Name of the Experiment: Software requirements specification (SRS) for E-Commerce system

1. Introduction: The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete Marvel Electronics and Home Entertainment software system by defining the problem statement in detail. Nevertheless, it also concentrates on the capabilities required by stakeholders and their needs while defining high-level product features. The detailed requirements of the Marvel Electronics and Home Entertainment are provided in this document.

1.1 Purpose

The purpose of the document is to collect and analyze all assorted ideas that have come up to define the system, its requirements with respect to consumers. Also, we shall predict and sort out how we hope this product will be used in order to gain a better understanding of the project, outline concepts that may be developed later, and document ideas that are being considered, but may be discarded as the product develops. In short, the purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in software delivery lifecycle (SDLC) processes.

1.2 Scope

Primarily, the scope pertains to the E-Store product features for making Marvel Electronics and Home Entertainment project live. It focuses on the company, the stakeholders and applications, which allow for online sales, distribution and marketing of electronics. This SRS is also aimed at specifying requirements of software to be developed but it can also be applied to assist in the selection of in-house and commercial software products. The standard can be used to create software requirements specifications directly or can be used as a model for defining a organization or project specific standard. It does not identify any specific method, nomenclature or tool for preparing an SRS.

1.4 References

The references are:

- E-Store Structural Model
- E-Store Behavioral Model

- E-Store NFR Model
- Vision Draft 5

1.5 Overview
The remaining sections of this document provide a general description, including characteristics of the users of this project, the product's hardware, and the functional and data requirements of the product. General description of the project is discussed in section 2 of this document. Section 3 gives the functional requirements, data requirements and constraints and assumptions made while designing the E-Store. It also gives the user viewpoint of product. Section 3 also gives the specific requirements of the product. Section 3 also discusses the external interface requirements and gives detailed description of functional requirements. Section 4 is for supporting information

2. Overall Description
This document contains the problem statement that the current system is facing which is hampering the growth opportunities of the company. It further contains a list of the stakeholders and users of the proposed solution. It also illustrates the needs and wants of the stakeholders that were identified in the brainstorming exercise as part of the requirements workshop. It further lists and briefly describes the major features and a brief description of each of the proposed system. The following SRS contains the detail product perspective from different stakeholders. It provides the detail product functions of E-Store with user characteristics permitted constraints, assumptions and dependencies and requirements subsets

3. Specific Requirements
3.1 Functionality
This subsection contains the requirements for the e-store. These requirements are organized by the features discussed in the vision document. Features from vision documents are then refined into use case diagrams and to sequence diagram to best capture the functional requirements of the system. All these functional requirements can be traced using tractability matrix.

3.1.1 Sell Configured to Ordered Products

3.1.1.1 The system shall display all the products that can be configured. 3.1.1.2 The system shall allow user to select the product to configure. 3.1.1.3 The system shall display all the available components of the product to configure 3.1.1.4 The system shall enable user to add one or more component to the configuration. 3.1.1.5 The system shall notify the user about any conflict in the current configuration. 3.1.1.6 The

system shall allow user to update the configuration to resolve conflict in the current configuration. 3.1.1.7 The system shall allow user to confirm the completion of current configuration

3.1.2 Provide comprehensive product details.

3.1.2.1 The system shall display detailed information of the selected products.

3.1.2.2 The system shall provide browsing options to see product details.

3.1.3 Detailed product Categorizations

The system shall display detailed product categorization to the use

3.1.4 Provide Search facility

- The system shall enable user to enter the search text on the screen.
- The system shall enable user to select multiple options on the screen to search.
- The system shall display all the matching products based on the search
- The system shall display only 10 matching result on the current screen.
- The system shall enable user to navigate between the search results.
- The system shall notify the user when no matching product is found on the search

3.1.5 Maintain customer profile.

- The system shall allow user to create profile and set his credential.
- The system shall authenticate user credentials to view the profile.
- The system shall allow user to update the profile information.

3.1.6 Provide personalized profile

- The system shall display both the active and completed order history in the customer profile.
- The system shall allow user to select the order from the order history.
- The system shall display the detailed information about the selected order.
- The system shall display the most frequently searched items by the user in the profile.
- The system shall allow user to register for newsletters and surveys in the profile.

3.1.7 Provide Customer Support

- The system shall provide online help, FAQ's customer support, and sitemap options for customer support.
- The system shall allow user to select the support type he wants.
- The system shall allow user to enter the customer and product information for the support.
- The system shall display the customer support contact numbers on the screen.
- The system shall allow user to enter the contact number for support personnel to call.
- The system shall display the online help upon request.

3.1.8 Email confirmation

- The system shall maintain customer email information as a required part of customer profile.
- The system shall send an order confirmation to the user through email.

