

CHAPTER 3 : SYSTEM ANALYSIS

System analysis studies the system of the company that will be implemented and its components to reach the needs and requirements of the system and the user, in this chapter we will present activities in the analysis phase in our project.

3.1 Company History

SHDAIF Trading Est. is located in Riyadh, Saudi Arabia. It was founded in 1395 -1975 .The Company is working in Food retailers. The core business is importing wide range of food items from different countries and selling them in the kingdom of Saudi Arabia. The Head Office is located in Riyadh but there are four more branches located in Jeddah, Dammam, Buraidah and Abha. The total number of employees is 105. They need to manage their business activities using an enterprise application that has three modules which are sales, finance and human resources.

Owners	Managers	Department	#of employees
1			
	1	HR	20
	1	Financial Management	8
	4	Sales & Marketing Management	71

Table 1: The Distribution of Employees

3.2 Problem Identification

As a Food retailer specialized company SHDAIF Trading Est.is facing severe competition and need supporting services to enhance their performance to guarantee continuation in the business market. They need to offer an outstanding customer services as well as marketing and sales facilities. The main problems that they are facing include:

- Limited number of customers
- Unmonitored sales statistics
- Undefined customers' needs and feedback
- Manual business processes that are based on paper and cause increase in paper related activities such as printing, inks and paper cost.
- The need for analytical information that help in management decision making. This include information about the least profit product, the best profit product and the regions of best sales
- The need for an effective reporting mechanisms that help the stuff to organize and commit their jobs and as the same time help the supervisors to monitor the staffs' performance
- A supporting tool to help in planning for the annual sales planes and improvements.

- An automated system to monitor the inventory, update it when sales take place and alert in case of needed stock to order for purchases.
- The need for helping information to identify sales opportunities and define future customer.
- The need to detect customers' fulfillment level to keep the customers loyal and satisfied.
- The need for a computed and calculated tool to help in identifying customers' feedback and needs to be the base of creating the proposed marketing campaigns.
- A financial analytical tool to identify the sources of cost and analyze them to help in taking decisions that aims to decrease costs and increase profit.

3.3 Functional Requirements

According to the limitations of resources this phase of the project will focus on the Sales Department's activities, needs and related tasks. The functional requirements include:

- Create a system that is implemented inside the company branches that enable the employees, supervisors and managers to fulfill their tasks.
- Create a system that can be used by partners, suppliers and customers outside the company campuses to know about the services and products as well as the contacts of the company.
- Sales staff can admit their daily sales activities, their sales reports and the customer's information that they deal with.
- Sales supervisors can monitor the activities and reports of the sales staff, monitor the sales activities according to branches and regions and submit monthly sales reports.
- Sales managers should be able to read all the sales reports, get analytical reports about the best-selling products, regions and staff.
- Sales managers should be able to get alerts about products that are causing loss and related information about the cause.
- Sales staff should be able to submit reports about the customer satisfaction and feedback to fulfill post sales activities.
- Sales managers should be able to view the feedbacks of customers in general with statistics that show the frequent and agreed on opinions, complains as well as the products' related comments.
- The Application should suggest marketing campaigns and plans that are aligned with the customers' feedback results.

3.4 Non-functional Requirements

- Modules that are related to the employees need authentication and authorization for access.
- Modules that are related to the customers need to be featured with high speed, performance, ease of use and catching interfaces.
- Confidential information related to the management and related tasks need to have granular security mechanisms.
- Company logo, color schemas applied in documents, footers and copyrights need to be applied in the proposed application.
- Company vision, mission, capital of money, category of company, locations and contacts should be illustrated.

3.5 Use-cases Diagram (sales activities)

A use case diagram displays the relationship among actors and use cases. Again, because the complexity of ERP packages, we have focused on the company needs and only on subsystem of ERP systems. In the Figure 3, we describe a use case diagram of “sales management” subsystem.

