

# Software Design Specification of E-commerce Website with Analysis Tools

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# 1 Introduction

## 1.1 System Overview

The E-commerce Website with Analysis tools serves as an platform to retailers needing to put their products online for sell. The E-commerce Website with Analysis tools will offer an interface that effectively aggregates the needs of retailer and customer with analyst role added in system to enhance the user Experience.

E-commerce website which will be used by

1. Customers to place orders navigating through categories as filters, place, manage and track orders.
2. Analyst/Manager to generate reports and develop marketing strategies like coupons and offers
3. Admin to manage stock, vendors and warehouses etc.

## 1.2 Definitions, Acronyms, and Abbreviations

System – Here after the ecommerce website with analysis tools will be referred as system.

MySQL – Database used in this application

Hibernate –ORM framework Used for mapping objects in JAVA code and MySQL database.

## 1.3 References

3 rd Party Frameworks

- a. Spring: <http://www.springsource.org/about>
- b. Spring Security: <http://static.springsource.org/spring-security/site/index.html>
- c. Spring Validation: <http://docs.spring.io/spring/docs/current/spring-framework-reference/html/validation.html>
- d. MySQL : <https://dev.mysql.com/downloads/mysql/>
- e. Hibernate: <http://hibernate.org/>
- f. Hibernate Validator : <http://hibernate.org/validator/>

## 2. Design Considerations

### 2.1 Assumptions

Users of this system must have basic knowledge of online shopping and computer systems .

### 2.2 Constraints

No specific constraints exist other than the resource limitations imposed upon applications that are being written for web browser. The cross browser testing needs to be done while deployment .

### 2.3 System Environment

The system is client server based web application will run on is the SpringSource dm Java Application Server (<http://www.springsource.org/dmserver>). Over an internet we can access this site form remote location.

### 2.4 Design Methodology

The design methodology being employed here is the UML object-oriented technique insofar as necessary since large parts of the system functionality are implemented in java ,spring MVC,and hibernate.

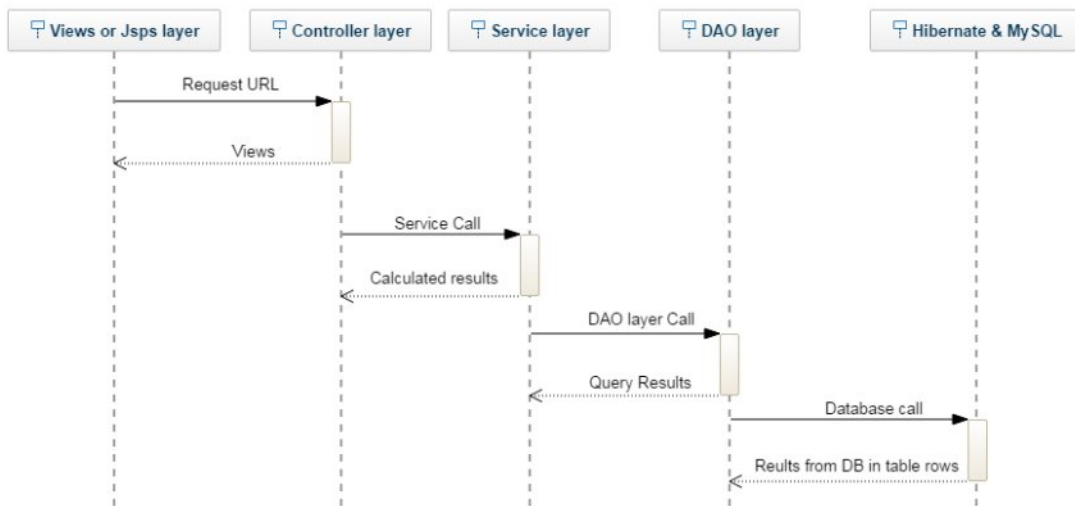


Fig.1 Layered structure of application

Fig 1 shows the layers of the system. And each layer calls the inner layer of the system and gets the requested results.

### 3. Architectural (High-level) Design

#### 3.1 Overview

The system is 3 tier architecture and implemented in Spring model view controller (MVC). Here Model is data coming from database in this case its MySQL and flows through the system. View is showing the data to the client which is different for different use here we are using jsp for view. The system has different users and for every user the screens are also different. Last the controllers are nothing but the java class spring controllers.

In this System the client server architecture is followed. The clients are web browsers who are consuming the website. And there is one server across the internet. It consists of Spring controllers that respond to requests for data from the client and that has db connection. Database may be on same machine or it might be on different machine connected via network.

The following block diagram shows the basic architectural (high level) design.

