E-Commerce Site

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Contents

1 Introduction

1.1 Purpose

The purpose of this document is to describe the requirements for the E-Commerce Site(ECS). The intended audience includes all stakeholders in the potential system. These include the following: Administrator, developers, customers.

Developers should consult this document and its revisions as the only source of requirements for the project. They should not consider any requirements statements, written or verbal as valid until they appear in this document or its revision.

1.2 Scope

The proposed software product is the E-Commerce site(ECS).The system, a web application will be used to cater day-to-day grocery needs. It is intended to act as a virtual supermarket, providing hassle free shopping experience to its customers,door step delivery of the products..Requirements statements in this document are both functional and non-functional.

1.3 Definitions, Acronyms, and Abbreviations

ECS	E-Commerce Site
HTTP	HyperText Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
SRS	Software Requirements Specification
Web Based Apllication	An application that runs on the internet.
Administrator	A person responsible for managing the site and all the activities associated with it.
Customers	People who will buy products from the site
Visitors	People who just occasionally visit the site without the intention to buy anything

1.4 References

1. Software Engineering by Dr. Rajib Mall

2. Demo SRS of Hospital Management System provided by Jaydeep Pati Sir

2 Overall Description

2.1 Product Perspective

The ECS is a web based product, which will be used by many users such as the seller, the retailer and the customer. ECS should be user friendly,interactive and reliable software for the above purpose. It should run on every platform.

2.2 User Characterstics

2.2.1 Adminstrator

The adminstrator is responsible for following:

maintaing all the databases associated with the site like customer information ,product and stock management,order shipment, delivery, payment collection etc.

2.2.2 Customers/Visitors

Functionalities of the customers/visitor includes:

1. Browsing through the site, choosing products and placing them in virtual shopping cart.

2. To proceed with purchase, the customer is promoted to login.

3. Also, the customer can modify personal profile information stated by application.

4. The customer can also view the status of any previous orders and cancel any order that has not been shipped yet.

2.3 General Constraints

1. Limited to HTTP/HTTPS

2. No multilingual support.

3. If the shopping cart value is below Rs. 500, shipping charges will be applicable.

2.4 Operating Environment

The ECS is a website that shall operate in all Browser and all the processors which support Internet Browsing.

2.5   Assumptions and Dependencies

1. Users of the software are familiar with shopping terminologies like shopping cart/checking out/transaction/shipping

2. The customers have computers with a browser and are familiar with internet.

3   Specific Requirement

3.1   External Interface Requirement

External Interface requirements refers to needs of this software's front end to work efficiently, the requirements are further classified into certain topics, which are as:

3.1.1   User Interface

For the efficient working of the User Interface, i.e. the Front End of the system, the OS must be having at least Internet Explorer 8 installed. To log into the website.

3.1.2   Hardware Interface

For the hardware requirements, the SRS specifies the logical characteristics of each interface between the software product and the hardware components. It specifies the hardware requirements like memory restriction, cache size, processor, RAM etc. those are required for software to run. Minimum Hardware Requirements:

1. Processor Pentium IV

2. HDD 40 GB

3. RAM 128 MB

4. Cache 512 kb

Preferred Hardware Requirements:

1. Intel Core i3 (or any latest one)

2. HDD 100 GB

3. RAM 2 GB

4. Cache 6 MB

3.1.3   Software Interface

1. For Hosting: Any Windows or Linux Operating System and Visual Studio Code for development. A working internet connection is mandatory.

2. For Using: Any type of Operating System with at Least Internet Explorer installed and having minimum of 512 kbps working internet compulsorily.

3.1.4   Communication Interfaces

This e-commerce website , offers a mini chatbot to interact with customers , for e.g. , record complaints from customers , getting feedbacks from customers , etc. We are using STRIPE for payment and POSTMAN for sign up.

3.2   Functional Requirements

3.2.1   Registration

New users can register themselves on the online website with their credentials to login. Already registered customers can directly login for futher use.

