# Software Design Document of

# E-Commerce website

Software Development Practices
SRH University – Heidelberg
Prof. Dr. Peter Misch
Lec. Mr. AjinkyaPrabhune

Done by: Anusha Nagaraj, Vinay Kumar, Shunmuga Prabhu Siddharthan and Sachin Baral Ramesh

# Table of Contents

# List of figures

# 1 Introduction

## 1.1 Purpose

The purpose of this document is to help the reader understand the E-Commerce website and its implementation. E-Commerce website is a web application that aims at facilitating the purchase and selling of electronic products online.

## 1.2 Scope

The following section contains information on what E-Commerce website is? it's purpose, working of the application, the targeted audience and its implementation.

## 1.3 Overview

E-Commerce websites are the web applications that facilitate business involving transfer of information, products or funds online. Range of business aspects such as personal, wholesale and retail can now be accomplished online. The three important components of e-commerce are **Server** that can setup the virtual store and manage it, **Database** to store or to keep track of all the important data and the **Dispatch system** that can dispatch products from warehouse.

# 2 System Overview

With the increase in usage of internet trading of products has also become electronic. In this project we are building E-Commerce website which is a web application for online shopping. This application aims at bringing vendors and consumers situated across the globe under the same roof making trade effortless, agile and available around the clock. The three major aspects of this system are as below.

## 2.1 Administrator

An administrator is the one who manages and exercises control over the website. The function of the admin will be to monitor the transactions of vendors and consumers by generating reports and also has the privilege of controlling the vendor / customer account in case of any restricted activities.

## 2.2 Sellers

Sellers are the product vendors who can register in the E-Commerce website. A vendor will be able to add, update or delete their products/ product details. Vendors will be able to track their product's stock availability and define the product specification and price. They will also get the order details, shipment information and will be able to generate reports for analytical purpose.

## 2.3 Customers

Customers are the consumers who will be able to purchase the products. A customer should be registered in prior to purchase any product. They will be able to add the products into the favorite list that allows him to save for later. Once the order is places the shipment address is to be provided by the customer. The checkout process involves two modes of payment i.e. online or by cash on delivery. Once the payment is done, the customer will be able to download the invoice.

