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E-commerce Use Case Document

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This document describes the Use Cases for an E-commerce application.

Revision History

Version #	Date	Author	Description
1.0	18-Oct-2012	Team RetailBiz	To describe the various Use Cases for an E-commerce application.

Disclaimer

The content of this document is for the sole purpose of guiding the user with all the relevant information about Use Cases for an E-commerce application. This document can be used as a reference for building further test cases.

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Feedback and Suggestions

For any kind of feedback or improvement suggestion, do feel free to contact us here:

http://www.retailbiz.in

All your suggestions will be gladly appreciated.

Introduction:

The goal of this document is to define the Use cases for an E-commerce application.

What is e-commerce?

Electronic commerce, commonly known as e-commerce or e-comm, is the buying and selling of products or services over electronic systems such as the Internet and other computer networks. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to business exchanges trading goods and services between corporations. It is currently one of the most important aspects of the Internet to emerge. Electronic commerce is generally considered to be the sales aspect of e-business. It also consists of the exchange of data to facilitate the financing and payment aspects of business transactions.

Ecommerce allows consumers to electronically exchange goods and services with no barriers of time or distance. Electronic commerce has expanded rapidly over the past five years and is predicted to continue at this rate, or even accelerate. In the near future the boundaries between "conventional" and "electronic" commerce will become increasingly blurred as more and more businesses move sections of their operations onto the Internet.

What are the benefits of E-commerce?

i) **Reduced Costs –**
E-commerce reduces costs by reducing labor, paper work, and errors in keying in data and it also helps in reducing post costs.

ii) **Reduced Time –**
E-commerce reduces lead times for payment and return on investment in advertising; by the faster delivery of product.

iii) **Flexibility and Efficiency**
E-commerce has the ability to handle complex situations, product ranges and customer profiles without the situation becoming unmanageable.

iv) **Improve relationships with trading partners –**
By improving communication between trading partners e-commerce leads to enhanced long-term relationships.

v) **Lock in Customers –**
The closer the sellers are to their customers and the more they work with them to change from normal business practices to best practice e-commerce; the harder it is for a competitor to upset their customer relationship.

vi) **Global Reach –**
E-commerce technology permits commercial transactions to cross cultural and national boundaries far more conveniently and effectively as compared to traditional commerce. As a result, the potential market size for e-commerce merchants is roughly equal to the size of world's online population.

vii) **Universal Standards –**
One strikingly unusual feature of e-commerce technologies is that the technical standards of the Internet and therefore the technical standards for conducting e-commerce are universal standards i.e. they are shared by all the nations around the world.

viii) **Interactivity –**
Unlike any of the commercial technologies of the twentieth century, with the possible exception of the telephone, e-commerce technologies are interactive, meaning they allow for two-way communication between merchants and consumer.

ix) **Personalization –**
E-commerce technologies permit personalization. Merchants can target their marketing messages to specific individuals by adjusting the message to a person's name, interests and past purchases. The technology also permits customization. Merchants can change the product or service based on user's preferences or prior behavior.

x) **Information Density and Richness –**
The Internet vastly increases information density. It is the total amount and quality of information available to all market participants, consumers and merchants. E-commerce technologies reduce information collection, storage, communication and processing costs. At the same time, these technologies increase greatly the accuracy and timeliness of information, making information more useful and important than

ever. As a result, information becomes plentiful, cheaper and of higher quality. Information richness refers to the complexity and content of a message.

xi) **Ubiquity -**

It is available everywhere at any time (24X7). The stores never close online. Online shopping has hurt traditional businesses in some ways and helped it in other ways. A positive thing is clicks-and-bricks; orders can be given online and it can be picked up at the store. E-commerce has forced business to get online or loss business. One of the negatives is that e-commerce takes away business from traditional businesses.

Introduction to Use Cases

As seen above, the Internet has completely changed the way most businesses operate today. E-commerce uses internet worked computers to create and transform business relationships. Web applications provide business solutions that improve the quality of goods and services, increase the speed of service delivery, and reduce the cost of business operations. However, many ventures into web application development fail because the systems are very complex and the users' requirements are continuously changing. Inefficient communication between the end user and the developer is another contributing factor. To successfully accomplish the development of a web application, one needs to visually model the system's architecture. A visual model helps in coherently grasping the changing user requirements and effectively communicates them to the development team. Requirements analysis along with abstraction (i.e., removing unnecessary details) is a critical factor in web application development. It is easier and more cost effective to correct an error at the requirement or design stage than at the implementation or maintenance stage. Further, formal (rigorous) specification provides unambiguous, precise and correct understanding of the user's requirements.

