

# **PURBANCHAL UNIVERSITY**



## **DEPARTMENT OF COMPUTER ENGINEERING KHWOPA ENGINEERING COLLEGE LIBALI-2, BHAKTAPUR**

### **A MID-TERM PROJECT ON "E-Mart (an e-commerce platform)"**

A mid-term project submitted for the partial fulfillment of requirements for the degree of  
Bachelor of Engineering in Computer Engineering (Seventh Semester)

#### **SUBMITTED BY:**

Sandesh Lawaju (730335)

Sujan Koju (730342)

Unika Shakya (730348)

#### **UNDER THE SUPERVISION OF**

(Er. Milan Chikanbanjar)

16 March 2020

## **ACKNOWLEDGEMENT**

We are thankful to all those who have helped us directly or indirectly with this project. Foremost, we would like to thank Department of Computer Engineering of Khwopa Engineering College for providing us this opportunity of building this website "E-Mart".

We would also like to offer our gratitude to all our teacher and lectures for providing ideas which have been the basis for our project research and appreciate the support rendered by Department of Computer Engineering.

We are grateful to our project supervisor, “Er. Milan Chikanbanjar” for his support and advice.

Lastly, we thank all the teaching staff and friends who in one way or other have shared their support.

## ABSTRACT

This report briefly describes about the seventh semester mid-term defense on an e-commerce website, “E-Mart”. Over the past decade, e-commerce has transformed the way the business is being done in the developed world. But in Nepal, it is still in its infancy. Therefore, we have started this project with the intention of building a domestic e-commerce website suitable for Nepali community. The main goal of this project is providing consumer-to-consumer and business-to-consumer sales services via the Internet. It would be the platform where the seller can advertise their products and the buyer can purchase their product of interest directly from the seller. This website is also able to take data from user views and create its own dataset. We intend to implement artificial intelligence to provide recommendations for customers and provide chat-filters.

**Keywords:** *E-commerce, virtual market, transaction.*

## LIST OF FIGURES

<b>Fig No.</b>	<b>Fig Name</b>	<b>Page No.</b>
3.1	System Block Diagram of E-Mart site	4
3.2	Context Diagram	5
3.3	Data Flow Diagram	5
3.4	Use Case Diagram	6
3.5	E-R Diagram	7
4.1	Home Page	9
4.2	User Account Register Page	10
4.3	Product Upload Page	10
4.4	Single Product Display Page	11
4.5	Contact Us Page	11
4.6	Comment Product Page	12
4.7	Admin Login Page	12
4.8	Admin Home Page	12

## TABLE OF CONTENTS

Chapters	Title	Page
	Title page	i
	Acknowledgement	ii
	Abstract	iii
	List of Figures	iv
	Table of Contents	v
1.	Introduction	
	1.1 Background	1
	1.2 Motivation	1
	1.3 Statement of problems	1
	1.4 Objectives	1
2.	Literature Review	2
3.	Methodology	
	3.1 System Block Diagram	4
	3.2 Context Diagram	5
	3.3 Data Flow Diagram	5
	3.4 Use Case Diagram	6
	3.5 ER Diagram	7
	3.6 Tools and Platform	8
4.	Results and Discussion	
	4.1 Work Done	9
	4.2 Work to be Done	13
	References	14

# **CHAPTER 1**

## **INTRODUCTION**

### **1. Background**

E-Commerce is the buying and selling of products or services over electronic systems such as the internet and other computer network. The types of E-commerce are Business2Business, Business2Consumer, Consumer2Business and Consumer2Consumer [1].

Around the world, e-commerce is changing the way people shop. The application and internalization of e-commerce can open up new opportunities for doing business. All it takes is a mobile phone to connect consumers and producers to the market. E-commerce thus has the potential to connect Nepali micro, small and medium enterprises (MSMEs), rural women and youth entrepreneurs [2].

We've gone a long way without AI, but now there are numbers proving that AI-driven solutions help businesses increase sales, retain customers, boost customer satisfaction. So, e-commerce has been one another area where AI is being developed at rapid speed. The AI used in e-commerce sites are: analyzing and predicting sales, creating product descriptions, answering queries about products, personalized recommendations and many more [9].

This project "E-Mart" would be an e-commerce domestic website based on the needs of Nepali community. It would be a platform where a person, retailer, wholesaler or business organization can create an account, and advertise their products. Instead of going to different places, people can easily search this website and find a suitable buyer who can sell their product of interest. "E-Mart" would act as an online venue where buyer and seller can contact with each other. This website would also implement artificial intelligence to improve recommendations for customers and provide chat-filters.

