

SOA Analysis

A top-down approach was used throughout the assessment as we were designing an application from scratch and had no existing application logic to work with. As the application was being assessed from a black box perspective we were more concerned about focusing on what the business problem is about, not the how of the implementation. A bottom-down approach was considered due to the business already having a tried and proven business process as well as already being broken down into individual entities; however it was decided that the top-down approach was more suited to our needs.

The first step of the approach was to define the services with the application acting as the sole virtual service and the core services being; Order, Supplier, Warehouse, Product and Customer. This was followed by defining the external drivers who would be interacting with the services. In this case there was only one external driver, the sales team member taking input from the customer.

The final step was to define the interactions of the various services and the sole actor:

- Customer :
 - o Interacts with a sales team member who is driving the application.
- Application:
 - o Gets list of products.
 - o Gets list of all registered customers.
 - o Adds new customers.
 - o Gets delivery time of products from warehouse
 - o Creates customer orders
- Order:
 - o Updates product stock levels
 - o Modifies order status of orders that have been shipped
- Supplier:
 - o Restocks the warehouse
- Warehouse:
 - o Gets delivery time from supplier to warehouse
 - o Automatically orders stock from supplier when needed.

When undertaking the task the following assumptions were observed:

- Delivery is automated and always on schedule, the shipping date agreed upon is the date the products get shipped.
- Ordering stock is an automated process that is triggered every time an order is placed and requires no manual input.
- The customer pays in full outside of the application when an order is confirmed