3.1.9 Detailed invoice for customer.

- The system shall display detailed invoice for current order once it is confirmed.
- The system shall optionally allow user to print the invoice.

3.1.10 Provide shopping cart facility

- The system shall provide shopping cart during online purchase.
- The system shall allow user to add/remove products in the shopping cart.

3.1.11 Allow online change or cancellation of order.

- The system shall display the orders that are eligible to change.
- The system shall allow user to select the order to be changed.
- The system shall allow user to cancel the order
- The system shall allow user to change shipping, payment method.
- The system shall notify the user about any changes made to the order.

3.1.12 Allow Online Product reviews and rating

- The system shall display the reviews and ratings of each product, when it is selected.
- The system shall enable the user to enter their reviews and ratings

3.1.20 Online Purchase of products.

- The system shall allow user to confirm the purchase.
- The system shall enable user to enter the payment information.

3.2 Usability

3.2.1 Graphical User Interface

- The system shall provide a uniform look and feel between all the web pages.
- The system shall provide a digital image for each product in the product catalog.
- The system shall provide use of icons and toolbars.

3.2.2 Accessibility

- The system shall provide handicap access.
- The system shall provide multi language support.

3.3 Reliability & Availability

3.3.1 Back-end Internal Computer

The system shall provide storage of all databases on redundant computers with automatic switchover. The system shall provide for replication of databases to off-site storage locations. The system shall provide RAID V Disk Stripping on all database storage disks.

3.3.2 Internet Service Provider

The system shall provide a contractual agreement with an internet service provider for T3 access with 99.9999% availability.The system shall provide a contractual agreement with an internet service provider who can provide 99.999% availability through their network facilities onto the internet

3.4 Performance

- The product shall be based on web and has to be run from a web server.
- The product shall take initial load time depending on internet connection strength which also depends on the media from which the product is run.
- The performance shall depend upon hardware components of the client/customer.

3.5 Security

3.5.1 Data Transfer

- The system shall use secure sockets in all transactions that include any confidential customer information.
- The system shall automatically log out all customers after a period of inactivity.
- The system shall confirm all transactions with the customer's web browser.
- The system shall not leave any cookies on the customer's computer containing the user's password.
- The system shall not leave any cookies on the customer's computer containing any of the user's confidential information

3.5.2 Data Storage

- The customer's web browser shall never display a customer's password. It shall always be echoed with special characters representing typed characters.
- The customer's web browser shall never display a customer's credit card number after retrieving from the database. It shall always be shown with just the last 4 digits of the credit card number.
- The system's back-end servers shall never display a customer's password.
- The customer's password may be reset but never shown. The system's back-end servers shall only be accessible to authenticated administrators.
- The system's back-end databases shall be encrypted.

3.6 Supportability

3.6.1 Configuration Management Too

The source code developed for this system shall be maintained in configuration management tool