#### . 3.2 Conceptual (or Logical) View

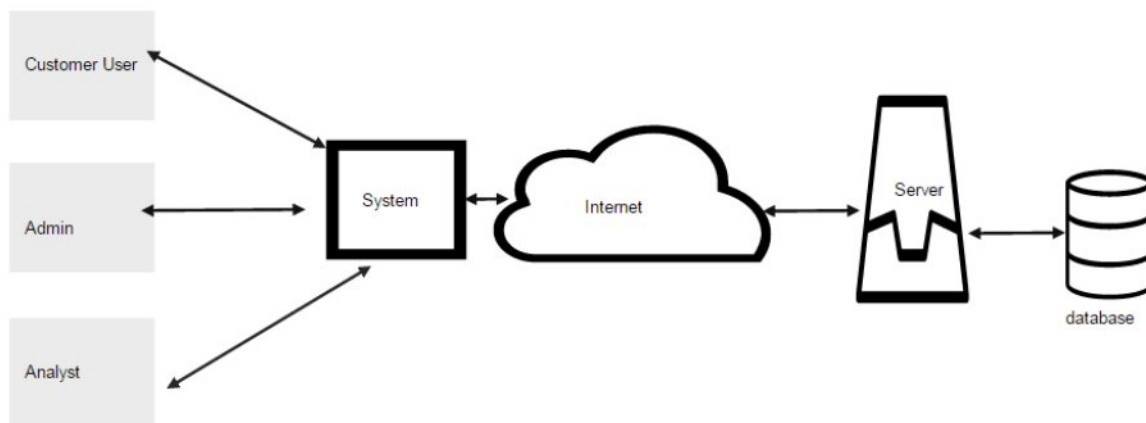


Fig. 2 High Level Architecture of The System

Basic flow

1. User Request a service.
2. It gets process at server according to user .
3. Server creates response and sends back to client.