### **2. Motivation**

The invention of internet has made the world into a virtual market place but in Nepal we still don't have many websites that focus on the needs of our community. So sites like Ebay, OLX has motivated us to build this website.

### **3. Statement of Problems**

In this era of internet and technology, we still have only few websites that bring dealers and customers together where they can make deals with each other. To find a suitable product we normally go from shop to shop until we find the product of interest. With this website, we intend to make a virtual marketplace where one can find their desired product.

### **4. Objective**

To build a platform where people or business originations can buy and sell any kind of goods with each other.

## CHAPTER 2

### LITERATURE REVIEW

The web has revolutionized the way we shop, allowing people to search, buy and sell products at the touch of a button. It all started in 1989 when a British computer scientist Tim Berners-Lee wrote a proposal for what would eventually become the World Wide Web. In 1994, Pizza Hut offered online ordering of Pizza on their website. In 1995, Amazon started selling Books Online and EBay was built as an auction site which later became one of the most popular online person-to-person trading community on the Internet [1]. From 2000 A.D, hundreds of e-commerce services such as online food ordering, media streaming, online advertising, online marketplace, brick and mortar retailers, e-commerce payment systems and online storefronts have emerged [2].

In the context of Nepal, Munchahouse.com was started in 2000, by a department store Munchahouse which was probably the first online shopping site in the History of Nepal [4]. The store was live and for online shopping in Nepal back then. It was famous for people from UK, USA, Australia to buy gifts for their friends and family but was not much used by the people residing in Nepal itself. Since then, there are a lot of e-commerce websites in Nepal like Nepbay, SastoDeal, Foodmandu. In 2005, Hamrobazar, a free online classified portal was opened. It enabled individuals as well as companies to list the wide variety of new or used product online. All the things listed are posted by the user itself and buyers directly contact the seller, so Hamrobazar is only a platform. In 2009, ESewa, an online payment gateway was launched. And in 2011, Sastodeal, an e-commerce platform specializing in “deals” was launched [5]. In 2013, Daraz started as Kyamu which is one of the top online shopping sites in Nepal. It was later rebranded as Daraz. In March 2018 Daraz was acquired by the Chinese e-commerce company Alibaba Group.

The concept of AI was started a long time ago which dates to the myths and legends from at least about 2,700 years ago. In 2005, recommendation technology based on tracking web activity or media usage brings AI to marketing. Now at present, digital marketing or e-commerce has taken the business prospect to the next level with the help of AI technology. AI is one of the fastest succession of technological breakthroughs due to smart solutions that are transforming the e-commerce industry. The AI applications range from the ability to analyze data sets, identifying patterns and creating a personalized experience. This creates a unique approach that is more efficient than any human being [6].

Now, eBay uses artificial intelligence in personalization, search, insights, discovery and its recommendation systems along with computer vision, translation, natural language processing and more [7].

The Daraz Mobile Application implements artificial intelligence by providing three super smart options for the customers to shop online with more comfort. Customers can now enjoy the ‘Smart Search’ to find out the exact desired product by the customer. Another advantage of the AI technology is ‘Product Recommendation – Just for you’. Based on the smart search feature, Daraz App will recommend some valuable suggestions to the buyers to buy their desired

products. It will also be able to understand customer's collective choices through the new app feature 'Collection' [8].

In recent time, a lot of such websites have been created making it easier for business to now directly sell their products via their online portal to their target market.



## CHAPTER 3

### METHODOLOGY

For developing the E-Mart application, various phases and methods will proceed with the help of various software, tools and languages. Our project initial step is to collect related data and perform analysis of proposed system, designing and development of complete system. For the comment filter we intend to use Profanity filter approach and for personalized recommendation we would use content-based filtering approach.