3.2.2   Cart

Users can browse their cart for viewing the product list as well as add or delete products to the cart. Cart will be used to keep a track of user's product choices.

3.2.3   Login

Users can login to the website by entering their credentials.

3.2.4   Receive Order

After confirmation of order for the customer, the order is received.

3.2.5   Payment collection

Customer will be provided various methods for payment following which the customer will be provided with invoice and statement.

3.2.6   Shipping items

Once the order is confirmed by the Shipping agent the items are shipped to the customer.

The user can login,add or remove items to car and register as well as pay. Admin can have privileged login and they can change or modify the catalogue as well as maintain user data. After adding items to cart they can make order. The orders are stored in ordered database. The orders are processed and items from the warehouse are delivered to customer by shipping agent.

3.3   Logical Database Requirement

1. Profile: Database of all the users accessing the system that includes their information like email id, password,phone number and other details

2. Order: It is the database of all the order the site or the administrator has

3. Shopping Cart: Contains the products that the customer is planning to purchase. Entities can be added to or removed from the cart.

4. Warehouse : Database of all the warehouses.

5. Invoices: It contains the information regarding billing.

6. Transaction : Payment information of all the customers.

7. Product Database: The database will contain information regarding product availabilty, stock etc.

8. Catalogue: It is the brochure containing the all the products the system has to offer its customer.

3.4   Design Constraint

The software is a web based application

3.5   Non Functional Requirement

3.5.1   Security

Only the administrator has the authority to edit details in Users and item tables. No one can enter the system without a username and password.

1. Administrator Identification (Login ID): The system requires the administrator to identify himself /herself.

2. User Identification (Login ID): System requires user to register to purchase the book.

3. Modification: Any modification (insert, delete, update) for the Database shall be synchronized and done only by the administrator.

4. Administrator shall be able to view and modify all information associated with the system.

5. System will have different users and every user has access constraints.

6. Normal Users/Viewers can only read information but cannot edit/modify anything.

3.5.2 Performance Requirements

1. Good working pc with all the requirements.

2. Works for medium size information databases.

3. System Should not be overloaded.

4. Response System: The response time to view information shall not be more than 3 seconds to appear on the screen.

5. The time for search a product will not be more than 3 seconds.

6. The time to print the stock evaluation will not be more than 3 seconds.

7. The time taken to update the database or to get information from the database will not be more than 2 seconds.

8. The time taken to prompt the message box will not be more than 2 seconds.

9. Capacity: System shall accommodate high number of items and users without any fault.

10. User-interface: The user-interface screen shall respond within 5 seconds.

11. Conformity : The systems must conform to the Microsoft Accessibility guidelines.

3.5.3 Maintainability

To make the maintainence of the system easy for the ECS Administrator ,the user manual and the system manual is provided at the delivery. Each module is designed independently so that any change of a request can be modified easily.

1. Back Up: The system shall provide the capability to back up the Data.

2. Errors: The system shall keep a log of all the errors. ECS shall handle expected and non-expected errors in ways that prevent loss in information and long downtime period

3.5.4 Reliability

System is thoroughly tested at the time of delivery so that computational errors are minimised.

3.5.5 Availabilty

The system should be available all the time.

3.5.6   Safety Requirements

1. Except visitors all other users of the software shall have Login ID and password.

2. Personal information of all the customers will be kept confidential.

4   Conclusion

Table 1: E-Commerce Site

Serial No.	Role	Responsibilty
1.	Administrator	Maintenance of database of customers and product
2.	Customer	Buy products from e-commerce site
3.	Visitor	Surfs through the e-commerce site