One method of requirement gathering for conceptual and navigational design of Web applications is based on Scenarios, Use-Case and User Interaction Diagrams (UIDs). Scenarios are used to validate the requirements and are automatically generated from the Use-Cases obtained from the users. They are also used to describe interface and navigational aspects, especially in the redesign of an existing web site. This document describes the development of an ecommerce system using Use-Case diagrams and Scenarios for requirements analysis.

What is use case?

Use-Cases model the user requirements and their interactions with the system at a very high level of abstraction. They are very useful for early requirements analysis because they enforce the identification of the different users and uses of a system while at the same time being easily understood by customers.

A **use case** in software engineering and systems engineering is a description of a system's behavior as it responds to a request that originates from outside of that system. In other words, a use case describes "who" can do "what" with the system in question. The use case

technique is used to capture a system's behavioral requirements by detailing scenario-driven threads through the functional requirements.

Use cases treat the system as a black box, and the interactions with the system, including system responses, are perceived as from outside the system. This is a deliberate policy, because it forces the author to focus on what the system must do, not how it is to be done, and avoids making assumptions about how the functionality will be accomplished.

A use case defines the interactions between external actors and the system under consideration to accomplish a goal. An **actor** specifies a role played by a person or thing when interacting with the system. The same person using the system may be represented as different actors because they are playing different roles.

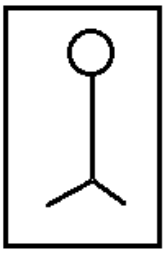
Defining an actor

Defining an actor means defining the system boundary. Anything that is part of the system being defined is not an Actor.

An Actor:

- Is always outside the system being modeled
- Characterizes a role
- A person, a system or some external entity

Symbol of an actor



Use Cases for an E-commerce application

1) Customer Registration

Use case name	Customer Registration
Primary Actors	Visitor
Secondary Actors	Administrator
Descriptions	This Use case Describes the first required step which any business wants from a user and that is user registration. User Registration can be done either by Ecommerce Administrator or by website visitor, we will look into both these scenarios. Note: It's not mandatory for online shopping to be a Registered Customer as many business offers Guest checkout feature which we will talk about later.
Normal path	1. Visitor browses the site. 2. Selects Register/Create an account. 3. Fills up personal Information (e g: name, mail). 4. Fills up log in information (e.g.: user id, password). 5. Submits the information. 6. Customer will receive an e-mail regarding his new account.
Alternative Path	**From Administrator's End** 1. Administrator click on Customer →Manage customer. 2. Click "Add New Customer Tab". 3. Fill the required information and Save.

2) Checking products by Browsing catalog

Use case name	Checking products by browsing catalog
Primary Actors	Visitor
Secondary Actors	None
Descriptions	In this use case we will discuss about catalog browsing. It's very important for an ecommerce business to show the merchandise in fashions which will hold the user for a longer time on its website, which can be a reason for increased sale. Note: Catalog browsing pattern is same for Registered and Guest customer and business try to give equal facility for both except in a B2B scenario where price and discount slab are only shown to registered customer.
Normal path	1. Customer opens the website. 2. Clicks on the category of product he/she is interested in. 3. Selects the sub category. 4. Browses through the various products available. 5. If compare facility is available then customer can select few products and compare them.
Alternative Path	N/A

3) Searching products through search:

Use case name	Searching products through search text box, search button
Primary Actors	Visitor
Secondary Actors	None
Descriptions	To make things easier and faster for website visitors, almost all the websites today have a very strong search feature which makes it easier for customer to directly go for what he/she is interested into and which in turn may result into faster sales. Note: Some websites give the feature of saved search for Registered Customer. This feature helps the user to buy faster once he/she has planned for purchasing that Product.
Normal path	1. Customer Visits the website. 2. Gives the search keyword (searching can be done from any page). 3. Selects enter/search button. 4. Search result shows the product as per the search keyword and availability of product on website. 5. Customer may choose to buy the product.
Alternative Path	N/A

4) Checking product Listing based on sorting:

Use case name	Checks product Listing based on sorting
Primary Actors	Visitor
Secondary Actors	Administrator
Descriptions	To make customer experience better sorting is a very useful feature. It helps the customer to see the product listing as per their requirement like lowest price on top or highest rated product on top.
Normal path	1. Customer visits the website. 2. Browses the categories & subcategories. 3. Sees all products under certain Category/Sub Category. 4. Checks selected no. of products. 5. Selects the keyword on which sorting will take place. 6. The data should be sorted as per the selected keyword.
Alternative Path	N/A

