

# Ecommerce Site Development Perspectives for Technical Stores in Nepal

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## Introduction

The work titled “Ecommerce Site for UNME Technical Store” is a type of dynamic website designed to perform the commercial transactions via the internet. The work “Ecommerce Site” is designed and developed by using HTML, Bootstrap for designing and PHP for developing. “Ecommerce Site”, have Frontend and Backend interface. Frontend Interface is for users who will able visit and see the product and make the transactions. And Backend Interface is for Administrative purpose from which we can able to control our Frontend Interface and for whole system control. It offers online transaction for technical thing like Mobile, PC, and CCTV etc. Frontend Interface is totally search engine based. Users can easily find out the products or items in short time. For Payment procedure, only cash on delivery is available.

“Ecommerce Site” is a web page application, which is configured to assist users to carry out the commercial transaction day to day.

## System Requirements

### Hardware Requirements

- RAM : 2 GB or more
- Hard Disk : 80 GB or more(According to requirements)
- Processor : Dual Core or Latest
- Display: 16 bit color or Better.

### Software Requirements

- Operating System: Windows XP or later operating system
- Web Browser: Internet Explorer, Mozilla Firefox, Chrome and Others too

### Technologies Used

- HTML: HTML is a language for describing web pages. Here in this project HTML 5 is also used for effectiveness and security aspects.
- CSS: Cascading Style Sheet is important to the web site developers for making relevant style options of webpage documentation. It provides consistent design looks of the webpage.
- Java Script and JQuery: JavaScript is scripting language which was designed to add Interactivity to HTML pages.
- PHP 5: PHP is used for scripting for server-side operations. It is designed for web development to manage server applications.

- MVC Architecture: Model–view–controller (MVC) is used for implementing user interfaces on computers. It is able to divide an input in form of a given software application into three connected modules as model, view of the application and controller of the application.
- Net Beans IDE 8.0.1: It is Open-Source Integrated Development Environment for software developers. Net Beans can run on various platforms including Windows, Linux, Solaris, and the MacOS. It is beneficial to use Net Beans IDE for cross-platform applications development in desktop, enterprise, web and mobiles.
- Apache Server: It is the world's most used web server software. It plays a pivot role in the beginning of World Wide Web. It became the first web server software to serve more than 100 million websites. Different operating systems including Unix, Microsoft Windows are able to support its functionalities.
- MySQL: It is an open source relational database management system which has flourished the basic development of database operations for the beginners and professionals. Structure Query Language (SQL) is used for data handling such as adding, removing, and modifying. Almost all the applications use MySQL for database. It helps the webpages to connect with the database so that the data given as input on webpages can be saved in the database by creating some database connections. There are some websites where data changes frequently as required; those dynamic web pages are significantly and easily handled by MySQL. MySQL also allows Web scripting language like PHP to access information from the database.

## Research Scope

We are in digital world. The habit of the people has changed from physical window shopping in the stores to the digital browsing of their needs on the websites. Keeping this thing in our mind, we have developed this e-commerce website. Though such e-commerce websites are already in existence, we have done this project to promote the business of our beloved friend, Mr. Shiddhant from Nepal.

Nepal is emerging with its potentials for involvement in e-commerce sector [1, 2]. The tourism in Nepal has always shown an attributed factor for Nepal's economy. Keeping this in mind Nepal is now investing and inviting startups from youths and students so that along with the business development the jobs of Nepal can be flourished. When, it comes to business developments, online applications developments for e-commerce comes into existence with its promising features. The connections between manufacturer and supplier to the end users also get more involved. This leads to the continuation of desires by consumers about acquiring the products or services etc. with more evolvement of better, faster, and cheaper processes. In this world of internet technology, businesses need to be adaptable to the various types of consumer needs and trends also changes time to time. E-commerce in Nepal is continuously in progression mode and showing its skills for becoming more and more important. The recent studies in e-commerce in last five years show that Nepal is lacking behind in holding effectiveness in this field [3]. However, recent acquisition of business development in 2018 [4, 5].

## Objectives

It offers online transaction for technical thing like Mobile, PC, and CCTV etc. It offers below services.

- This project focus on ecommerce business to carry out the commercial transactions via the internet
- It also offers the secure electronic transactions.
- User friendly user interface.
- Customers can make multiple transaction by adding items into cart.
- Customers can view all the details and images about the product
- Customers can search the item according to brands, category, and products base.
- Confirmation message can be getting easily with the both email and mobile verification.

- Customers can query about the items and other related topics.
- Backend Interface is fully customizing with add, delete, update mechanism.

## System Design

Frontend Module:

*Register Module:* Register module able to create the account for making the transaction.

*Login Module:* Login module able to sign in and able to make the transaction.

*Cart Module:* Cart module able to add the item into the cart as well as able to edit the cart items and quantity.

*Search Module:* Search module provides the function for the searching the item.

*Brands, Category and Product Module:* This module provides the function items to be found according to brands, category and product wise.

*Delivery Module:* Delivery module provides the function for getting the information about the delivery details.

Backend Module:

*Register Module:* Register module able to create the account for user to access the backend.

*Login Module:* Login module able to sign in and able to access the backend system.

*Members Module:* Provides the function for managing the member's details.

*Brand Module:* Function to add, delete, and update brands.