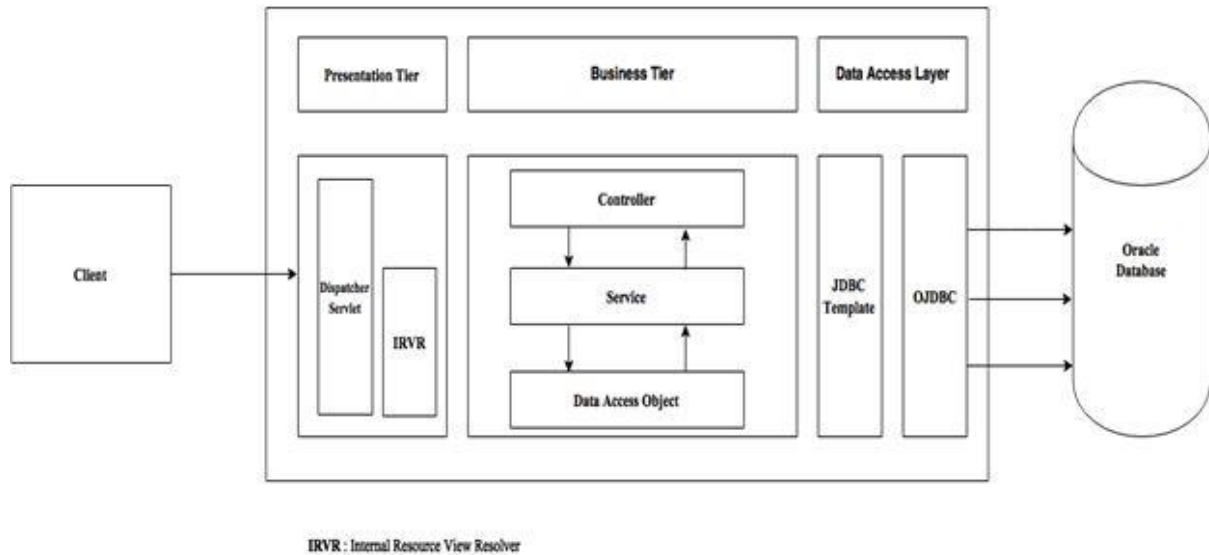# 3   System Architecture

## 3.1   Architectural Diagram



IRVR : Internal Resource View Resolver

Figure 1: E-Commerce website Architectural Diagram

## 3.2 Decomposition Description
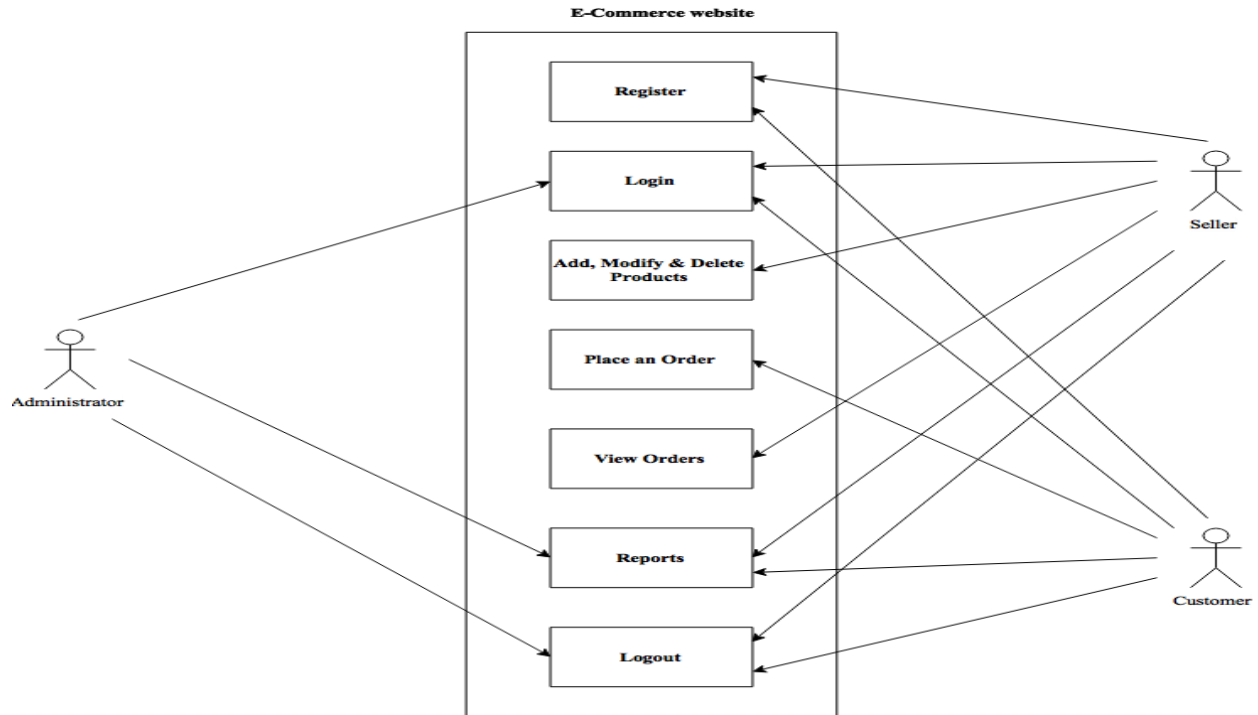
### a. Use case Diagram



Figure 2: E-Commerce website Use case Diagram
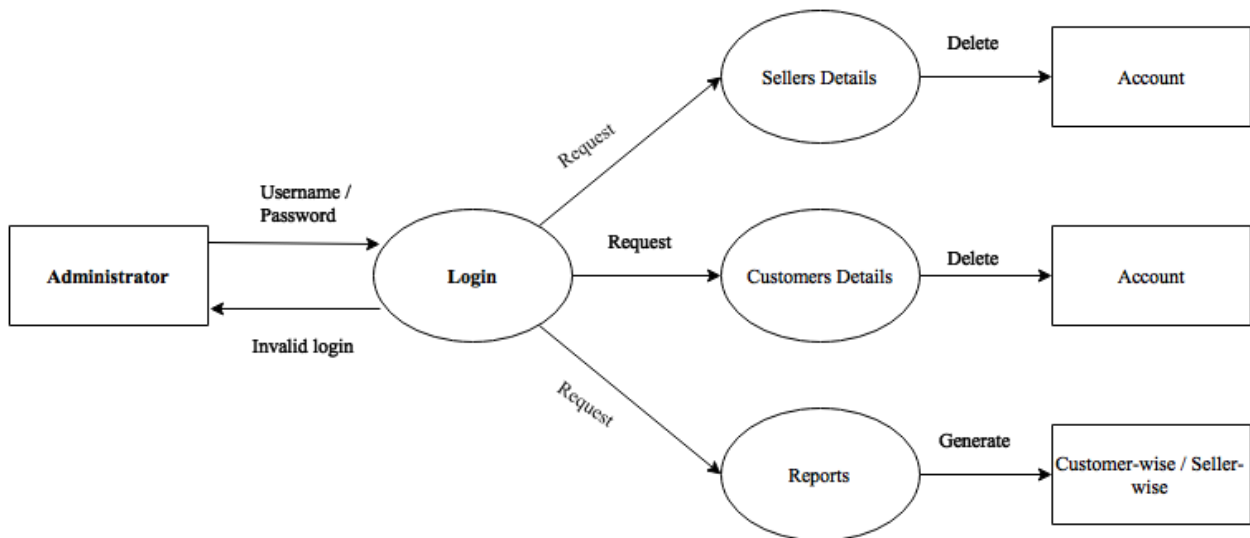
### b. Dataflow diagram of Administrator