5) Adding Products in Wish list

Use case name	Adding products in Wish List
Primary Actors	Registered Customer
Secondary Actors	Administrator
Descriptions	To make customer experience better adding desired products in Wish List is a very useful feature. It helps the customer to buy their desired product in future as per his/her requirement like occasion wise. It also reduces the overall time of purchasing by the customer, because they do not have to browse/search for the Product again. Note: This feature is available only for Registered Customer.
Normal path	1. Customer visits the website. 2. Logs in. 3. Browses category. 4. Goes to Sub Categories. 5. Selects Products and quantities. 6. Adds Product to their Wish List. 7. Logs out. 8. Customer logs in again. 9. Goes to Wish List and places Orders directly from among the Products available in the Wish List. Ecommerce Admin can check which customer has added how many products in his/her Wish List.
Alternative Path	N/A

6) Adding Item in cart

Use case name	Adding Item in cart
Primary Actors	Customer
Secondary Actors	Administrator
Descriptions	This Use Case describes the first most important step in online Retail business. i.e. selection of Products by Customers for buying. They can do so by adding their selected Products to Shopping Cart. At any point of time, the Customers can see the Products added into their Cart and proceed for Checkout and Payment or continue shopping as desired by them. For Registered Customers, even if the Customer logs out they can login back again and proceed to Payment without needing to add the Products back into the Cart. Note: This feature can be made available to both Registered and Guest Customer. The only exception is that Guest Customers have to proceed to Checkout after adding Products to Cart.
Normal path	**From Registered Customer's End** 1. Customer visits the website. 2. Logs in. 3. Browses Category. 4. Browses subcategory if desired. 5. Selects Products and required Quantity. 6. Adds to Cart. 7. Proceeds to Payment. 8. Order generated for the Customer. **From Guest Customer's End** 1. Customer visits the website. 2. Browses Category. 3. Browses subcategory if desired. 4. Selects Products and required Quantity. 5. Adds to Cart.

	6. Proceeds to Payment. 7. Order generated for the Customer. Ecommerce Admin can check how many products are added in Cart for a Customer. They can also modify Quantities as per Offline request from Customers after the Order has been placed. (e.g. for Magneto it is reports->shopping cart->products in cart/*Abandoned cart*)
Alternative Path	**From Registered Customer's End** Wish List to Shopping Cart i) Customer visits the website. ii) Logs in. iii) Browses Category. iv) Browses subcategory. v) Checks selected no. of items. vi) Adds to Cart. vii) Moves items to Wish List. viii) Logs out. ix) Logs in again. x) Adds Product to Cart from Wish List. xi) Proceed to Payment. xii) Order generated for the Customer. Log Out -> Add to Cart i) Customer visits the website. ii) Logs in. iii) Browse category. iv) Browses subcategory. v) Goes to individual product detail page. vi) Required (no.) quantity is given as input. vii) Products are added into Cart. viii) Customer Logs out. ix) Goes to Cart. x) Proceeds to Payment. xi) Order generated for the Customer.

	From Administrator's End 1. Administrator click on Sales → Orders →Create New Order. 2. Select Customer. 3. Select Website, Store and Store View. 4. Click on "Add Products" 5. Select Products and Quantity 6. Click on "Add Selected Products to Order". 7. Places Order for the Customer.

7) Modify quantity of items in cart

Use case name	Modify quantity of items in cart
Primary Actors	Customer
Secondary Actors	Administrator
Descriptions	This Use Case describes how Customers can modify their Order after they have added Products into their cart. Customers can modify the quantity of item in shopping cart & check the total amount of the Order depending on the quantity modified. This feature is beneficial for the customer because they can always have a preview of the total amount of the Order and modify quantity of the Products as required. As a result customers have greater flexibility in placing their products. The Ecommerce Admin can check how many products are added in cart and modify Quantities as per Offline request from Customers after Order has been placed. (e.g. for Magneto it is reports->shopping cart->products in cart/*Abandoned cart*) Note: This feature is available for both Registered and Guest Customers.
Normal path	**From Registered Customer's End -** 1. Customer visits the website. 2. Logs in. 3. Browses Category. 4. Browses Sub- Category. 5. Searches products by searching it using a keyword or name. 6. Checks selected no. of items. 7. Adds to cart. 8. Modifies the quantity of item in cart & checks the change in Order amount

	depending on the modified quantity. 9. Removes items as required. 10. Proceeds to payment. 11. Order is generated for the Customer. 12. Logs out **From Guest Customer's End -** 1. Customer visits the website. 2. Browses Category. 3. Browses Sub- Category if required. 4. Searches products by searching it using a keyword or name. 5. Checks selected no. of items. 6. Adds to cart. 7. Modifies the quantity of item in cart & checks the change in Order amount depending on the modified quantity. 8. Removes items as required. 9. Proceeds to payment. 10. Order is generated for the Customer. **From Administrator's End -** Admin checks how many products are added in cart from admin panel.
Alternative Path	**From Administrator's End** 1. Administrator click on Sales → Orders. 2. Opens required Order. 3. Click on "Edit". 4. "Add" or "Edit" quantities as required. 5. Places Order. **From Registered Customer's End** <u>Not enough Inventory</u> i) Customer logs in. ii) Add products in cart. iii) Updates (increases) the quantity. But that quantity is not in inventory (error message is displayed in that case).