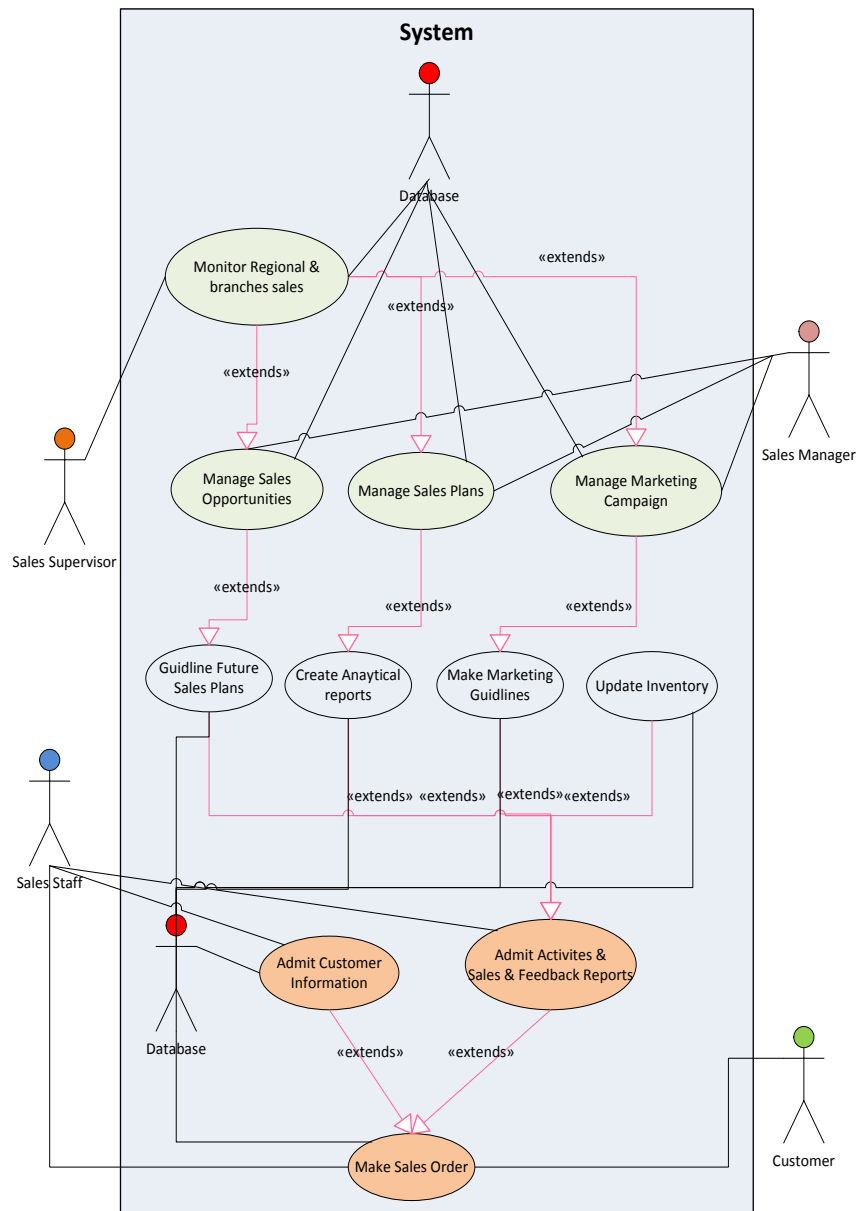


Figure 1:Sales Management - use case

3.6 Sequence Diagram

In order to model the flow of logic within the system in a visual method, UML sequence diagrams are always used. It enables to document and validate the logic ceased in the system. Moreover, it is used for both analysis and design processes. Sequence diagrams are the most popular UML artifact for dynamic modeling. It focuses on identifying the behavior within the system. In our system we have two main activities that need to be analyzed and modeled. They are the selling process itself and the sales department internal reporting workflow. In order to define how they are working, we have created two Sequence Diagrams as shown in two the figures below to depict them

