

For this assignment, you will perform object analysis for the RFQ system of the International Part Solutions (IPS) Corporation.

Use *Microsoft Word* or any document editor (that you can export to a .pdf file) to type your answers (single spacing.) Name your file using this format: [Course-Assignment #]-[your first initial and last name].doc Example: CSCI467-A2-RMarshall.doc

Also, please include the following information in your assignment file:

- Your first name, last name and student id
- Course number and assignment number
- Due date and time of the assignment

When you are done, save your Word file in the “.pdf” format. Submit the .pdf version on Blackboard by on the due date and time.

Analyze the functional requirements listed in this document and indicate all of the attributes for each of the following objects. Use the UML Notation for class to show each object and its attributes. Use the object name for the Class Name.

Class Name
List of attributes, one per line.

**Objects to Analyze:**

1. Customer Account
2. Customer Representative
3. Inventory Part
4. Request-For-Quote (RFQ)
5. Sales Quote
6. Sales Order

The RFQ system must allow an authorized IPS's sales manager to create a new customer (i.e. company) account. Each account contains a unique account number/id, the company name, complete address (street, city, state and zip code) for billing and shipping, first name, last name, email and phone number of the company's representative. Each customer has one representative. The sales manager must be able to indicate whether the customer can be auto-quote or manual-quote, and his (the manager's) email address and phone number. After the new account is created, the system creates a unique password for each customer and notifies the customer's representative via an email of the account login information (company id and password.)

The RFQ System must allow an authorized sales manager to create a new airplane inventory part. Each inventory part contains a unique part number, part name, barcode, part description, quantity, listing/selling price (may be blank), manufacturer name, image(s) and comments. (*New*)

The RFQ system must allow an authorized customer representative, who has the customer id and password, to create a Request For Quote (create RFQ). The customer representative must be able to enter the part number, quantity, and require date for each requested part. The system must be able to accept one or more parts for a single RFQ.

If the customer's account was set up as auto-quote, the system calculates the quote and displays the results to the customer immediately. If the customer's account was set up as manual-quote, then the system must notify the sales manager of the customer's generated RFQ.

The RFQ system must allow an authorized sales manager to create a sales quote for a selected customer with an RFQ with the "Created" status. The sales manager must be able to select an RFQ associated with the selected customer. For each part on the RFQ, the sales manager must be able to indicate the date IPS can provide the part and the price for that part. After the manager confirms to create the sales quote, the system generates the sales quote, which 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 IPS can provide the part, the price and the date the quote expires (30 days from the sales quote date.) The system also sets the sales quote status to "Created."

The RFQ system must allow an authorized sales manager to submit one or more sales quotes to a selected customer. Once submitted, the system sets the status of the selected sales quotes to "Submitted to Customer" and sends a notification to the associated customer.

The RFQ system must allow an authorized customer to accept one or more unexpired sales quotes. 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 system also generates and sends notifications to IPS's Accounts Receivable (AR), Sales Order Management (SOM) and Inventory Management (IM) systems.

A sales order contains a unique order number, the order date (the date the sales quote was accepted), 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.