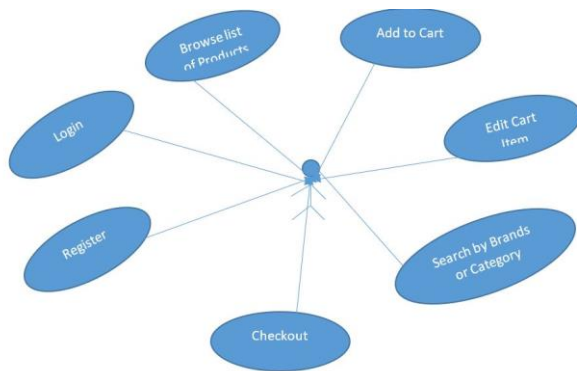
*Category Module:* Function the function to add, delete, and update category.

*Product Module:* Function the function to add, delete, and update product.

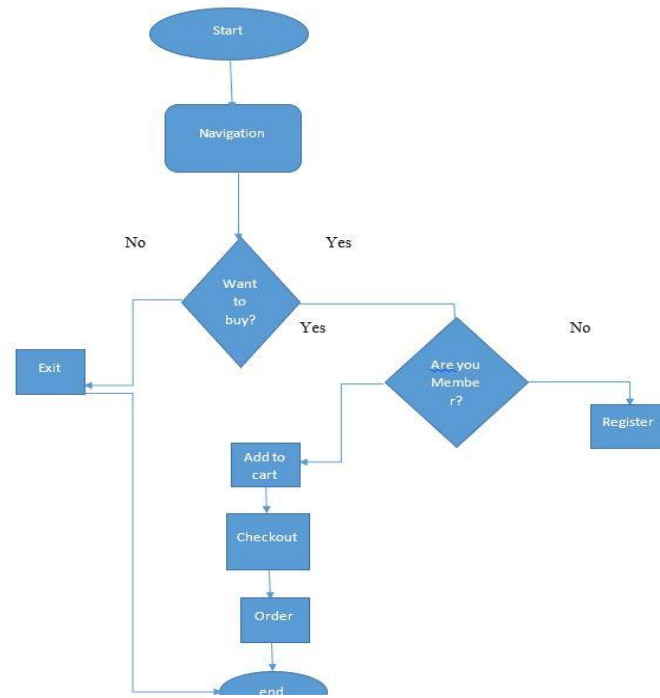
*Cart Module:* Function the function to add, delete, and update cart items details.

*Delivery Module:* Provides the function to send the message for delivery details to the members.

## UML Diagram



**Figure-1: Use case Diagram:**



**Figure-2: Flow Diagram**

## Testing

E-commerce uses internet technology where manufacturer or the supplier does not have the physical or face to face communication or visibility; consumers or the clients entirely depend upon the application infrastructure and believes that the transactions of the intended applications must be efficient enough to handle the purpose. Moreover, as it is dealing with monetary transaction too along with bank verification and other steps, testing of an e-commerce web site on the internet is required in different phases. The usability factors also get bylined if the website is too heavy and not downloaded in proper response time. Rigorous testing, therefore, is crucial for the implementation and maintenance of such systems as it leads to customer confidence, trust and reputation. In this, we have discussed some of the criteria for testing some parameters for the developed e-commerce website [6]. Testing is a phase of software development cycle where the system errors are identified and rectified accordingly before launching it officially. The main objective in this phase is to identify the bugs and debug them as required. This process enhances the integrity of a system by notifying the deviations in design in comparison with system requirements. Verification and validation are the two processes where it confirms to the user requirements.

- Unit testing is considered as the first phase of testing. It is performed before Integration Testing takes place. Unit testing checks the system module wise or process wise and generally done with is the White Box Testing method.
- Once all the processes are individually verified and validated as functional, integration testing tests the connection among components; such testing includes the check procedures in an operating system and file system, hardware or even networks. Integration testing is performed with integration tester or test team. Two approaches: either 'Top Down' approach and 'Bottom Up' approach is followed in this.

## Results

We have tested our e-commerce website in different categories and have found the following test results which says that the e-commerce website is efficient and eligible for commercialization.

Module/Function	Total test cases	Passed percentage
User interface	54	100%
Ordering module	63	98%
Payment module	70	90%
Others	40	100%

## Conclusion and Future Enhancement

We are in digital world. The habit of the people has changed from physical window shopping in the stores to the digital browsing of their needs on the websites. Keeping this thing in our mind, we have developed this e-commerce website. In the ongoing development process, we shall try overcome the errors that have been bugged during testing for full fledged commercialization.

## REFERENCES

- [1] <https://www.ashesh.com.np/kaymu-nepal-online-shopping-marketplace-app-review-stat/>
- [2] <https://blog.goodaudience.com/future-of-e-commerce-business-in-nepal-after-2-big-acquisition-in-2018-c15b13454b12>
- [3] <https://ictframe.com/ecommerce-business-practices-and-trend-in-nepal-2/>
- [4] <https://risingjunkiri.com/the-scopes-and-challenges-of-e-commerce-in-nepal/>
- [5] <https://www.nepalmedia.com/e-commerce.html>
- [6] [https://www.outerboxdesign.com/web-design-articles/ecommerce\\_features](https://www.outerboxdesign.com/web-design-articles/ecommerce_features)