5 Data Dictionary

1. Item: String

2. Quantity: Integer

3. Price: integer

4. Customer- ID: Integer

5. Customer-Name: String

6. House No. : String

7. Street No : String

8. City: String

9. Pin: Integer

10. Date: year+ month +day

11. Year: Integer

12. Month: Integer

13. Day: Integer

14. Order : Customer-ID + items+ quantity + order No.

15. Order no. : Integer /*unique order no generated by the program*/

16. Bill : Item+ quantity + price +total amount+ customer address+ order no.

17. Customer address : Name+ house no. + street no. + city + pin

18. Total amount : Integer

6 Design Methodologies
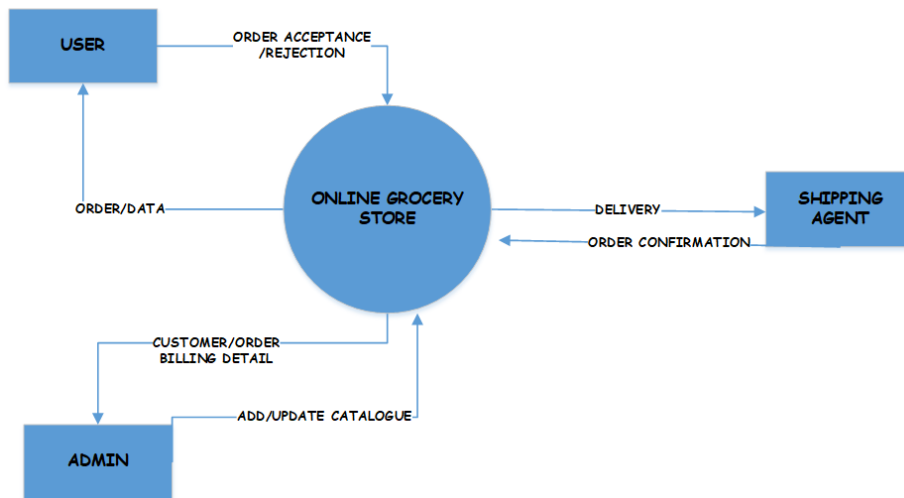
Figure 1: Context Diagram
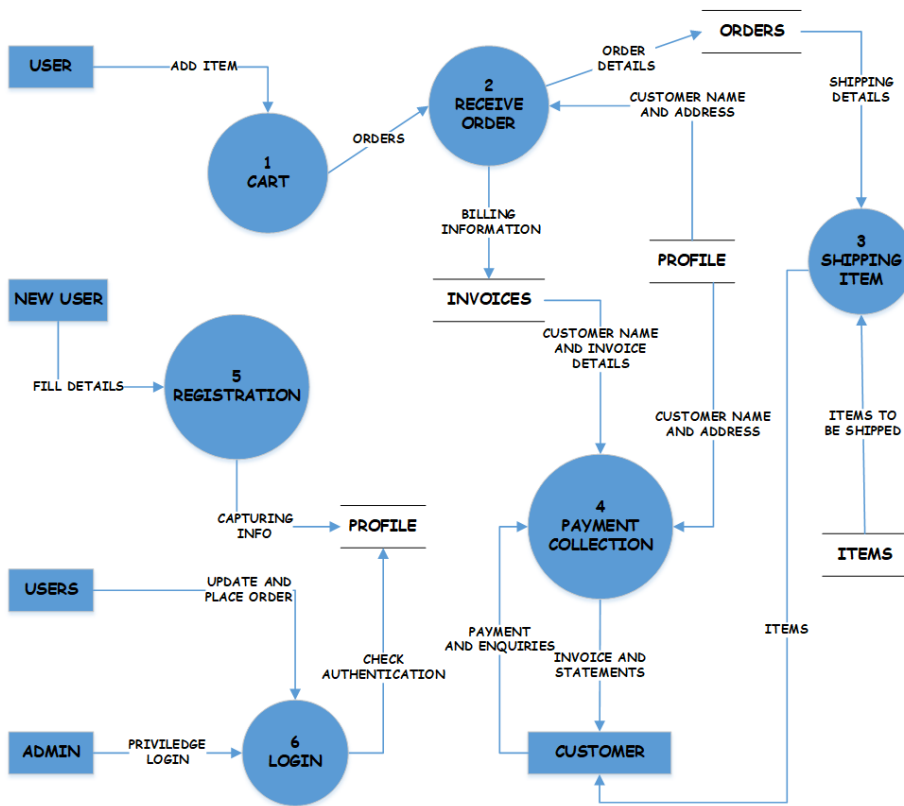
Figure 2: DFD Level 1