	iv) Customer adjusts the Quantity. v) Proceeds to Payment. vi) Order generated for the Customer. vii) The Customer logs out. <u>Cart to Wish List</u> i) Customer Visits the website. ii) Logs in. iii) Browses category. iv) Browses subcategory. v) Checks selected no. of items. vi) Adds to cart vii) Modifies the quantity of item & checks the changing of amount depending on the modified quantity. viii) Adds the item to wish list. ix) Logs out.

8) Clear Cart

Use case name	Clear Cart
Primary Actors	Customer
Secondary Actors	None
Descriptions	This Use Case describes an important feature for greater flexibility in placing their Orders and that is Clear Cart functionality. Customers can remove the unwanted items from their cart and clear their cart if they don't like any product or items using this facility. It will enhance customer's satisfaction to buy the required products. Note: This feature is available for both Registered and Guest Customers.
Normal path	**From Registered Customer's End** 1. Customer visits the website. 2. Logs in. 3. Browses category. 4. Browses subcategory. 5. Checks selected no. of items. 6. Adds to cart. 7. Remove items to clear cart. 8. Logs out. **From Guest Customer's End** 1. Customer visits the website. 2. Browses category. 3. Browses subcategory. 4. Checks selected no. of items. 5. Adds to cart. 6. Remove items to clear cart.
Alternative Path	**From Registered Customer's End** Clear Cart after Item Quantity modification i) Customer visits the website. ii) Logs in. iii) Browses Category. iv) Browses Subcategory.

	v) Checks selected no. of items. vi) Adds to cart. vii) Modifies quantity & checks the amount based on modified quantity. viii) Remove items to clear cart. <u>Wish List to Clear Cart</u> i) Customer visits the website. ii) Logs in. iii) Checks Wish List. iv) Add items from Wish List to cart. v) Remove items to clear cart

9) Adding product review & ratings :

Use case name	Adding product review
Primary Actors	Registered Customer
Secondary Actors	Administrator
Descriptions	This Use Case describes a very important feature of Retail business, which helps in increasing Sales for a Website. According to a survey, 61% of customers read online reviews before making a purchase decision, and they are now essential for e-commerce sites. User reviews and ratings are proven sales drivers, and something the majority of customers will want to see before deciding to make a purchase. Customers can add reviews against any product so that customer's feedback can be available very easily and through rating product can be judged and web site can be updated accordingly. The E-commerce Administrator can check which review is added against which product and approve/disapprove it or Change the status to make it visible/invisible to users. Note: By default, this feature is available for Registered Customers only. But the Ecommerce admin can permit Guest Customers also to add Reviews and Ratings.
Normal path	**From Registered Customer's End –** 1. Customer visits the website. 2. Logs in. 3. Browses category. 4. Browses subcategory. 5. Checks the selected no. of items. 6. Or goes to individual product detail page/select an item.

	7. Adds review against a certain product 8. Rates the product. 9. Submits review. **From Guest Customer's End –** 1. Guest customer visits the website. 2. Browses category. 3. Browses subcategory. 4. Checks selected no. of items. 5. Goes to individual product detail page/select an item. 6. Adds review against a certain product. 7. Rates the product. 8. Submits review. **From Administrator's End –** Administrator Checks which rating & review is added against which product and can change the status to make it visible/invisible to users 1. Logs in 2. Checks what review & rating is added against which product. 3. Approve or disapprove the reviews and ratings. 4. Changes the status for the visibility to user. 5. Adds review. 6. Changes the status (enables/disables).
Alternative Path	**From Customer's End -** <u>Log out without submitting Review:</u> i) Customer visits the website. ii) Browses category. iii) Browses subcategory. iv) Checks selected no. of items. v) Goes to individual product detail page/select an item. vi) Adds review against a certain product & rates it.

	vii) Logs out/Exists (without submitting the review). **From Administrator's End -** Adding review but not visible: i) Administrator logs in. ii) Adds review against certain products. iii) Does not make it visible to customers/guests. Changing Review Status: i) Administrator logs in. ii) Checks which review are added to which products. iii) Changes the status of review added by customers. Disable Review i) Administrator logs in. ii) Disables review. Enable review i) Administrator logs in. ii) Enables review.