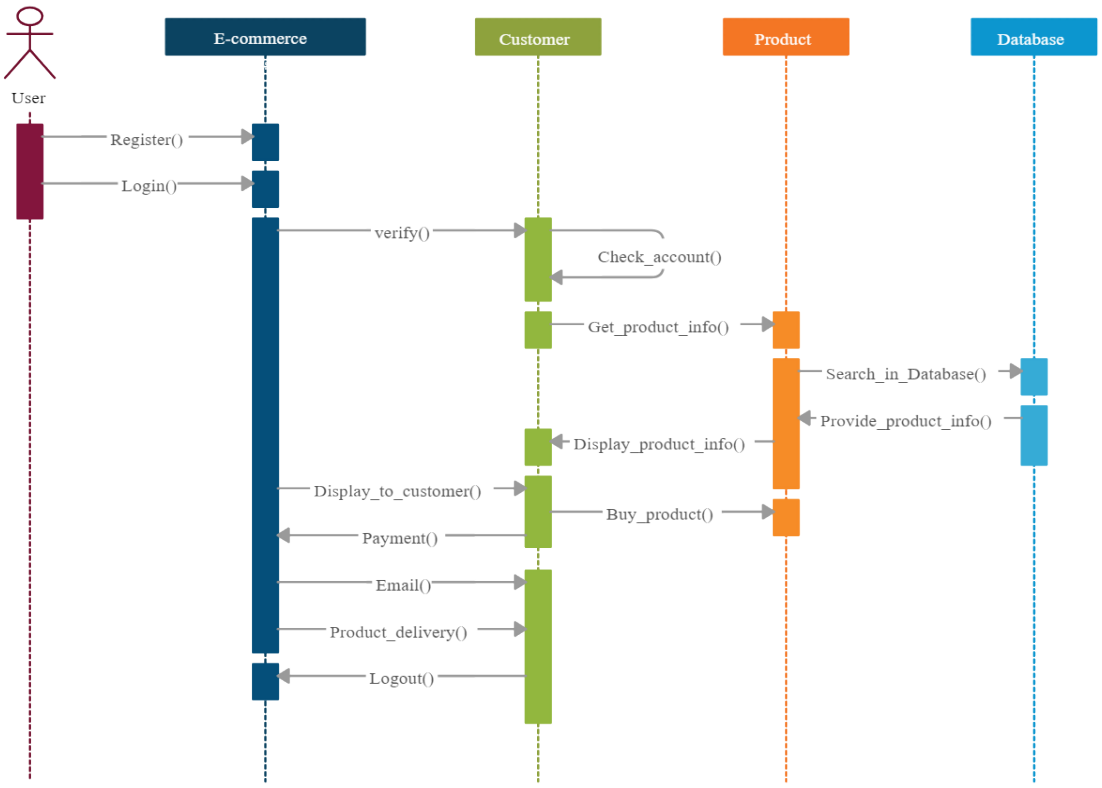
3.7 Design Constraints

3.7.1 Standard Development Tools

The system shall be built using a standard web page development tool that conforms to either IBM's CUA standards or Microsoft's GUI standards.

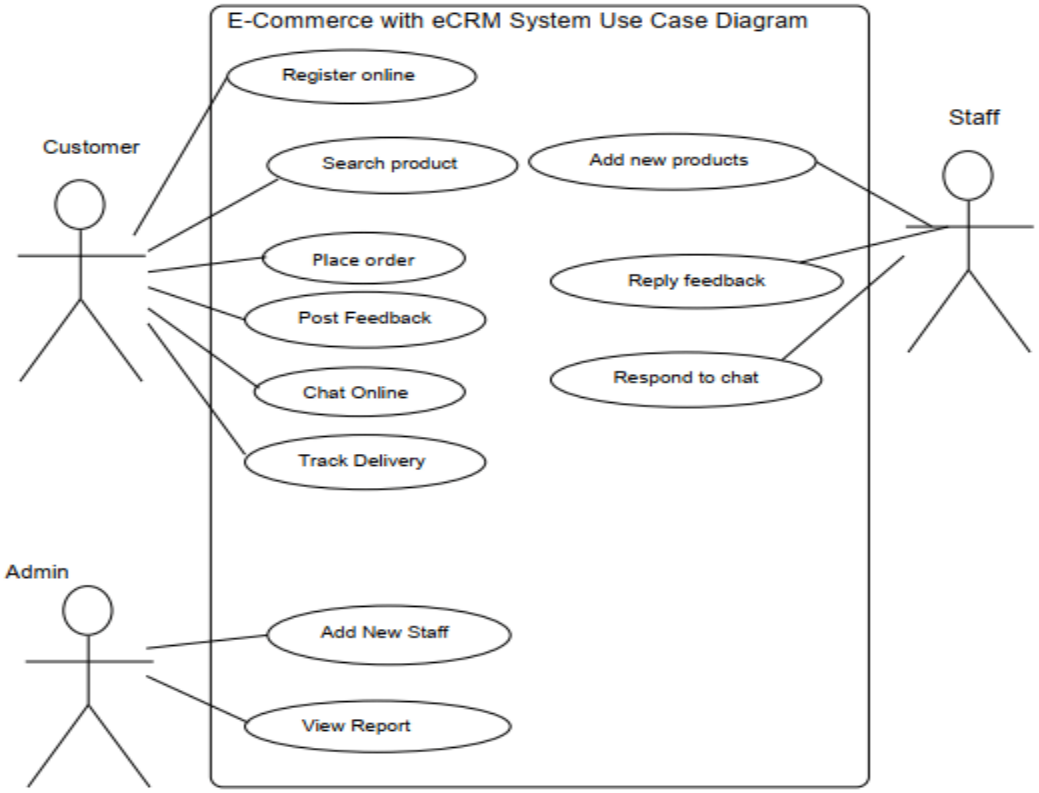
Sequence Diagrams for an E-commerce Firm can be broken into 5 main functionalities:

1. Sign Up Functionality
2. Login Functionality
3. Add to Cart Functionality
4. Product Order Functionality
5. Customer Care Functionality



The **use case diagram for e-commerce website** is the behavioral diagram that summarizes activities done in the e-commerce website and its user details. It depicts the graphical representation of the system's behavioral structure.

Additionally, the **diagram** consists of **processes** (use cases) and **users** or "actors". It uses defined symbols to describe the overall workflow of the e-commerce website.



Discussion:The SRS for the E-Commerce system has been described in this lab report. The system will meet the needs of customers and restaurants, and it will be easy to use and secure. The diagrams included in the SRS will help developers understand the requirements of the system and implement it correctly