## 4. Low Level Design

### Client server Design

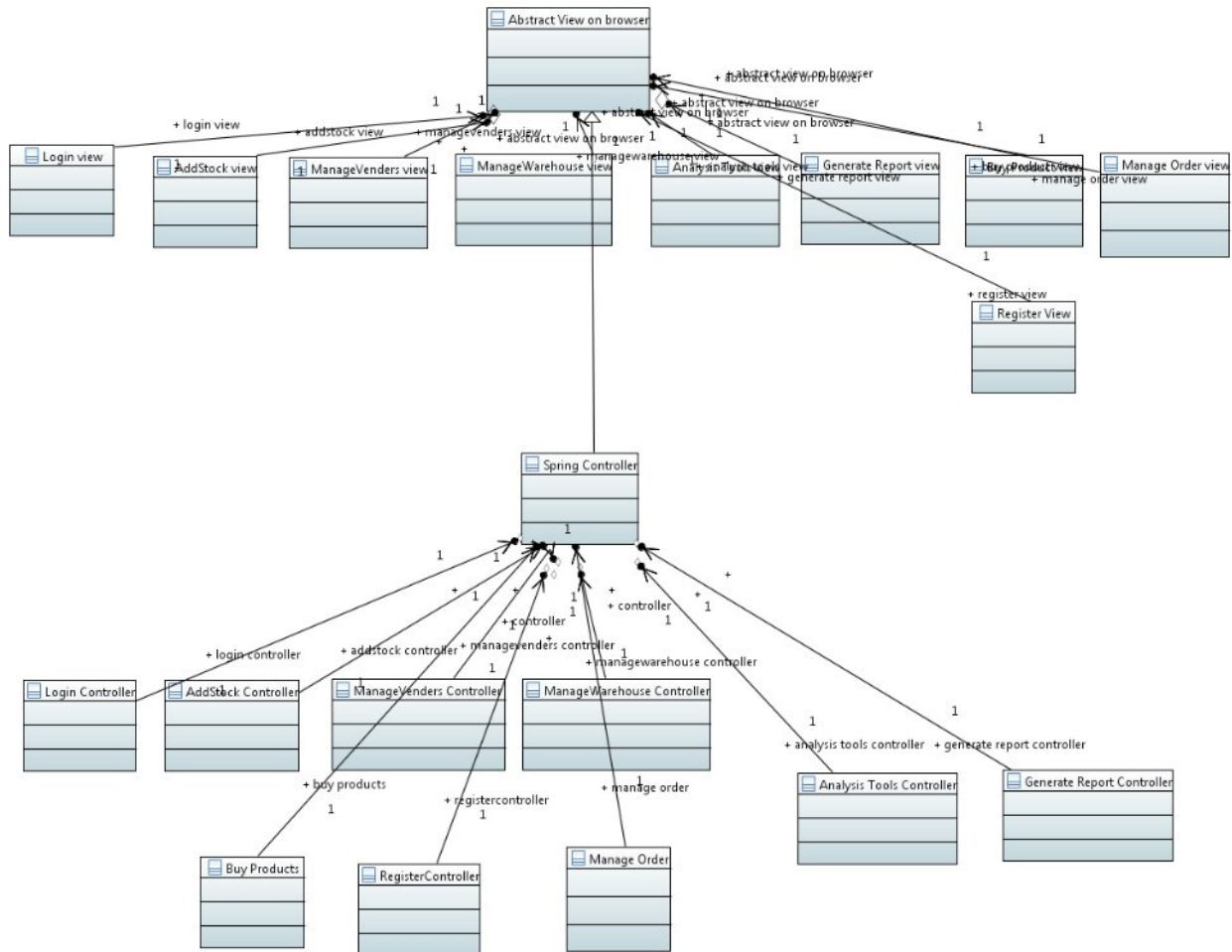


Fig. 3 Low Level Design Diagram for System.

As shown in fig 3 we have different controllers to delegate the user request, according to the controller called subsequently the controller will call the service method, and service method where all business logic resides, then it will call the DAO class method which deals with database access control this sequence is shown in fig 1. In chapter 2. This layered structure will enhance the system security and scalability of the system.

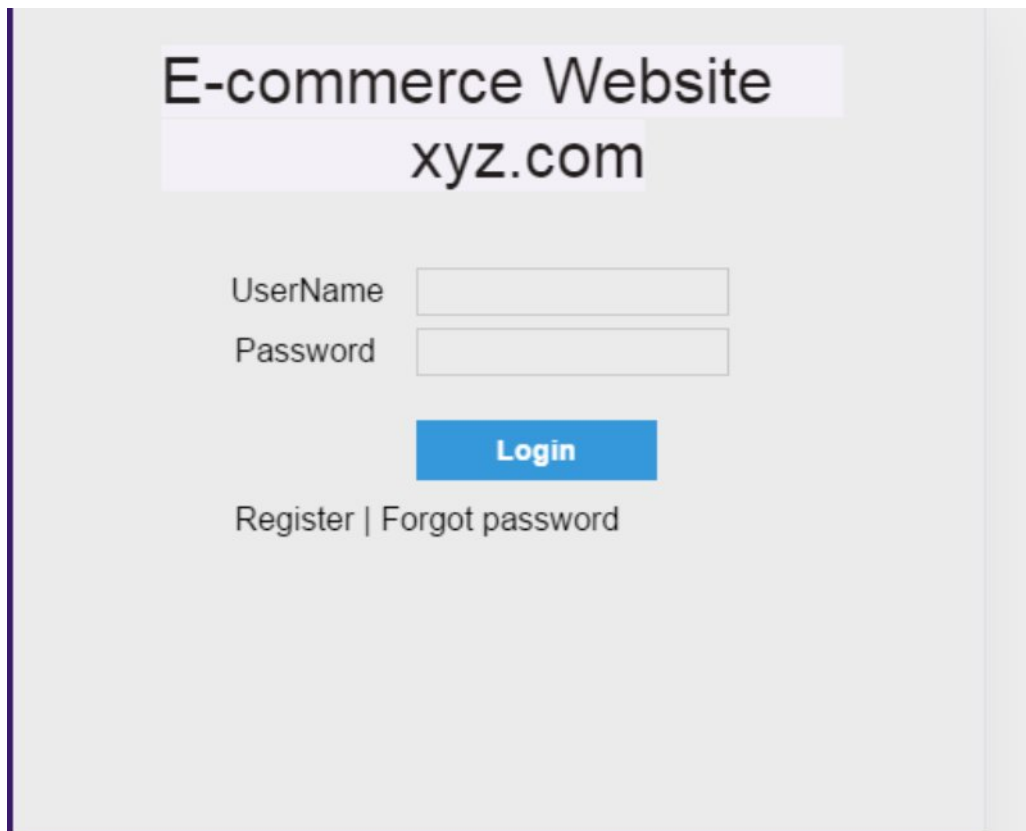
## 5. User Interface Design

### 5.1 Application Control

The primary user interface consists of an interface as can be seen in the following screenshots. There are three types of users for the system. For each type of user login screen is same but, other screens vary as shown below.

### 5.2 Screenshots

#### 1.Login page



The screenshot displays the login interface of an e-commerce website. At the top, the text 'E-commerce Website' is followed by 'xyz.com' in a larger font. Below this, there are two input fields: 'UserName' and 'Password'. A blue button labeled 'Login' is positioned below the password field. At the bottom of the login section, there are two links: 'Register' and 'Forgot password'.