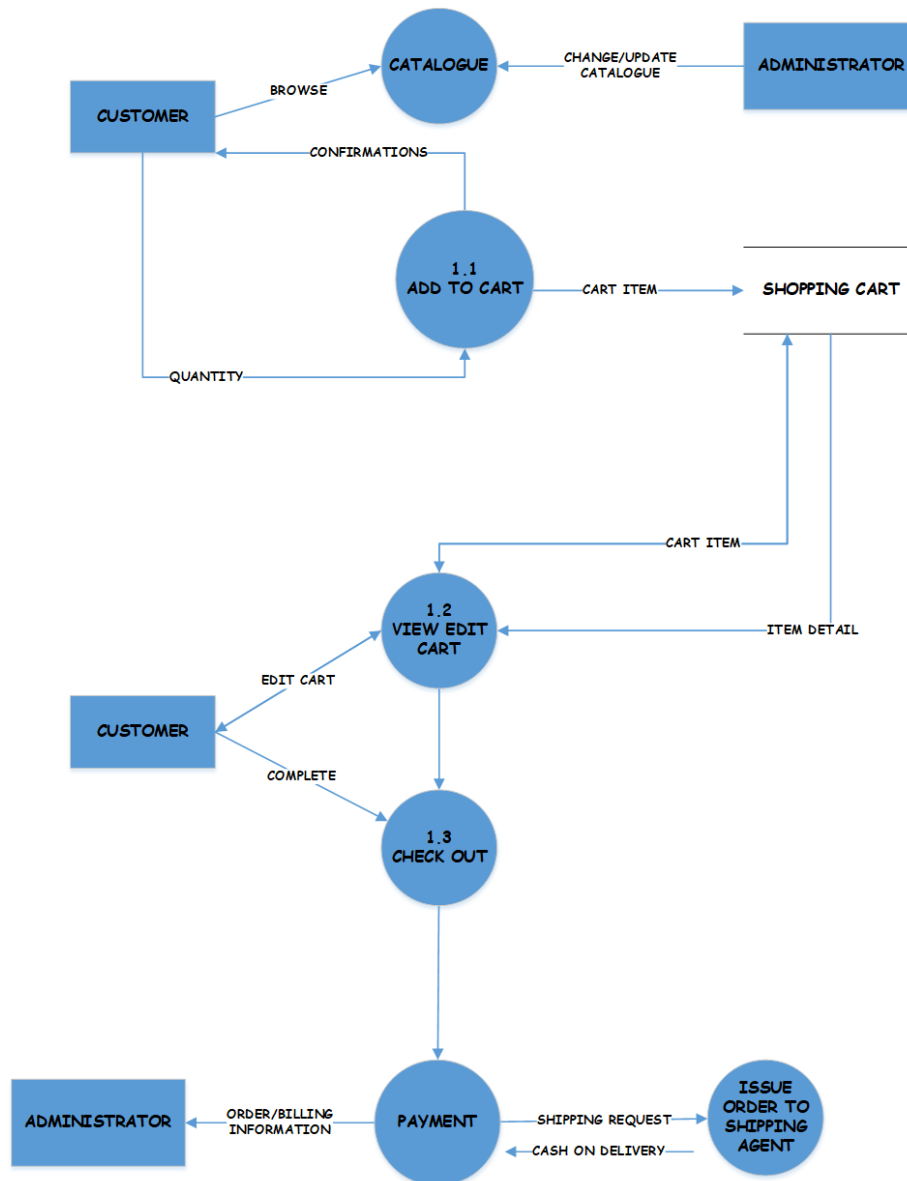
Figure 3: DFD Level 2: Cart
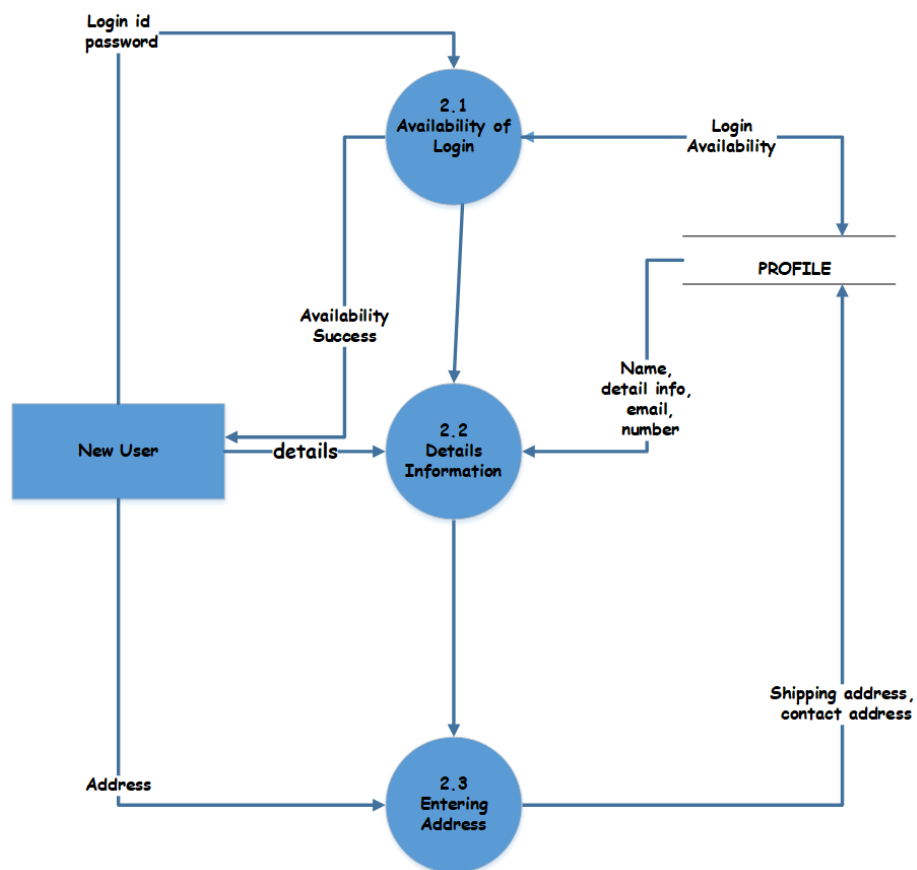
Figure 4: DFD Level 2:Registration
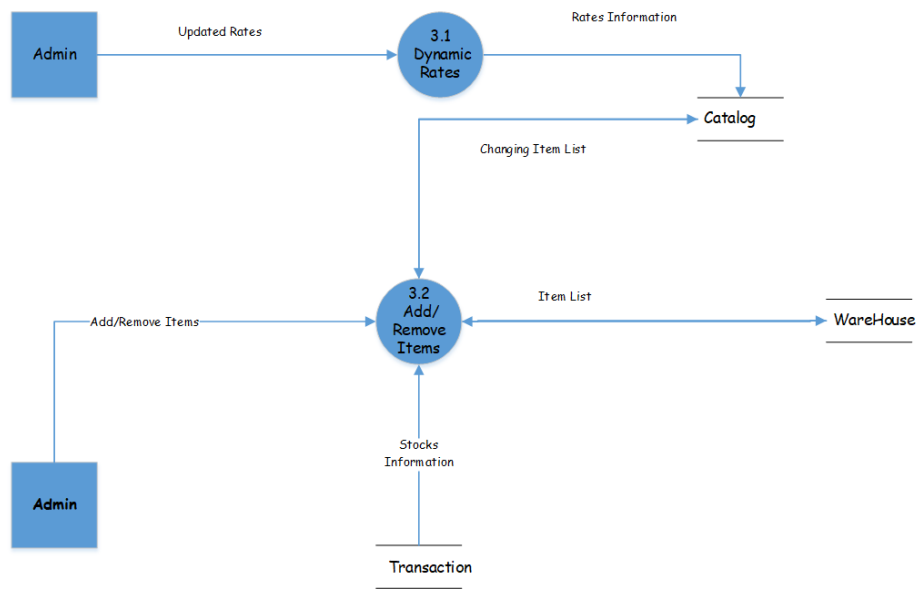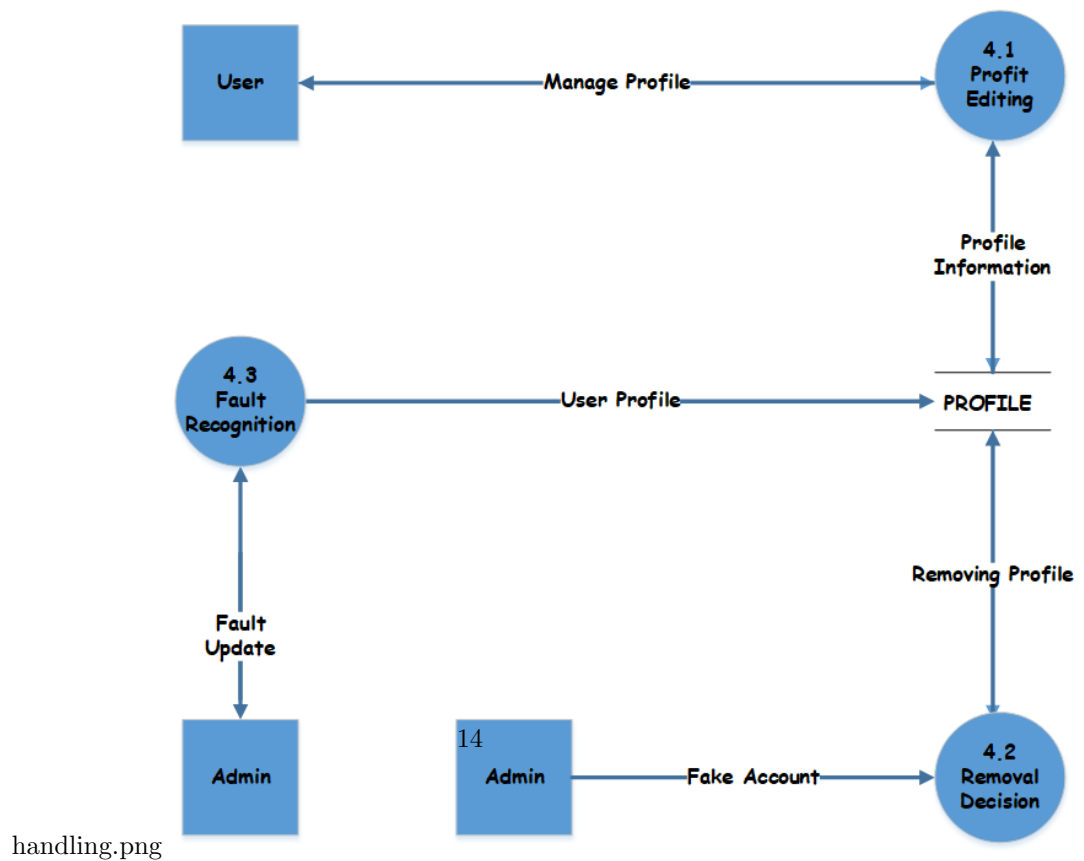
Figure 5: DFD Level 2: Maintenance

