# MuleSoft Training Interview - Technical Exercise 2

## Summary

Use Case: The ACME Corporation want to expand their traditional business by provided a new online sales model. ACME’s CEO, Elmer Fudd, has hired you as their new CTO. Congratulations! Your first responsibility is to design an online trading system that allows customer to place orders online. The CEO and CMO, Pepé le Pew, have come up with some requirements. You will need to work together with ACME’s in house developer, Marvin and the manager of the logistics department, Yosemite Sam.

The goals of this exercise are:

1. Design an integration solution that accepts, stores and processes incoming orders for ACME Corporation’s new online business. The processing of an order is typically a workflow that has the following steps:
   1. Parse the order.
   2. Update the inventory database.
   3. Create and send an invoice.
   4. Ship the order by sending the original order to the packaging department.
2. Implement the designed solution as a regular Mule ESB application or CloudHub application (extra credits!).

This project will take anywhere from several hours to potentially a lot more, depending on the complexity of the designed solution and on the participant’s experience.

## Deliverables

1. A basic design that describes the architecture of the ACME online platform. Keep it simple, a textual description is sufficient. Optional credits for graphical diagrams.
2. A working Mule or CloudHub application, exported as a Mule Deployable Archive including all sources.

## Goals

Below are a few goals to help guide you through the exercise.

* Design the overall application first. Choose a medium for accepting online orders (can be anything, ranging from email to a web form)
* Create a new Mule application using Anypoint Studio.
* Create a simple data model that represents an order. Think about all the information that must be part of the order, such as contact details, shipment address, status etc.
* Create an object store that represents the inventory database. This database must be updated when processing the order. Please note that the Object Store Module is only available as an extension.
* Create an invoice in any format (plain text, PDF etc.) that can be sent to the customer via email.
* Create a simple service for the logistics department to receive the order details so they can send the order to the customer.
* Package the project as a Mule deployable archive.

## Resources

Below are some available tools/resources we think you'll find helpful:

* MuleSoft documentation: <https://docs.mulesoft.com>
* Anypoint Studio for creating and running Mule Applications: <https://www.mulesoft.com/studio>.
* Note that a Java Development Kit (JDK, not JRE) version 1.7 or 1.8 is required.
* Anypoint Platform Account; sign up for access and a free 30-day trial to most of the available service: <http://anypoint.mulesoft.com>
* Anypoint Exchange: <https://www.mulesoft.com/exchange>
* Mule Object Store: <https://docs.mulesoft.com/mule-user-guide/v/3.7/mule-object-stores>
* Reach out to [roy.prins@mulesoft.com](mailto:roy.prins@mulesoft.com) if you have any questions around project goals.

## Submission

Submit your final solution to [training@mulesoft.com](mailto:training@mulesoft.com). You can create a deployable archive by selecting File | Export… | Mule | Anypoint Studio generated Deployable Archive. Make sure to check “Attach project sources” in the subsequent dialog

Ensure the subject reads ‘{Your Name} - Technical Exercise 2’. Please submit your solution at least one day before the technical interview.

Note: in some cases, sending an email with a zip file attached may get rejected due to security policies or email provider policies. Alternatively, you can use a public file transfer service, such as <http://wetransfer.com>. Please send your solution directly to [roy.prins@mulesoft.com](mailto:roy.prins@mulesoft.com).