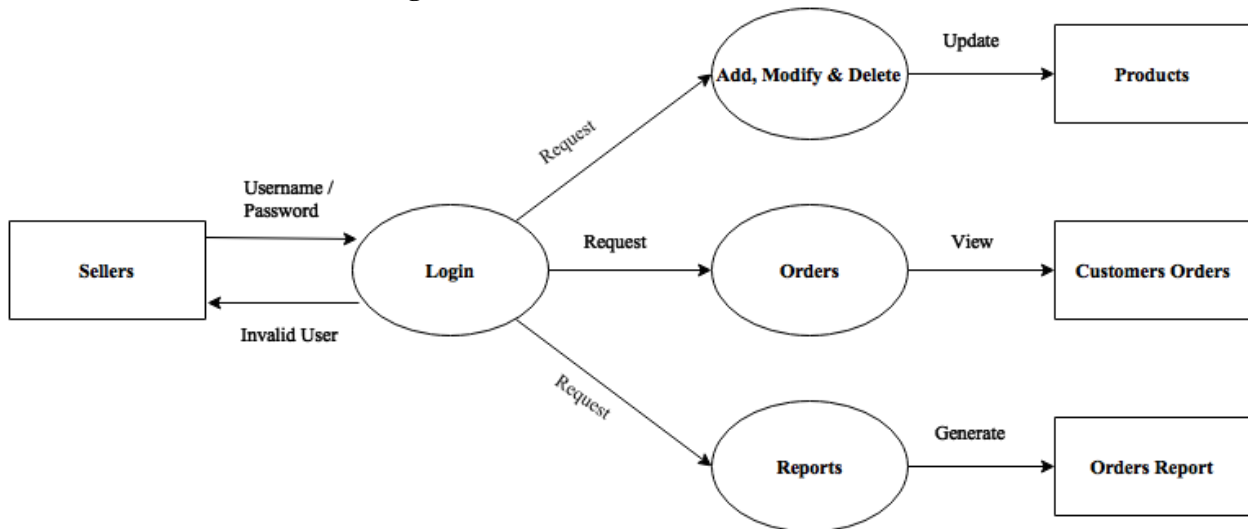Figure 3: Administrator's Dataflow Diagram