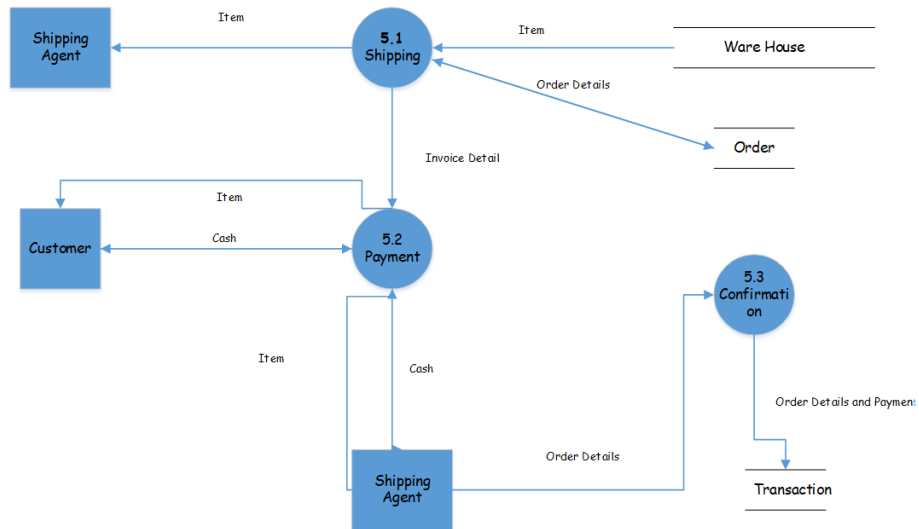
handling.png

Figure 6: DFD Level 2:Profile handling

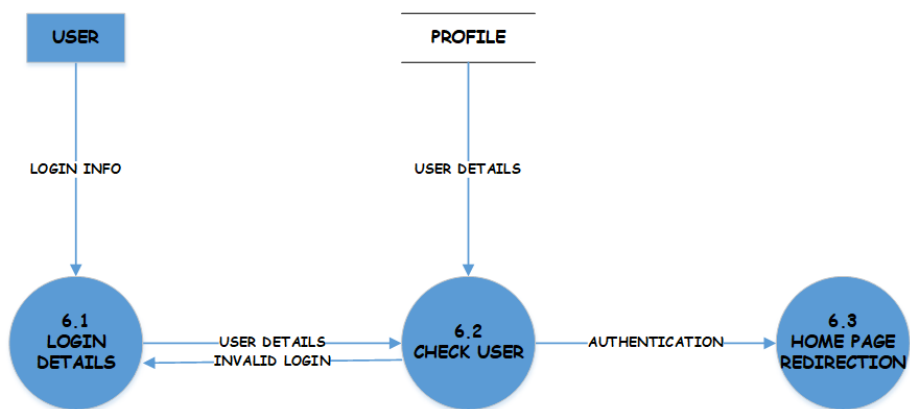Figure 7: DFD Level2:Physical Transaction
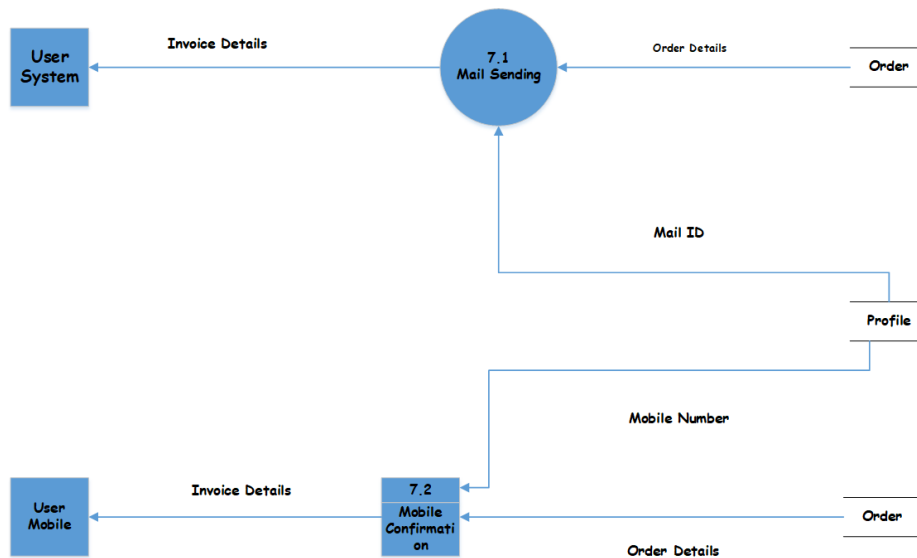