- 1- **Customer make an order.**
- 2- **Sales Reporting workflow**

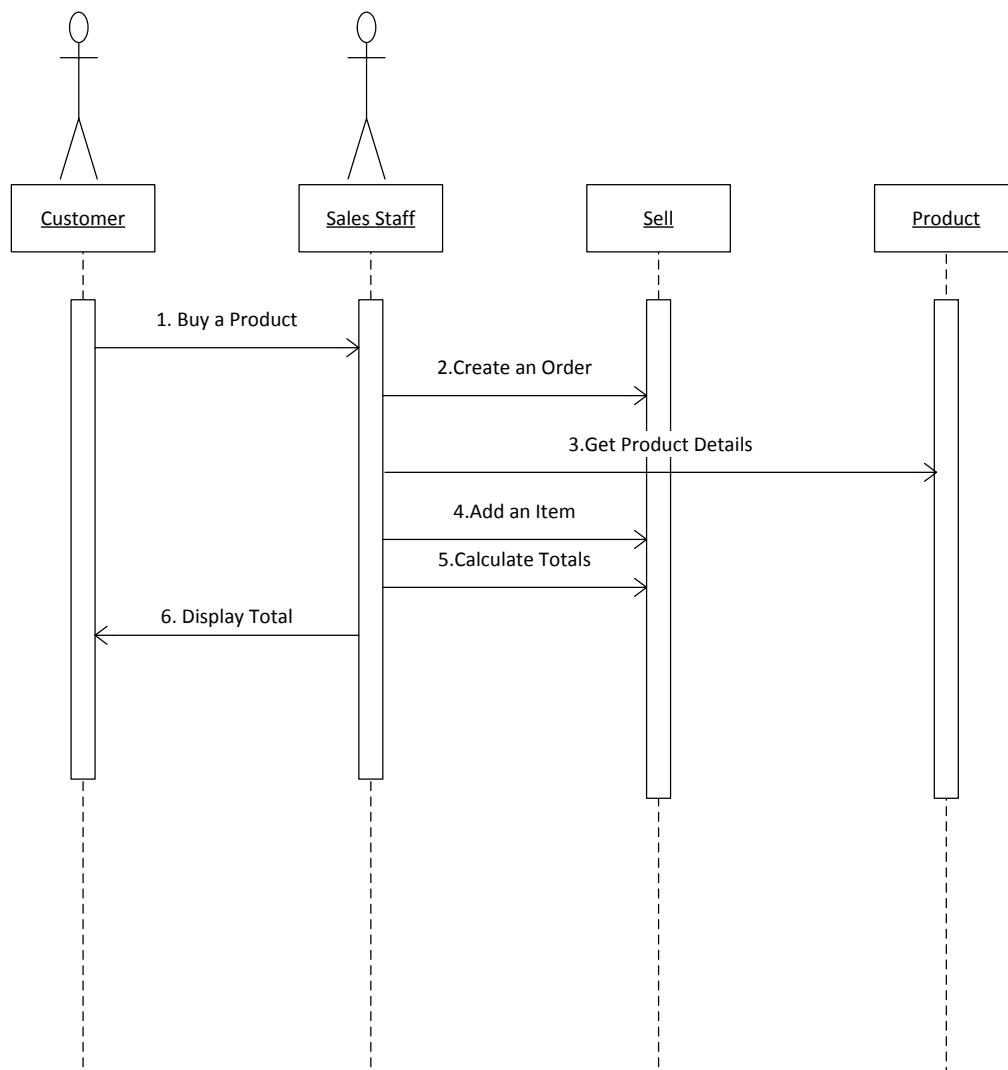


Figure 2: Customer make an order Sequence diagram

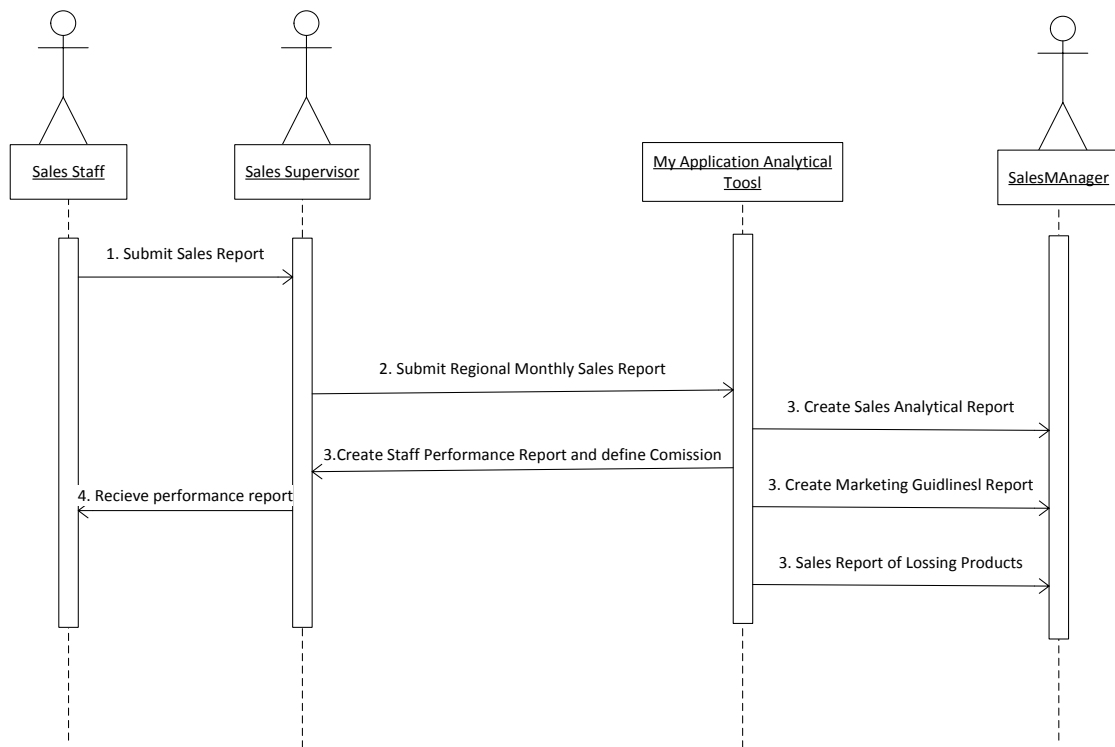


Figure 3:Sales Reporting workflow Sequence Diagram based on my system