auto-quote contains a unique sales quote number, the date the quote was created, the part number, part description, part image(s), the quantity, the date that GPS can provide the part, the price and the date the quote expires. Typically, a sale quote (auto or manual) expires 30 days from the quote date. At this time, the sales quote has the "Created" status.

Manual-Quotes
If the customer's account was set up as manual-quote, then the system notifies the sales manager of the customer's RFQ. When a sales manager receives manual RFQs, he/she researches the quote request based on sales history, available inventory, and market availability – all of these research activities are performed outside of the RFQ system.

Sales Quotes From Manual Quotes
In addition, the new RFQ system must allow a sales manager to create a sales quote for a submitted manual-quote. This means he/she must be able to select the customer with the associated/existing RFQ(s) that the customer created previously including the requested part number, description, quantity and the required date. He/she must be able to indicate the date GPS can provide the part and the price. The system then calculates and displays the date when the quote expires (30 days from the indicated provide date). Once all input data is correct, the sales manager may confirm to create the sales quote and the system assigns a unique sales quote number for the generated sales quote. At this point, the sales quote has a status of "Created."

If the sales manager selects to submit the generated sales quote to the customer, the system updates the status of the quote to "Submitted to Customer" and notifies the customer of the sales quote.

Accept and Reject Sales Quotes
The new RFQ system must also allow an authorized customer to accept an unexpired sales quote. To accept a sales quote, the customer must log into the RFQ system with his/her company id and password. The accept sales quote function accepts a valid, unexpired sales quote number. After accepting the quote, the system updates the sales quote status to "Accepted" and automatically generates a sales order based on the data associated with the sales quote and associates the sales order to the customer.

The customer may reject a sales quote it receives from GPS. Once the customer chooses to reject an existing generated sales quote(s), the system notifies the associated sales manager at GPS. The system must update the sales quote status to "Cancelled by Customer" and notify the sales manager and the customer.

A sales order contains a unique order number, order date, required date, the customer name and complete address where to send the invoice and where to ship the ordered parts (each order line contains part number, description, order quantity and unit price) and sales order total amount. After the sales order is generated, the system sends a copy of the sales order to the associated customer using the email address of the customer's representative. It also generates and sends notifications to GPS's Accounts Receivable (AR), Sales Order Management (SOM) and Inventory Management (IM) systems.

In addition, the new RFQ system must provide reporting function that allows sales managers to run detailed and/or summary status reports for request for quotes (auto and/or manual) and sales orders.   They will rely on you to design and develop input and report prototypes for them to review.