### c.   Dataflow diagram of Seller



**Figure 4: Seller's Dataflow Diagram**

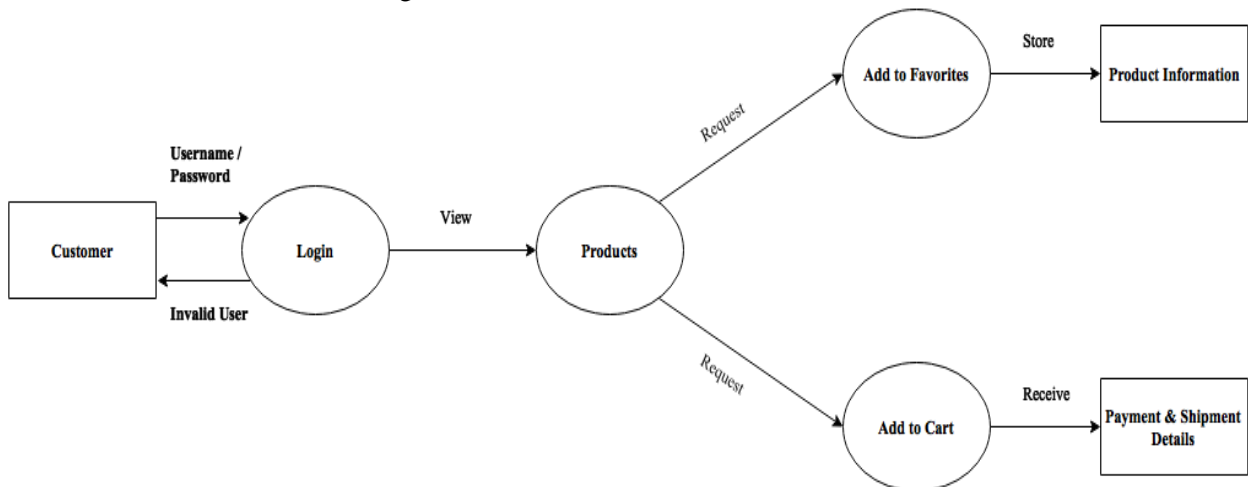### d.   Dataflow diagram of Customer



**Figure 5: Customer's Dataflow Diagram**

## 3.3 System Operation

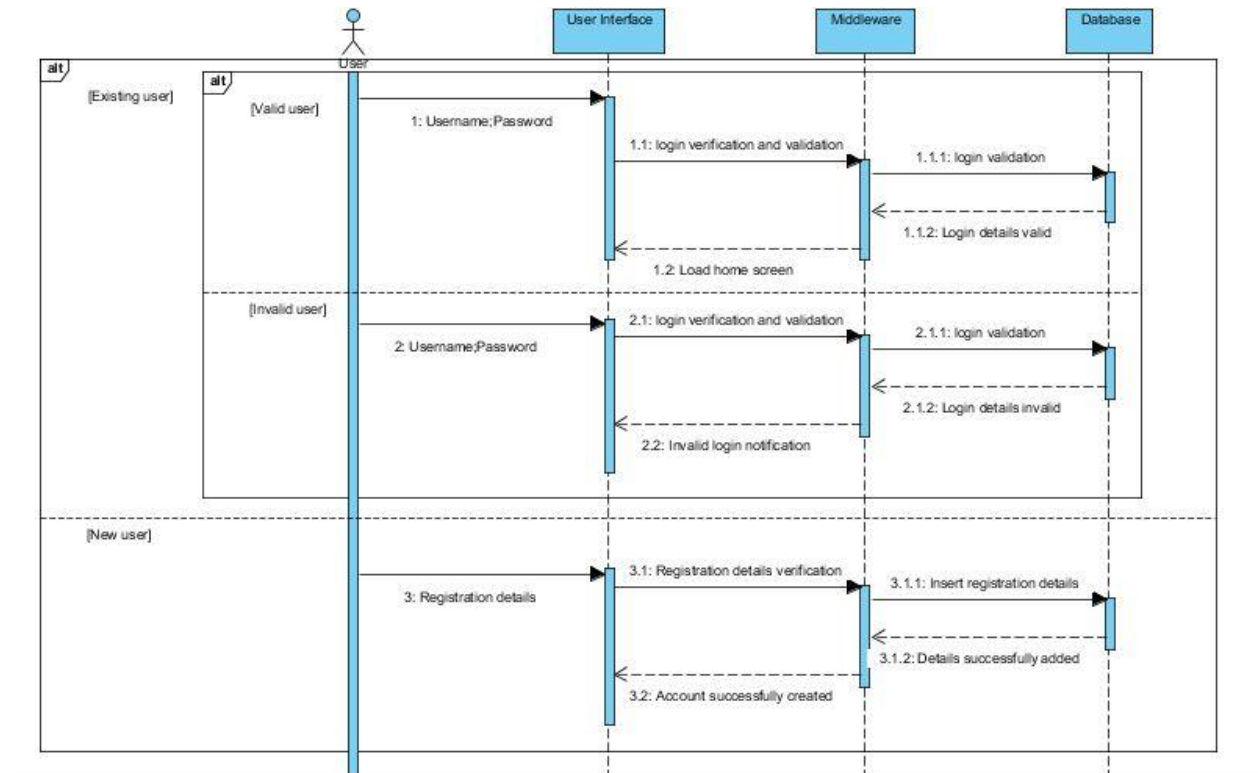The diagrams below show the sequence of the actions occurring in the web application.
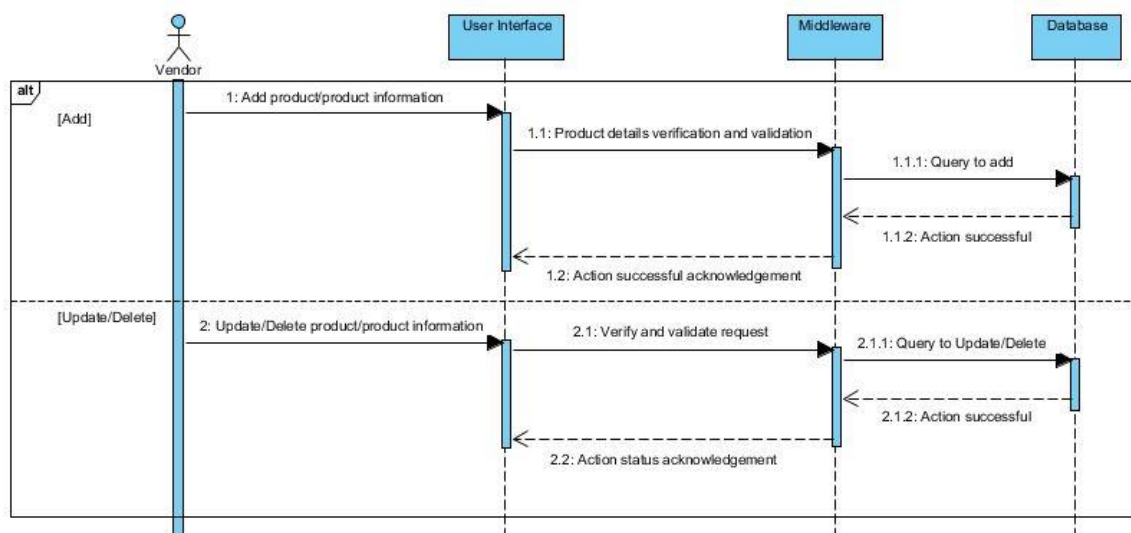