## 2.Admin- Add Stock

### Add Stock

Product Name	<input type="text"/>
Product Id	<input type="text"/>
Quantity	<input type="text"/>
Supplier ID	<input type="text"/>
Warehouse ID	<input type="text"/>
Product Description	<input type="text"/>
Product Price	<input type="text"/>
Add CSV file	<input type="text"/>
	<input type="button" value="Browse file"/>
<input type="button" value="Add Stock"/>	



### 3.Admin – Manage Venders

### Manage Venders

Vender Id	Vender Name	Address	Update	Delete
1	Vender A	Address 1	<a href="#">update</a>	<a href="#">Delete</a>
2	Vender B	Address 2	<a href="#">update</a>	<a href="#">Delete</a>
3	Vender C	Address 3	<a href="#">update</a>	<a href="#">Delete</a>
4	Vender D	Address 4	<a href="#">update</a>	<a href="#">Delete</a>

Vender ID

Vender Name

Vender Address

[Update](#)

### 4.Admin –Manage Warehouse

### Manage Warehouse

Warehouse Id	Warehouse Name	Address	Update	Delete
1	warehouse A	Address 1	<a href="#">update</a>	<a href="#">Delete</a>
2	warehouse B	Address 2	<a href="#">update</a>	<a href="#">Delete</a>
3	Warehouse C	Address 3	<a href="#">update</a>	<a href="#">Delete</a>
4	Warehouse D	Address 4	<a href="#">update</a>	<a href="#">Delete</a>

Warehouse ID

Warehouse Name

Warehouse Address

[Update](#)

5.User Buy Product.

### Buy Product

Select Category  Select Sub-category

Product name

\$99.99

An awesome description

3 Databases

10GB Storage

250 Contacts

Online Support

[Buy Now](#)

Product name2

\$99.99

An awesome description

3 Databases

10GB Storage

250 Contacts

Online Support

[Buy Now](#)

[Check Out](#)

6.User –Register

**Register / Create profile**

First name	<input type="text"/>
Last Name	<input type="text"/>
Ph Number	<input type="text"/>
Email Id	<input type="text"/>
Confirm email	<input type="text"/>
UserName	<input type="text"/>
Password	<input type="text"/>
Shipping address	<input type="text"/>
Pin	<input type="text"/>



[Create Profile](#)

## 7.User- Manage Order

**Manage Orders**

Orders	Open order	Delivered
--------	------------	-----------

	order 1 Deliverd
	Order 2 ready to ship

[Cancel Order](#)

## 8.Analyst –Analysis Tools

### Analysis Tool

#### Most Selling Products

Product ID	Product Name	Number of Products sold
2	Product 2	20
3	Product 3	10
1	Product 1	5

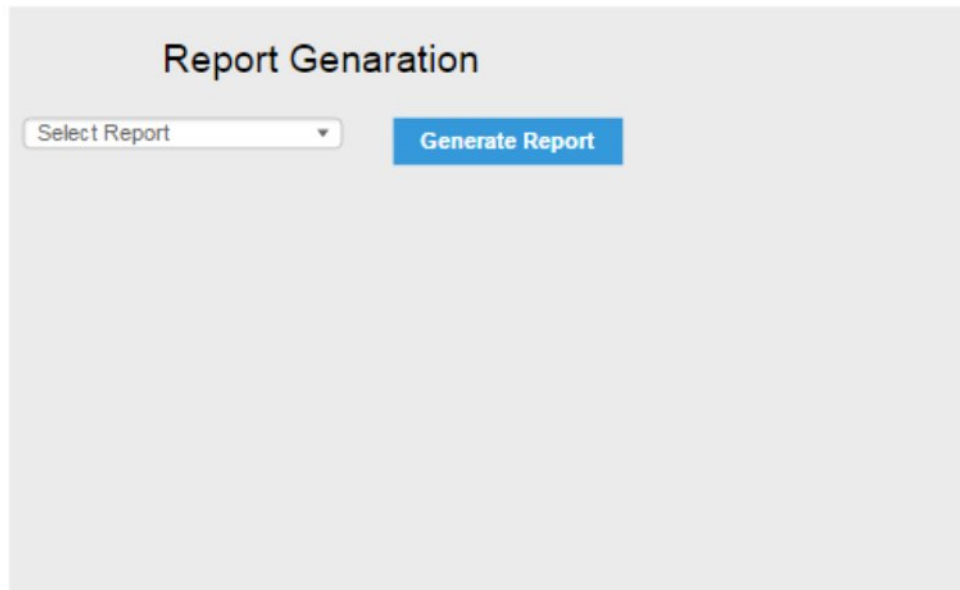
#### Least Selling Products

Product ID	Product Name	Number of Products sold
8	Product 8	0
10	Product 10	2
11	Product11	3

#### Newly added Products

Product ID	Product Name	Number of Products sold
2	Product 2	20
3	Product 3	10
1	Product 1	5

Refresh



The image shows a web interface for report generation. It features a title "Report Generation" at the top. Below the title, there is a dropdown menu labeled "Select Report" and a blue button labeled "Generate Report". The background is a light gray.