Chapter 2  THEORETICAL FRAMEWORK

2.1 Introduction

Information System is processing of information received and transmitted to produce an efficient and effective process. One of the most typical information systems is the Transaction Processing System. Transaction Processing System collects, stores, modifies, and retrieves the transactions of a certain organization. The process of retrieving, modifying and transmitting data to be stored using information system is referred to as transaction. Transactions occur is known to be a part of records. All of these records were originally kept in paper. When a certain organization uses a certain transaction processing system, retrieving and transmitting of information will be available at anytime needed. The number and volume of transactions can be calculated for a given time period. It eliminates time constraints and efforts in terms of having several order transactions on electronic commerce and marketing of Jaro Development Corporation.

In the case of the online marketing of Jaro Development Corporation, it will bring about efficiency and convenience in processing the different ordering processes.
Nowadays, data processing uses one or more database at one or more certain organizations. Databases are use in transaction processing where information are stored, retrieved and transmitted at certain time it is needed. Examples of transaction processing systems are airline reservation systems, billing system, payroll system, library system, online marketing and online transaction processing.

2.2 Database Management System

A database management system (DBMS) is computer software designed for the purpose of managing databases. It is responsible to perform a program that organizes data in a database, providing information storage and organization, retrieval capacities. The database management system or the database itself serves as the foundation of the website for Jaro Development Corporation. Without these, the online portal cannot handle different transactions and other database driven functionalities.
2.3 Electronic Commerce

Electronic commerce is the process of buying and selling of products or services over electronic systems such as the Internet and other computer networks. The use of e-commerce has grown dramatically since the wide introduction of the Internet. E-commerce uses variety of ways and is conducted including things such as electronic funds transfer, supply chain management, e-marketing, online marketing, online transaction processing, electronic data interchange (EDI), automated inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least some point in the transaction's lifecycle, although it can encompass a wide range of technologies such as e-mail.

The proponents analyzed and used the concept of e-marketing as well as online marketing for marketing the products of JDC and online transaction processing for ordering of the consumer using the World Wide Web.

2.4 Website

A website is a collection of web pages having images, videos and other digital assets that is hosted on one or several web servers usually accessible via Internet, cell phone or a LAN. All publicly accessible websites are seen collectively as constituting the World Wide Web. The pages of websites can usually be accessed from a common root URL called the homepage, and usually
reside on the same physical server. The URLs of the pages organize them into a hierarchy, although the hyperlinks between them control how the reader perceives the overall structure and how the traffic flows between the different parts of the sites. Some websites require a subscription to access some or all of their content. Examples of subscription sites include many business sites, parts of many news sites, academic journal sites, gaming sites, message boards, Web-based e-mail, services, social networking website, and sites providing real-time stock market data.

The website to be used by the proponents is referred to as business sites which will include the overall assets of the Jaro Development Corporations such as their products and services.

2.5 Hypertext Preprocessor

PHP is a reflective programming language originally designed for producing dynamic web pages. PHP is used mainly in server-side scripting, but can be used from a command line interface or in standalone graphical applications. With this open-source technology, the proponents were more likely to use this as a server-side scripts that will handle different kind of functions from browser handling to MySQL database driving.
2.6 Spiral Model

Spiral model is an evolutionary software process model that couples the iterative nature of prototyping with the controlled and systematic aspects of the linear sequential model. It provides the potential for rapid systematic aspects of the linear sequential model. Using the spiral model software is developed in a series of incremental releases.

2.7 HIPO Diagram

A HIPO diagram is used to present a high-level view of functions performed by a system. With this, the developers have the ability to view certain functions on the program in a timely manner and with ease.

2.8 System Flowchart

The systems flowchart is often a very useful diagram for the system designers who must develop overall systems architecture of hardware and software to implement the user requirements.
2.9 Entity-Relationship Diagram

Entity-relationship diagram (ERD), is a type of conceptual data model or semantic data model.

It is used to describe the type of information that is to be stored in a database during the requirements analysis. The proponents used this data modeling technique to describe the classifications of each entity and their relationships.

2.10 Data-Flow-Diagram

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system. A data flow diagram can also be used for the visualization of data processing. With the use of the data flow diagram, the proponents can visualize the data processing of the proposed system.

2.11 Summary

Transaction Processing System (TPS) is a type of information system. It retrieves, stores, modifies and transmits information of the transactions made in a certain organization. The event in which process data that is eventually stored in information system is referred to as transaction.
**Electronic commerce** is the process of buying and selling of products or services over electronic systems such as the Internet and other computer networks. Examples of this are electronic funds transfer, supply chain management, e-marketing, online marketing, online transaction processing, electronic data interchange (EDI), automated inventory management systems, and automated data collection systems.

**Website** is a collection of web pages having images, videos and other digital assets that is hosted on one or several webservers usually accessible via Internet, cell phone or a LAN. It is collectively known as World Wide Web. Examples of subscription sites include many business sites, parts of many news sites, academic journal sites, gaming sites, message boards, Web-based e-mail, services, social networking website, and sites providing real-time stock market data.

**Hypertext Preprocessor** is a reflective programming language originally designed for producing dynamic web pages.

**Spiral Model** is evolutionary software process model software that couples the iterative nature of prototyping with the controlled and systematic aspects of the linear sequential model.
HIPO diagrams is used to present a high-level view of functions performed by a system.

Flowchart is very useful diagram for the systems designers.

Entity-relationship diagram is a type of conceptual data model or semantic data model.

Data flow diagram is a graphical representation of the "flow" of data through an information system.