10) Adding product Tags

Use case name	Adding product tags
Primary Actors	Registered Customer
Secondary Actors	Administrator
Descriptions	Adding Product Tags is a powerful and flexible feature which helps in organizing product catalog in a website. Tags are descriptors that can be assigned to any product to help organize and remember them. It makes an Ecommerce site more helpful for customer as it helps them to search and sort the products. By tagging the products with one or more labels, a "tag cloud" can be created, that gives customers a visual indicator of how many products are associated with that particular label. Note: This feature is available only for Registered Customers.
Normal path	**From Customer's end –** 1. Customer visits the website. 2. Logs in. 3. Browses category. 4. Browses subcategory. 5. Checks selected no. of items. 6. Adds a Tag against a certain product. 7. Submits it. 8. Logs Out **From Administrator's End -** Administrator Checks what tag is added against which product and can change the status for the visibility to user. 1. Logs in. 2. Checks what Tag is added against which product. 3. Changes the status for the visibility to user.

	4. Adds Tag. 5. Changes the status. Customers/guests can see the tag against certain product (depending on the status of visibility).
Alternative Path	N/A

11) Continue shopping (after adding items in cart)

Use case name	Continue Shopping
Primary Actors	Registered Customer
Secondary Actors	Administrator
Descriptions	In this Use Case we will discuss how Customers can continue shopping without re login through this facility and add or view more products as per his/her desire. The Ecommerce Administrator checks how many products are added in (e.g. for Magento it is reports->shopping cart->products in cart/Abandoned cart)
Normal path	**From Registered Customer's end –** 1. Customer visits the website. 2. Logs in. 3. Browses category. 4. Browses subcategory. 5. Checks selected no. of items. 6. Adds to cart. 7. Modifies the quantity of item in cart. 8. Selects Continue Shopping. 9. Add a new Product. 10. The new Product is added into Cart along with the previously selected Product. 11. Customer places Order. **From Guest Customer's end –** 1. Customer visits the website. 2. Browses category. 3. Browses subcategory 4. Reaches products by searching it using a keyword or name. 5. Checks selected no. of items. 6. Adds to cart.

	7. Modifies the quantity of item in Cart. 8. Selects continue shopping. 9. Goes to individual product detail page. 10. Gives required (no.) quantity as input. 11. Adds to cart. 12. Modifies the quantity of item in cart. 13. Selects continue shopping. Ecommerce Administrator can check how many products are added into Cart.
Alternative Path	**From Customer's end –** Wish List to Continue shopping i) Customer visits the website. L ii) Logs in. iii) Browses Category. iv) Browses Subcategory. v) Check selected no. of items. vi) Gives the required (no.) quantity as input. vii) Adds the items to Wish List. viii) Adds to cart. ix) Continues shopping. Clear Cart to Continue shopping i) A customer visits the website. ii) Logs in. iii) Browses Category. iv) Browse Subcategory. v) Check selected no. of items. vi) Adds to Cart. vii) Clears Cart. viii) Continue Shopping. Order Review to Continue Shopping i) Customer Visits the website. ii) Logs in. iii) Browses Category.

	iv) Browses Subcategory. v) Checks selected no. of items. vi) Gives required (no.) quantity as input. vii) Adds to Cart. viii) Proceeds to Check Out. ix) Fills up billing information. x) Fills up shipping information. xi) Select shipping method. xii) Selects Payment Method/Payment Information. xiii) Checks Order review. xiv) Selects Continue Shopping. xv) Edits cart again. <u>Exists after Continue Shopping -</u> i) Customer visits the website. ii) Browses category. iii) Browse subcategory. iv) Checks selected no. of items. v) Give required (no.) quantity as input. vi) Adds to cart. vii) Modify the quantity of item in cart. viii) Select continue shopping. ix) Exits/Logs out. x) Administrator checks how many products are added in cart <u>Continue Shopping after Clear Cart.</u> i) Customer visits the website. ii) Browse category. iii) Browse subcategory. iv) Check selected no. of items. v) Add to cart. vi) Clear cart. vii) Continue shopping. viii) Exits/Logs out.

12) Continue shopping (after placing orders)

Use case name	Continue shopping
Primary Actors	Customer
Secondary Actors	Administrator
Descriptions	The ability to Continue Shopping after the customers have placed Orders provides increased flexibility to customers for purchasing Products. This Use Case describes this functionality for Online Retail business which may result in greater sales for the business. The benefit of this feature is that customers are able to buy more products in a single login. It reduces the time for accessing websites for shopping. They don't require re-login to the website for placing a new order. The Ecommerce Administrator can check how many products are added in cart. e.g. for Magento it is reports->shopping cart->products in cart/Abandoned cart) Note: This feature is available for both Registered and guest Customers.
Normal path	**From Customer's end –** 1. Customer visits the website. 2. Logs in. 3. Browses category. 4. Browses subcategory. 5. Checks selected no. of items. 6. Adds to cart. 7. Selects Continue shopping. 8. Modifies the quantity of item in cart. 9. Goes to individual product detail page. 10. Gives required (no.) quantity as input. 11. Adds to cart 12. Modifies the quantity of item in cart. 13. Add products to cart.