#### 3.1 System Block Diagram

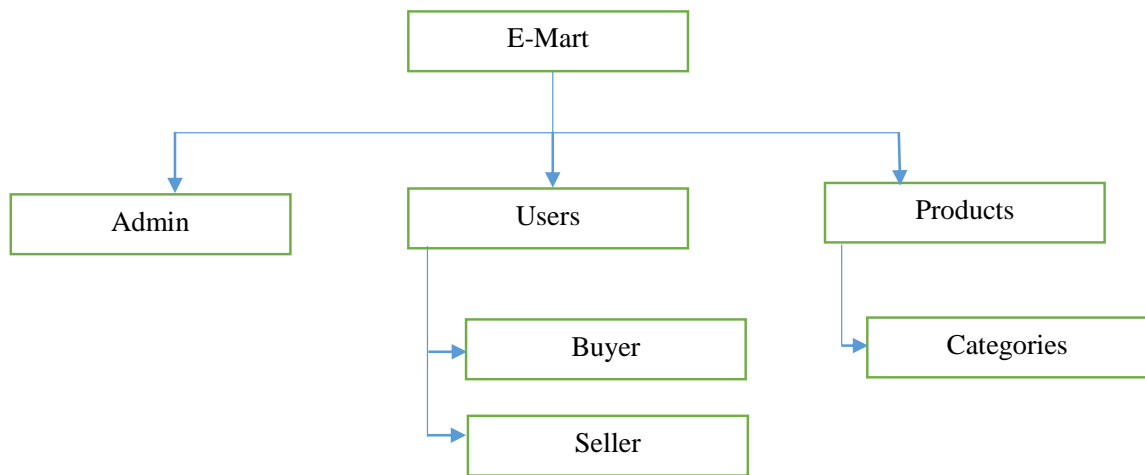


Fig 3.1 System Block Diagram of E-Mart site

This site consists of three major components: an admin, users and product. Admin is the beneficiary of this website. He can view the feedback of the website and report messages. Admin can delete any product or user accounts.

Users can be divided among buyers and sellers. Anyone can visit the website but to upload product one must login providing all necessary details.

Products have different categories. They consist of product details, photograph, price, seller descriptions, etc.