**Figure 6: Sequence Diagram of Registration/login process**



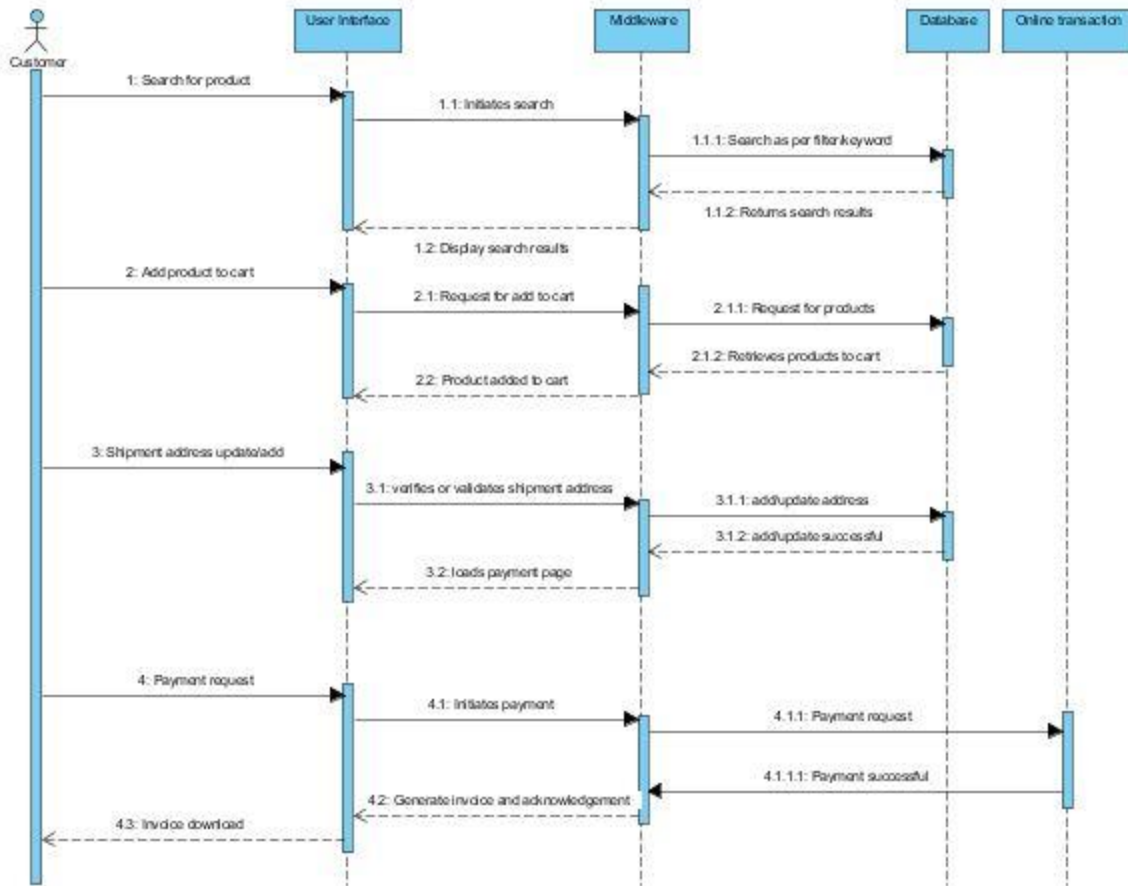**Figure 7: Sequence diagram of vendor activities**

Figure 8: Sequence diagram of Customer activities
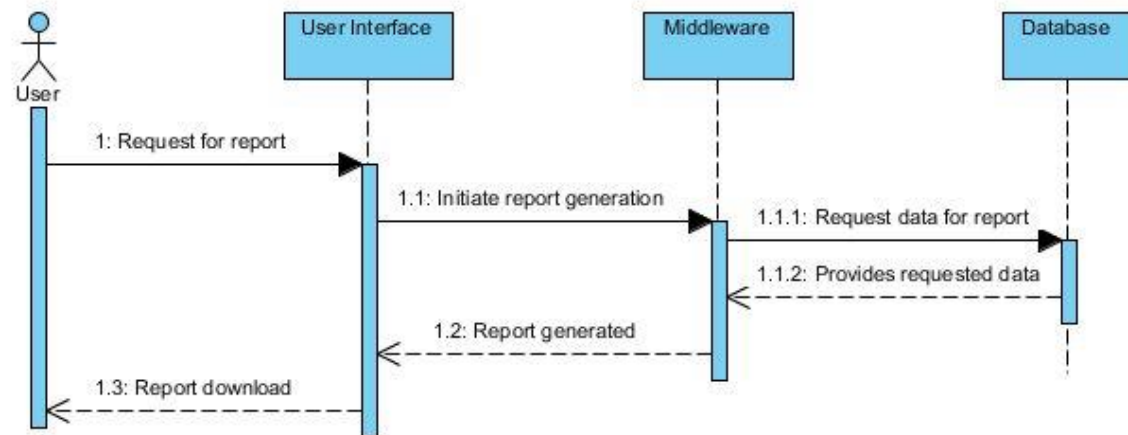