	14. Proceeds to check out. 15. Performs check out procedure (by filling up Billing information, Shipping Information, select Shipping method, Payment Information & place order). 16. Receives order id. 17. Selects continue shopping.
Alternative Path	N/A

13) Newsletter Subscription:

Use case name	Newsletter Subscription/Un-subscription
Primary Actors	Registered customers, Guest Customers
Secondary Actors	Administrator
Descriptions	This Use Case describes a very important feature of Online Retail business i.e. informing customers about promotions. Newsletter subscription facility is a very useful feature for informing the customers about new promotions and discounts regarding products and also provides updated news about the website. The clients can unsubscribe from the newsletter if they are not interested about promotions and updated news about the website. The Magento administrators can send ecommerce related Newsletter to clients who are subscribed to them. The Newsletter tab gives the administrator the ability to choose the email template that is used to notify customers about the newsletter, and determine the email account that is used to reply to newsletter requests. Note: By default Guest Customers can not subscribe to Newsletters. But if the Administrator allows the Guest Customer to subscribe to Newsletters, then only the Guest Customer can get it. Going through this path the Ecommerce Administrator can allow the Guest Customer to subscribe for the newsletter : System > Configuration > Customers > Newsletter > Subscription Options
Normal path	**From Registered Customer's End:** 1. Customer Visits the website. 2. Logs in.

	3. Subscribes for newsletter from the page where subscription request appears. 4. Subscribes/ Unsubscribe by changing the settings of his/her account. **From Guest Customer's End:** 1. Visits the website 2. Browses category/subcategory 3. Subscribes newsletter from the page where subscription request appears. 4. Subscribes during the procedure of registration.
Alternative Path	**From Administrator's End** 1. Administrator click on Customer →Manage customer. 2. Click on "Edit" for the desired Customer. 3. Go to Newsletter section. 4. Check or uncheck the "Subscribed to Newsletter" checkbox. Or <u>Newsletter Subscription based on type of Customer</u> i) Checks the status, type of customer of newsletter subscription. ii) Changes the status of subscription (subscribe -> unsubscribe or unsubscribe -> subscribe) iii) Creates the template of newsletter iv) Records which newsletters are sent to customers/guest. v) Records Newsletter Problem Reports.

14) Transaction through payment Gateway:

Use case name	Transaction through Payment Gateway
Primary Actors	Registered Customer
Secondary Actors	i) Administrator (of E-commerce Business owner) ii) Administrator (of Payment Gateway)
Descriptions	Transaction through Payment Gateway is a very important feature of Online retail business, because it provides secure processing of online transactions done by the Website Customers. Through the Payment Gateway customers can do the payment very easily, quickly and in a secured way. From the Ecommerce Administrator point of view, the benefit of Payment Gateway Transaction is that business will get the payment very quickly. They do not need to wait for payment. It also makes the transaction process very secured and reliable. This in turn increases the Customer faith on the Website and subsequently, Website traffic will increase. Note: This feature is available for both Registered and Guest Customer.
Normal path	**From Registered Customer's End** 1. Customer visits the website. 2. Logs in. 3. Views products by browsing category/subcategory or by searching it using name/keyword. 4. Adds to Wish List. 5. Adds to Cart. 6. Proceeds to Check Out. 7. Selects the Billing information. 8. Selects the Shipping information. 9. Selects Shipping Method. 10. Selects the suitable Payment Gateway.

	11. Fills up all the required information for transaction when he/she is redirected to Payment Gateway landing page and makes the payment. 12. After successful Payment is done, the Order is placed. 13. Customer gets the Order id. 14. Customer Logs out. **From Guest Customer's End** 1. Guest Customer visits the website. 2. Views products by browsing category/subcategory or by searching it using name/keyword. 3. Adds to Cart. 4. Proceeds to Check Out. 5. Performs Guest check out 6. Fills up the Billing information. 7. Fills up the Shipping information 8. Selects Shipping Method. 9. Selects the suitable Payment Gateway. 10. Fills up all the required information for transaction when he/she is redirected to Payment Gateway landing page and makes the payment. 11. After successful Payment is done, the Order is placed. 12. Customer gets the Order id. **From Administrator's End (Payment Gateway)** 1. Logs in 2. Checks the status (depending on transaction), transaction id, order track id, customer id, time, amount & all other information related to order.
Alternative Path	**From Customer's End** <u>Exists from Payment Gateway Page</u> i) Customer visits the website. ii) Logs in.