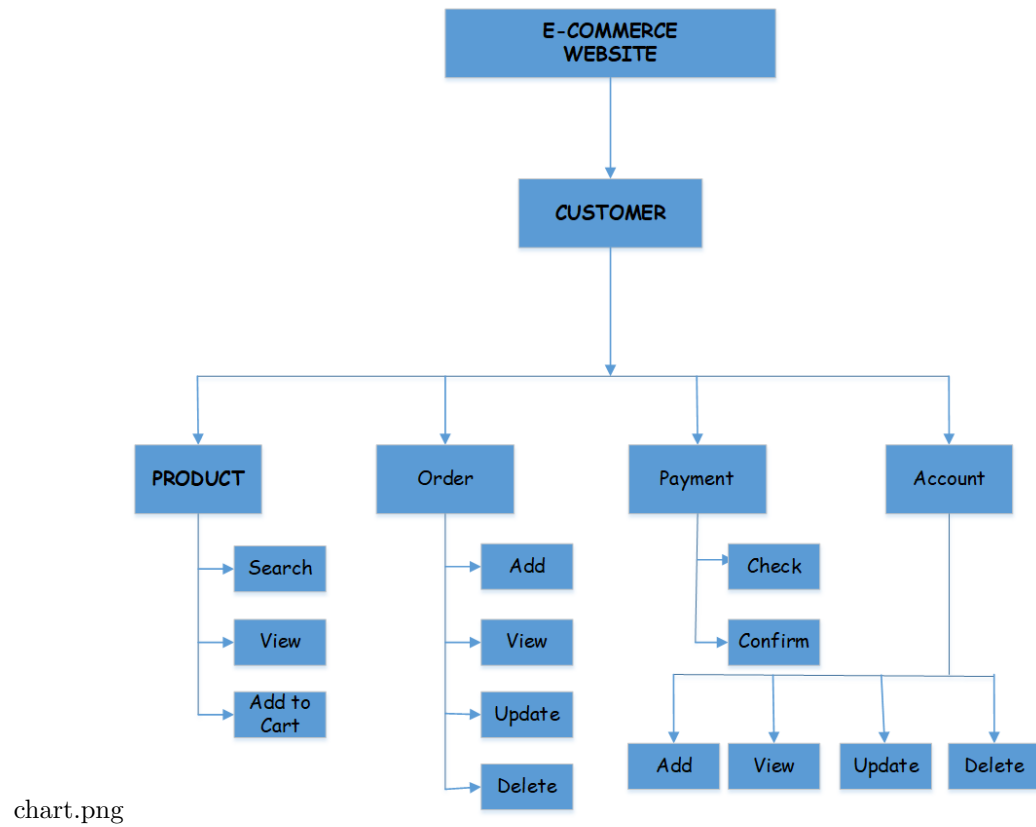Figure 8: DFD Level 2: Login

Figure 9: DFD Level 2: Intimation

chart.png

Figure 10: Structure Chart Customer Related Activities