Figure 9: Sequence diagram of reporting

# 4 Data Design

## 4.1 Data Description

Our E-Commerce website mainly flows around the products. So, there is a dedicated Product Table which stores all the products information and the company name which sells it. Sellers, Customers and Administrator all come under one roof as a user. Users Table contains customer, sellers and Administrator information. User password, Company details, Orders details and Wish list have their own separate table in the database as User Passwords, Company, Orders and Favorite.
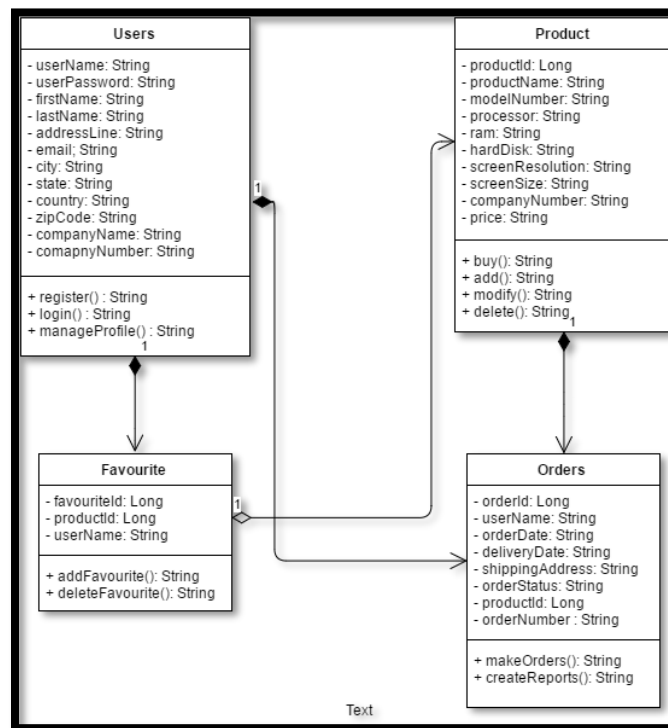
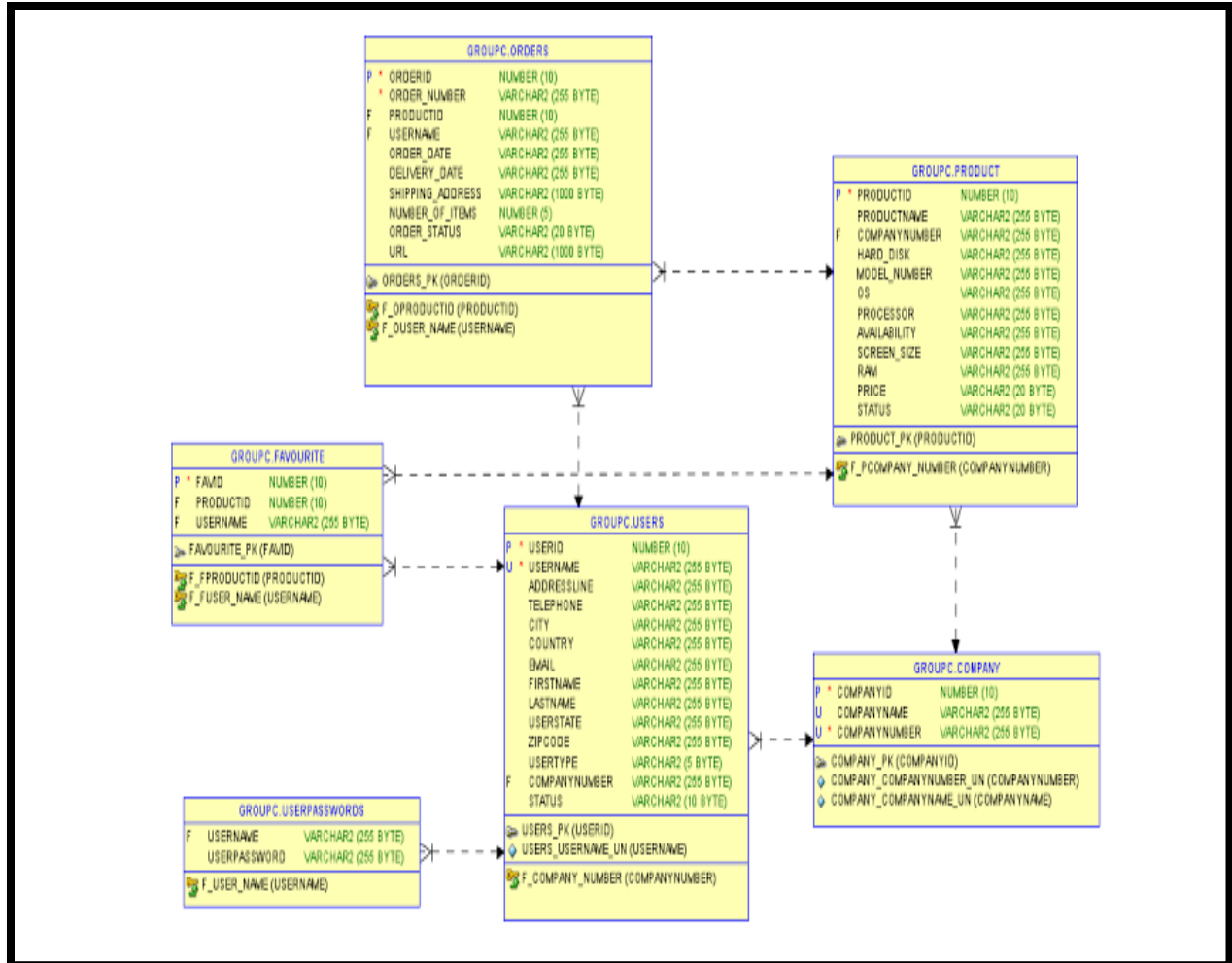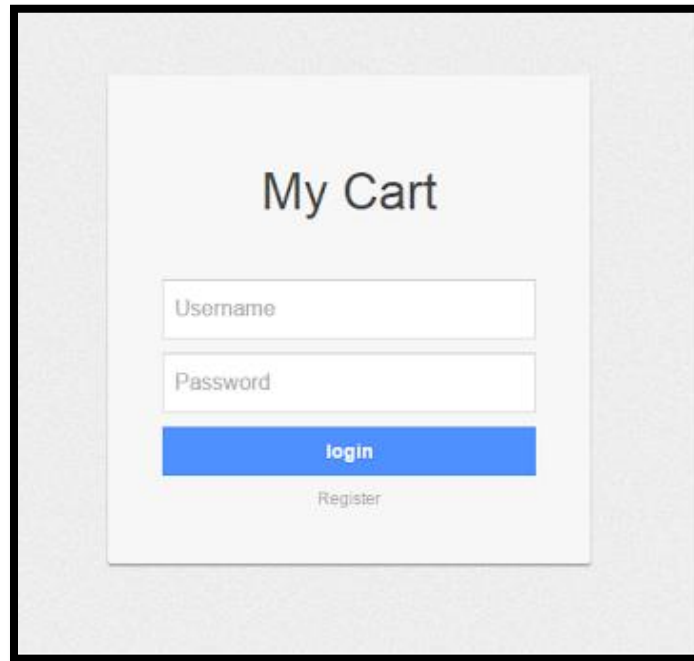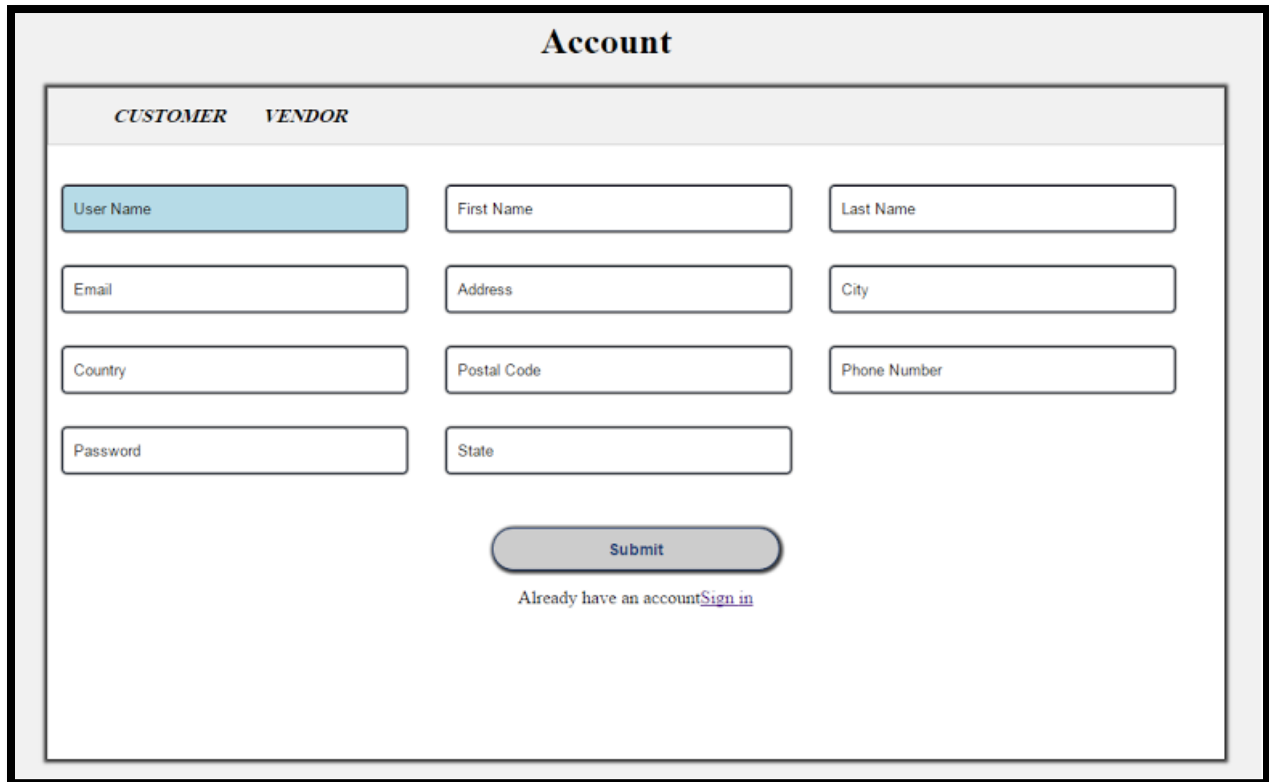## 4.2 Data Dictionary



