# USE CASE EXERCISES

Adapted from linus.socs.uts.edu.au/~igorh/sysanal/stguides/exercise.htm

**PROBLEM 1 – a use case for requesting an item**

A customer requests an item from a salesperson.   
The salesperson looks up the inventory to see if the item is available.   
The salesperson replies to the customer.   
The customer places an order with the salesperson.   
The salesperson enters the order into the system.   
The salesperson uses the system to create an invoice and sends it to the customer.   
When payment on the invoice is received the salesperson authorises delivery of the goods to the customer.   
    
**PROBLEM 2 - INVESTMENT QUERIES**

A customer arrives at an investment consultant and makes an initial enquiry about his or her investment requirements.   
The consultant records and files the requirements.  
The consultant checks the investment product files.   
The consultant proposes a financial product to the customer.   
If the customer accepts the product, the consultant records the decision in the requirements file.

**PROBLEM 3 - MEETING CUSTOMER ORDERS**

*USE CASE 1 - FINDING OUT WHAT THE CUSTOMER WANTS*

The salesperson has an inventory of items for sale.   
The salesperson goes through the inventory retrieving the item name, price and description   
and shows it to a client.   
Whenever a client identifies an item for purchase, the item name, quantity and price are recorded in a sales docket.

*USE CASE 2 - FINALIZING THE SALE*

Once a sales order is completed the salesperson computes the total value of the order.   
The salesperson then requests approval from management for a discount to be offered.   
If management agrees to the discount, a total quote is forwarded to the client, who then makes a decision as to whether to proceed with the purchase.   
If the client goes ahead with the purchase, a sales docket is generated.

*USE CASE 3 - ARRANGING GOODS FOR DELIVERY*

On completion of the sale, the sales docket is retrieved by the warehouse worker, who searches for the ordered items in the inventory and arranges for their shipment to the customer.   
When the required items are found in the inventory, they are earmarked for the order and the item together with its location is entered on a delivery docket.

**Exceptions**

If all items are not found in inventory then a back-order is created and the customer is informed of possible delay.   
    
*USE CASE 4 - ARRANGING DELIVERIES*

The transport manager collects delivery dockets.   
An invoice is prepared.   
Arrangements are made with a delivery company to deliver the items in the delivery docket.   
The invoice is delivered with the goods.

USE CASE 5 - PROCESSING PAYMENTS

The customer returns the invoice with the payment.   
The sale is recorded as completed.

**Exceptions**

The customer does not return a payment within a month, in which case a reminder notice is sent to the customer.

**PROBLEM 4 - CAR HIRE SYSTEM**

*USE CASE 1 - MAKING RESERVATIONS*

A customer contacts a reservation officer about a car rental.   
The customer quotes the start and end dates needed, the preferred vehicle, and the pickup office.   
The reservation officer looks up a prices file and quotes a price.   
The customer agrees to the price.   
The vehicle availability file is checked to see if an appropriate vehicle is available for the required time at the required office.   
If the requested vehicle is available at the nominated pickup office, then it is reserved for the customer. An entry is made in the vehicle availability registering the reservation.   
The reservation officer issues the customer is issued with a rental number.   
A rental agreement is then created on the rental file, including the rental number, the rental period, the vehicle type and the pickup office.

**Exceptions**

An appropriate vehicle is not available at the pickup office. The customer is offered an alternative vehicle.

*USE CASE 2 – MAINTAINING AVAILABILITY SYSTEM*

A vehicle availability file is checked to see if a vehicle of a given type is available at the requested pickup office for a requested rental period. There is a record for each vehicle which includes the times, when a vehicle is available and when it is rented.

If it is, then the vehicle is reserved for the requested period.

**Exception**

If a reservation cannot be made because of lack of vehicles a problem report is issued to be used in planning vehicle levels.

*USE CASE 3 - INITIATING RENTAL*

The customer arrives at a pickup office and quotes a rental number to the rental officer.   
The rental file is searched to find the customer’s rental number.   
If a match is found then the rental agreement is retrieved and discussed with customer.   
If the customer accepts, then a rental agreement is printed.   
The customer signs the agreement and lodges a credit card number.   
The rental officer requests the customer to select one of a number of insurance options. Following the selection an insurance policy is filled out and attached to the signed agreement.

**Exception**

A customer does not have a prior reservation. In that case a vehicle availability check is made. If a vehicle is available, the customer is offered the vehicle and a price is quoted. If the customer accepts then a rental is initiated.

*USE CASE 4 - PROCESSING VEHICLE RETURNS*

The customer records the mileage and fuel level and quotes them to the rental officer.   
The amount of fuel to be added to the vehicle is added to the rental account on the rental agreement file.   
The rental account is checked by the customer.   
The customer pays the rental amount.

**Exception**

The returned vehicle is damaged requiring a forfeit of the deposit and filling in of an insurance claim.

*USE CASE 5 - PROVIDING MANAGEMENT REPORTS*

The reservation statistics file is updated at the time that reservations are made.

The statistics are updated at the time of return to show the length of reservation and the amount of payment received.   
A rental summary is generated on request from management.