	iii) Views products by browsing category -> subcategory or by searching it using name/keyword. iv) Adds to Cart. v) Proceeds to check out. vi) Fills up billing information. vii) Fills up shipping information. viii) Selects the Shipping Method. ix) Selects the Payment Method or Payment Information or suitable Payment Gateway. x) Is redirected to Payment Gateway landing page. xi) Exits without filling up required information. xii) Corresponding status will be displayed in Payment Gateway Admin panel. <u>Cancels transaction from Payment Gateway Page</u> i) Customer visits the site. ii) Logs in. iii) Views products by browsing category->subcategory or by searching it using name/keyword. iv) Adds to Cart. v) Proceeds to check out. vi) Fills up billing information. vii) Fills up shipping information. viii) Selects shipping method. ix) Selects the Payment Method or Payment information or suitable Payment Gateway. x) Fills up all required information for transaction when he/she is redirected to Payment Gateway landing page. xi) Cancels the transaction. xii) Corresponding status will be displayed in Payment Gateway Admin Panel.

	Incorrect input in Payment Gateway Page i) Customer visits the site. ii) Logs in. iii) Views products by browsing category -> subcategory or by searching it using name/keyword. iv) Adds to Cart. v) Proceeds to check out. vi) Fills up billing information. vii) Fills up shipping information. viii) Selects shipping method. ix) Selects the Payment Method or Payment information or suitable Payment Gateway. x) Fills up required information with incorrect input when he is redirected to payment gateway landing page. xi) Error message will be displayed & the transaction will be canceled. xii) Corresponding status will be displayed in Payment Gateway admin panel.

15) Placing Order (Complete Check out process)

Use case name	Placing Order at any E-commerce portal by a customer
Primary Actors	Customer, Administrator
Secondary Actors	None
Descriptions	This Use Case describes the complete Checkout process by which Registered/ Guest customers will place Orders in a Website. It describes the way the purchase cycle is executed for a Customer when he/she places an Order. The Ecommerce Administrator can check the order details in the Admin panel. Then details are checked and status is changed if money is received by the owner & invoice is created. The invoice is sent to the customer. When the products are shipped to the customer, then the status of order is changed. Note: Prima-facie, the Checkout process is similar for both Registered and Guest customers. The exception is that, Registered Customers login to place the Order and so can see the history of Orders placed by them any-time after login. This facility is not available for the Guest customers.
Normal path	**From customer's End:** 1. Customer can register by filling up the personal information as well as Log in information. 2. Registered customers can log in by providing the User id & Password given at the time of registration. 3. Views Products by browsing catalog/sub catalog or by searching using the keyword- They can view all products, their cost & all related information by browsing catalog/sub catalog or by searching using the keyword/name. 4. Customer can add product to their Wish

	List. 5. Customers can add product reviews, ratings & tags. 6. Customers can select products from category->subcategory page or from the product details page to shop hence they add products in cart & can check total amount, decide whether they want to shop more or they want to check out. 7. They fill up Billing information, Shipping information, select Shipping Method & Payment Information & Place Order & can check their order id & receive an e-mail regarding order details. 8. Receives e-mail about when the product will be received & products will be shipped by owner (from admin). 9. The corresponding status of the Order is changed.
Alternative Path	N/A

16) Check Out with Multiple Shipping Address

Use case name	Placing Order at any E-commerce portal by registered customer
Primary Actors	Customer, Administrator
Secondary Actors	None
Descriptions	In this Use Case, we will discuss a very important feature which enhances customer satisfaction by giving greater flexibility to them for Product delivery. That feature is allowing Customers to checkout with Multiple Shipping Addresses. Customers can give more than one Shipping Address. So using this facility customer can have their purchased products sent to different places as per their requirement through a single account creation. When the customer wants to change the shipping address, he/she does not need to create a new account, he/she only needs to add the new address and select it as shipping address. The Ecommerce Administrator can track all the addresses of the customers and is able to deliver the products easily to the proper destination. This in turn enhances customer satisfaction. Note: This feature is available only for Registered Customers.
Normal path	**From Registered Customer's End** 1. Customer visits a Website. 2. Customer can register by filling up the personal information as well as Log in information 3. Registered customers can log in by providing the user id & password given at the time of registration. 4. Views Products by browsing catalog/sub catalog or by searching using the