**Figure 10 : Class Diagram**

Figure 11: E-Commerce website ER Diagram

## 4.3 User Interface



**Figure 12: Login Page**



**Figure 13 : User Registration Page**

**Adding Product**

| | | |
|---|---|---|
| Product Name | Model Number | processor |
| RAM | Hard Disk | Availability |
| Screen Size | os | Prize |

Save Product

Cancel

Figure 14 : Product Registration Page

Search product name

Favourite List    Check Out    View Orders    Manage Profile

**Product List**

Show 10 entries                                                                    Search:

| Product Id | Product Name | Model Number | OS | RAM | Hard Disk | Processor | Screen Size | Available | Price | Action |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP Elite book | HPELBK | Windows | 8 GB | 1 TB | Intel i7 | 17" | 4 | 500 EURO | Add to Favourite / Add to cart |
| 2 | Apple Laptop | 123 | Apple Mac | 2 GB | 500 GB | Intel i5 | 15.5" | 141 | 500 EURO | Add to Favourite / Add to cart |
| 3 | Toshiba A50 | X2010 | Windows 7 | 4 GB | 500 GB | Intel i5 | 15" | 4 | 400 EURO | Add to Favourite / Add to cart |

Showing 1 to 3 of 3 entries                                            Previous  1  Next
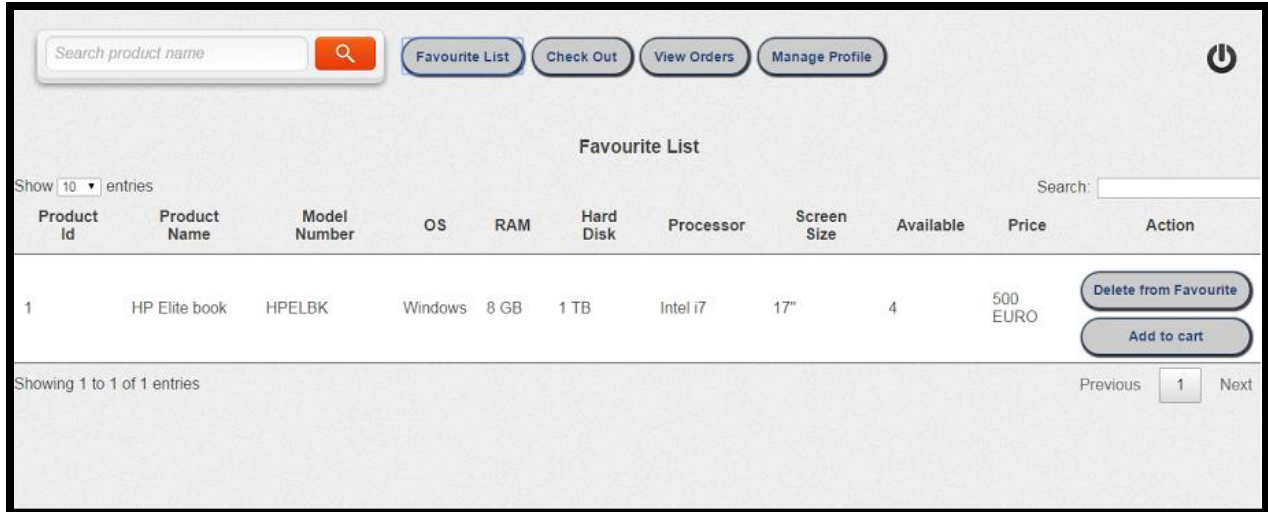
Figure 15 : Product List
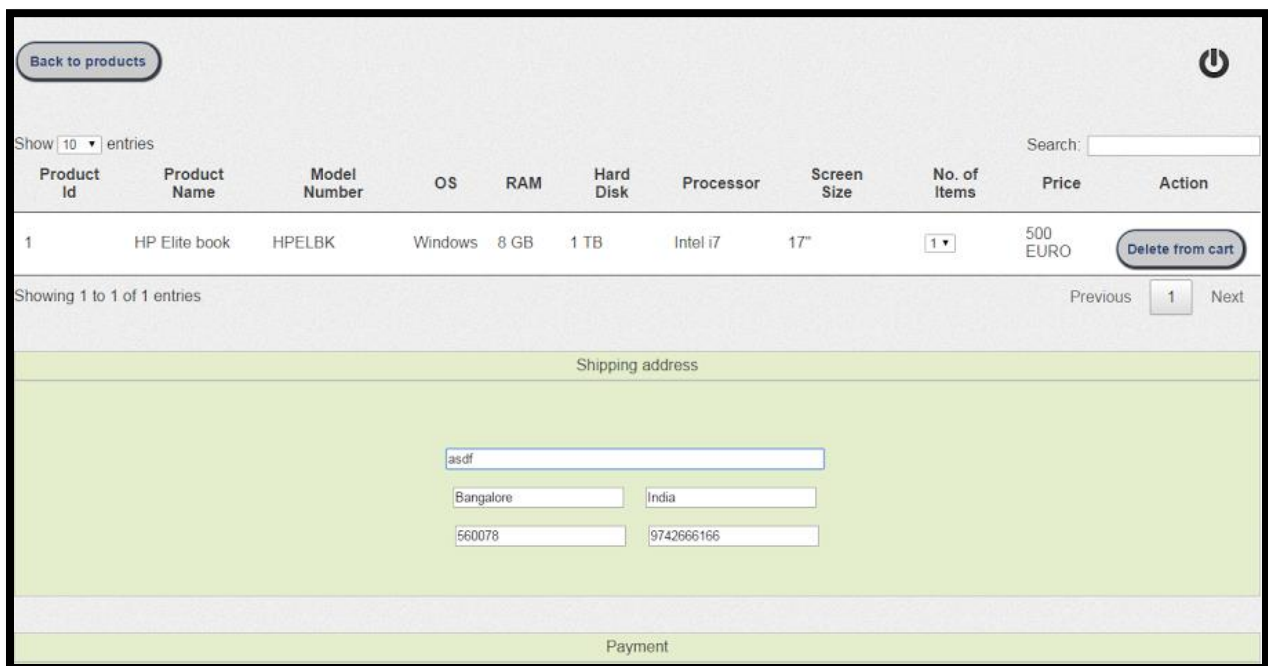
**Figure 16 :Favourite List**



**Figure 17 : Check Out**

## Confirmation

Order number : OR 2

Order Date : 19-DEC-16

Address : asdf,Bangalore,India,560078

Payment type : Cash on Delivery

| Model Number | Product | Unit price | No. of Items | Delivery date |
|---|---|---|---|---|
| HPELBK | HP Elite book | 500 EURO | 1 | 19-DEC-16 |

Figure 18 : Order Invoice

Order report for the year 2016

| Order Number | Product Name | Order date | Unit price | No. of Items | Status | Delivery date |
|---|---|---|---|---|---|---|
| OR 1 | HP Elite book | 19-DEC-16 | 500 EURO | 1 | SHIPPING | 19-DEC-16 |
| OR 1 | Apple Laptop | 19-DEC-16 | 500 EURO | 1 | SHIPPING | 19-DEC-16 |

Figure 19 : Admin Report