	keyword. 5. They can view all products, their cost & all related information by browsing catalog/sub catalog or by searching using the keyword/name. 6. They can add products in cart & can check total amount & decide whether they want to shop more or they want to check out. 7. Checks Out. 8. Selects option of check out with multiple addresses. (More than one product must be there in the Order in order to ship them to different addresses). 9. Edit & Assign addresses against individual products. 10. Select Shipping method against individual products & Shipping addresses. 11. Checks billing information, payment method (which is same for all products), shipping information (which is different for all products) & total amount of order (which can be same if same item is ordered more than one Or can be different if different items are ordered). 12. Places order. 13. Receives individual order id against individual shipping address. 14. Receives e-mail when cost (amount) of product will be received. 15. When products will be shipped by owner (from admin) the corresponding statuses will be changed.
Alternative Path	N/A

17) Shipment Tracking

Use case name	Order Tracking
Primary Actors	Customer
Secondary Actors	Administrator
Descriptions	This Use Case describes a very important feature which is available for customers after they have placed their online Order, i.e. Order Tracking. The Customers can track the various stages of their Orders such as "Processing" "Shipped" etc. Customers can know about their ordered items and actual status of the ordered items. Ecommerce Administrator checks the order and changes the status. Admin can also send e-mail. When the money is received & the invoice is created the status is changed. Also when the products will be shipped, Admin can send e-mail containing tracking Id/No. Here the administrator can track the current shipment status also if required. Note: This feature can be provided for both Registered and Guest Customers. The Guest customer gets the same facility without doing the long process of registration. We will discuss both these scenarios.
Normal path	**From Registered Customer's End:** 1. Customer visits Website. 2. Logs in. 3. Views Products their cost & all related information by browsing catalog/sub catalog or by searching using the keyword/name. 4. Adds Product to Wish List. 5. Select Products to shop by adding the products to cart. 6. Checks total amount, decide whether they want to shop more or they want to

	check out. 7. Checks Out. 8. Places Order. 9. Receives e-mail about total cost (amount) of product, when it will be received. 10. Products will be shipped by Owner (from Admin) & corresponding status is changed. 11. Admin sends e-mail containing tracking Id/No. 12. Customer knows the current shipment status by providing that tracking id to their corresponding shipper's site. **From Guest Customer's End:** 1. Customer visits Website. 2. Views Products their cost & all related information by browsing catalog/sub catalog or by searching using the keyword/name. 3. Adds Product to Wish List. 4. Select Products to shop by adding the products to cart. 5. Checks total amount, decide whether they want to shop more or they want to check out. 6. Checks Out. 7. Places Order. 8. Receives e-mail about total cost (amount) of product, when it will be received. 9. Products shipped by Owner (from Admin) & corresponding status is changed. 10. Admin sends e-mail containing tracking Id/No. 11. Customer knows the current shipment status by providing that tracking id to their corresponding shipper's site.

	From Administrator's End : 12. Sends E-mail to customer. 13. Creates Invoice. 14. Allows to ship goods. 15. Change Order status based on the current scenario. 16. Can check which orders have been shipped.
Alternate Path	**From Administrator's End :** <u>Order Placed by Customer</u> i) Customer account is created by Administrator on behalf of a customer. ii) Oder is placed by administrator. iii) Status is changed when money is received & invoice is created. iv) Status is changed & mail is sent to customer containing tracking id/No. v) Customer can check the current shipment status. vi) Administrator can also track the current shipment status. <u>Tracking ID sent by Administrator</u> i) Customer logs in. ii) Checks products by browsing it through catalog/searching it. iii) Checks product details. iv) Adds to Cart. v) Modifies quantity. vi) Proceed to Check Out (can follow simple check out or check out with multiple addresses). vii) Completes the Check Out process. viii) Receives order id. ix) Administrator Checks the order details. x) Changes status & creates invoice if money is transferred to owner's account. xi) Sends e-mail to customer.

	xii) Changes status when the product is shipped & corresponding e-mail will be sent to customer containing shipment tracking id/No. xiii) Customer/Administrator uses tracking Id/No to know the shipment status. xiv) Product is shipped. xv) Credit Memo is created from Admin panel. <u>Admin Cancels Order</u> i) Customer places Order. ii) Receives Order id. iii) Administrator Checks the order details. iv) Cancels the Order. v) Shipment tracking ID not sent to Customer and customer mailed accordingly. <u>Hold the Order</u> i) Customer places Order. ii) Administrator Checks the order details. iii) Administrator creates the Invoice if money is transferred to owner's account. iv) Changes the status. v) Holds the order if required. vi) Un-holds the order. vii) Changes the status when products are shipped. viii) Sends e-mail with corresponding shipment tracking no. to customer. ix) Customer/administrator can know the current shipment status.