### 3.2 Context Diagram

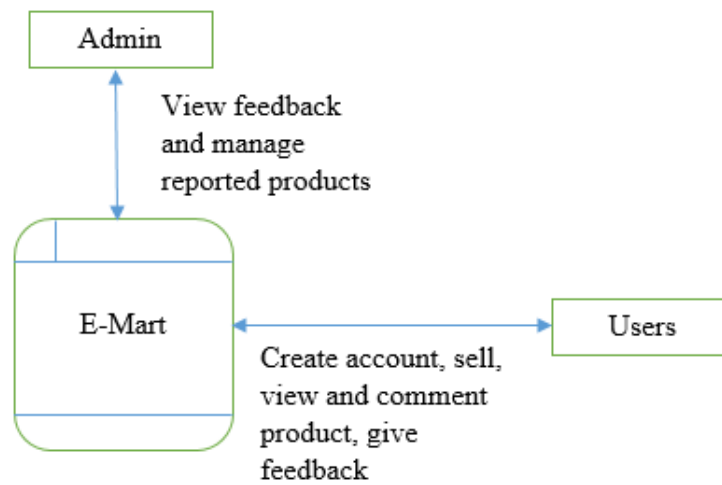


Fig 3.2 Context Diagram

### 3.3 Data Flow Diagram

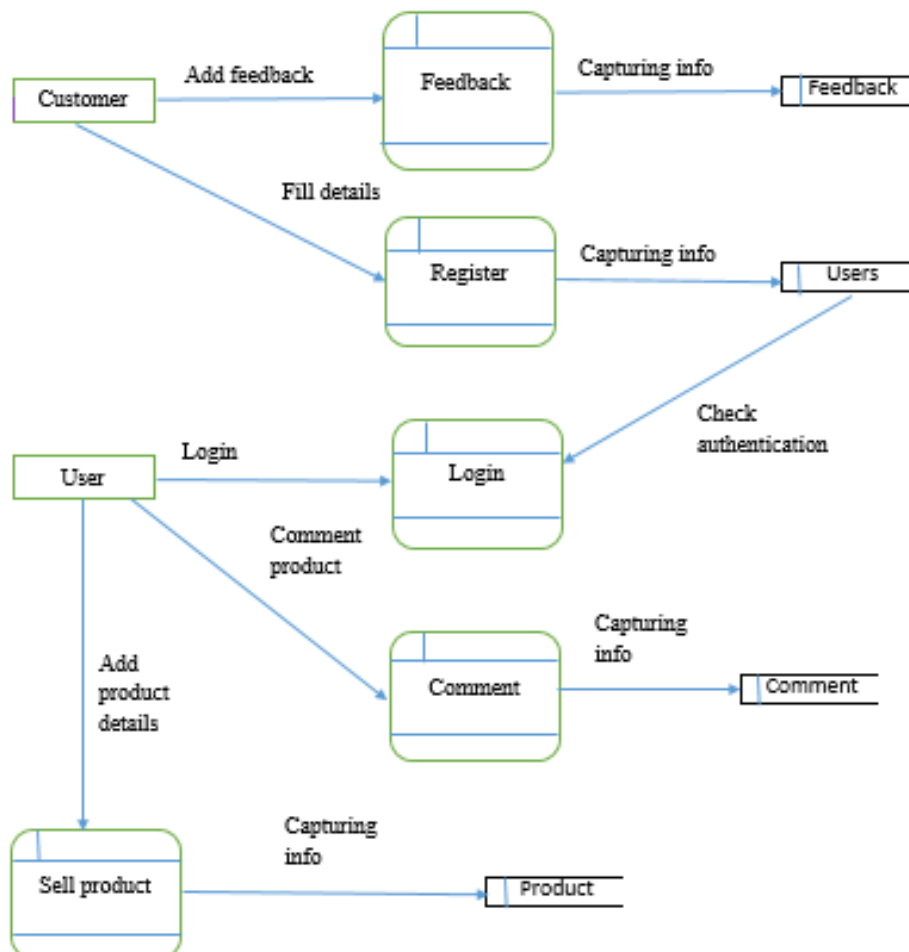


Fig 3.3 Data Flow Diagram

### 3.4 Use Case Diagram

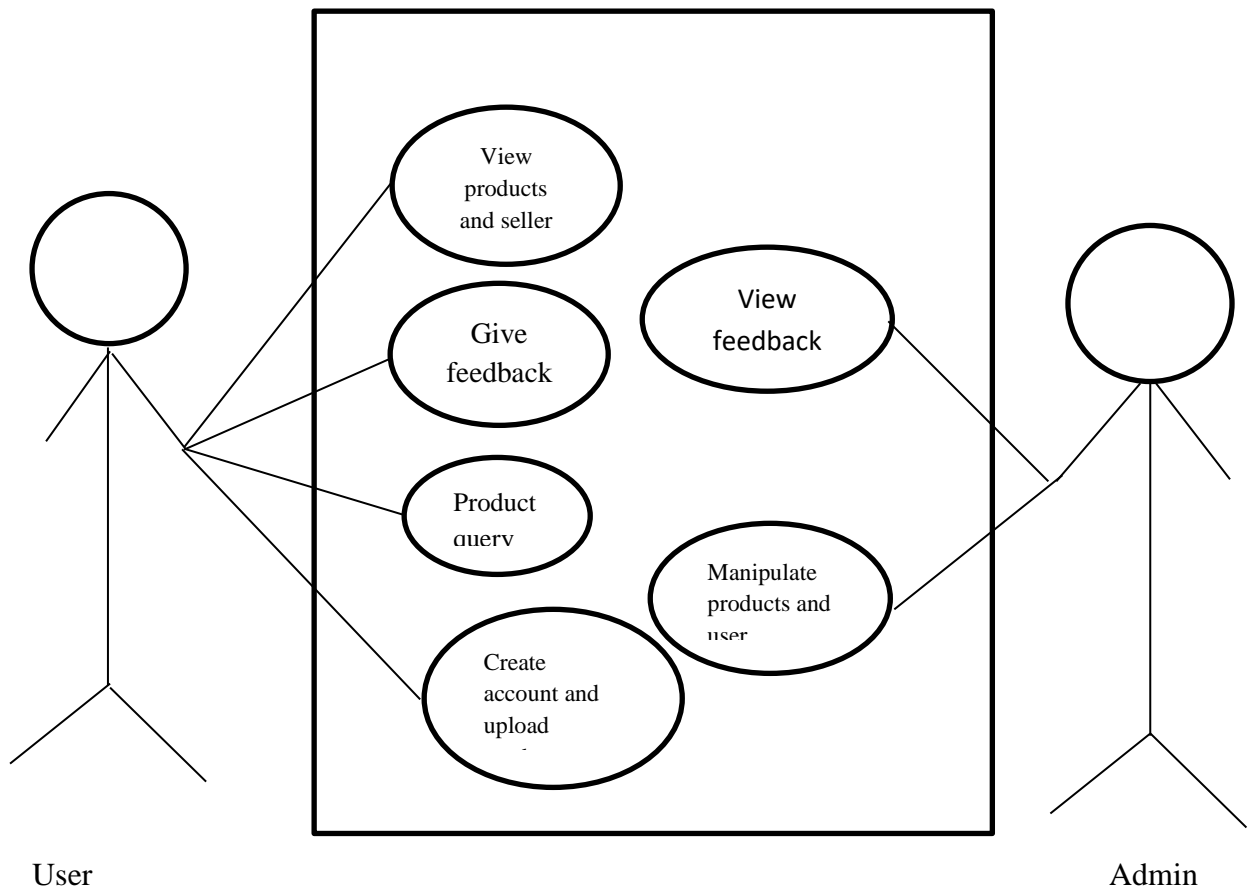


Fig 3.4 Use case diagram

### 3.5 ER-DIAGRAM

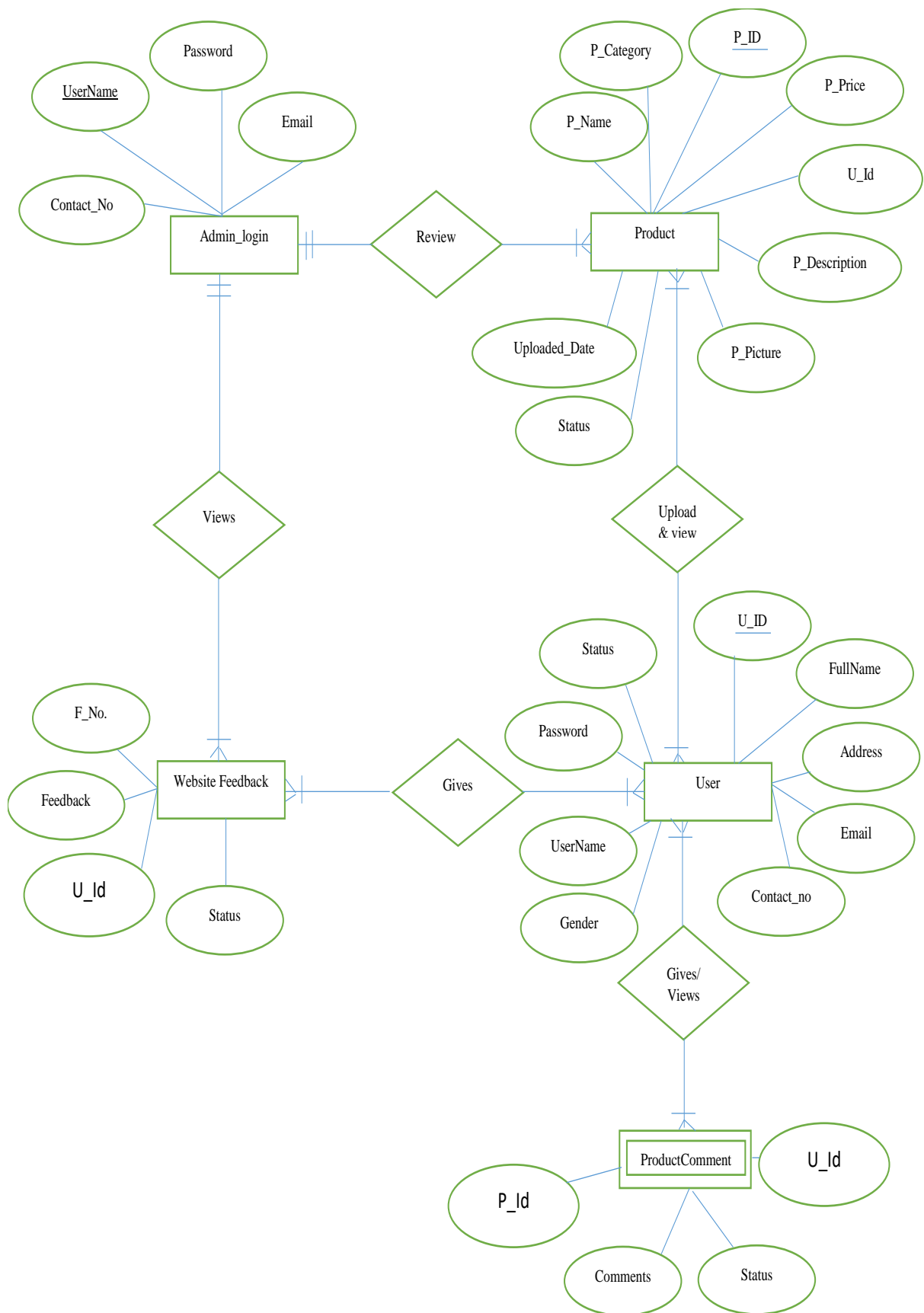


Fig 3.5 ER diagram

### **3.6 Tools and Platform**

#### **1. Front End**

- HTML
- CSS
- JavaScript

#### **2. Back End**

- Java
- Hibernate
- Spring-MVC
- MYSQL Database

#### **3. XAMPP Server, Tomcat Server**

#### **4. Eclipse IDE**

## CHAPTER 4

### RESULTS AND DISCUSSION

#### 4.1 Work Done

E-mart is a user-friendly e-commerce platform where a person, retailer, wholesaler or business organization can create an account, and advertise their products. This website will give its users the ability to browse different items from different sellers via use of internet. This project has following features:

1. Visitors can view products and the seller's information.
2. Anyone can create an account and upload their items which is a way of advertising.
3. Users can comment the product and ask the seller for any queries or order online.
4. Users can give feedback on website.
5. Fake products can be reported.
6. Reported products can be deleted by admin.
7. Has a feedback system.
8. Has ability to generate its own dataset based on user views.

#### Screenshots

---

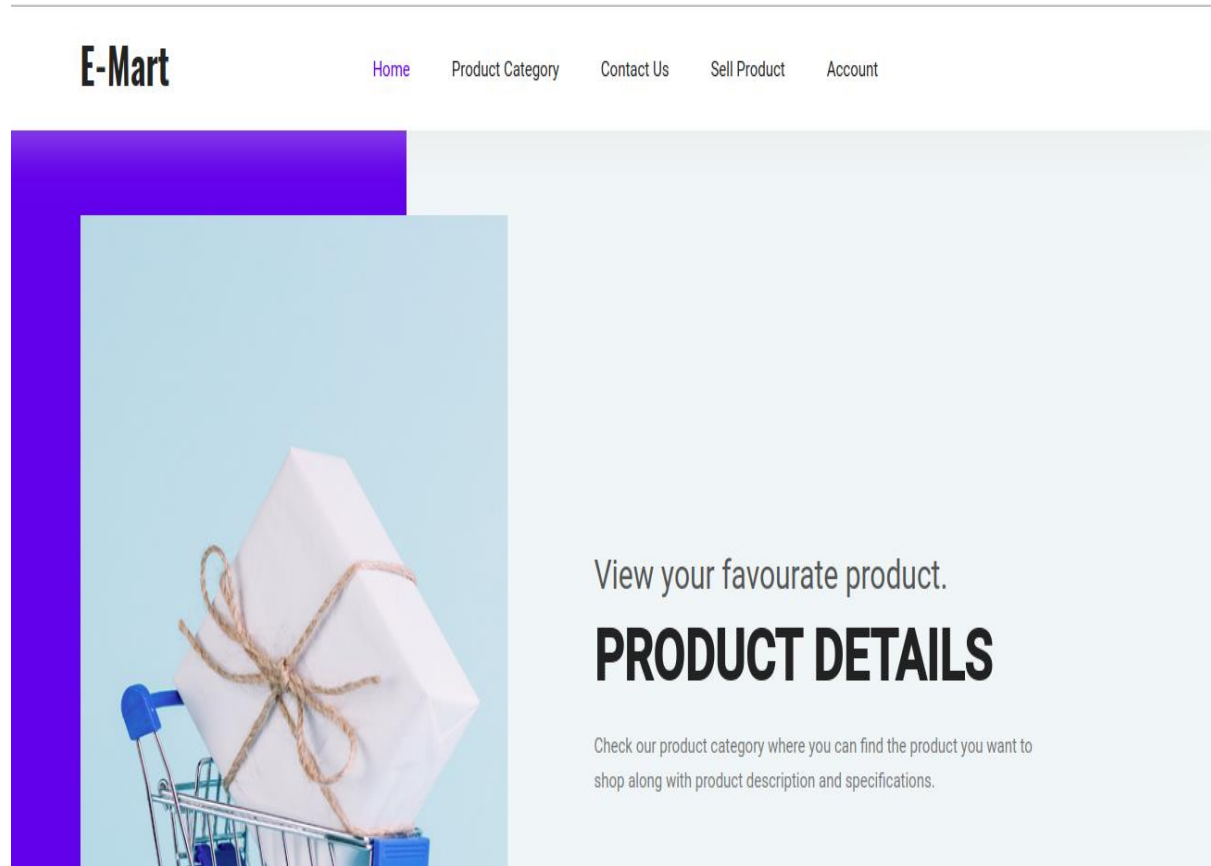


Fig 4.1 Home page

E-Mart
Home
Product Category
Blog
Contact Us
Sell Product
Account

Already have an account?

Login Now

### CREATE AN ACCOUNT

Fullname

Username

Address

Email Address

Contact Number

Password

REGISTER

Fig 4.2 User Account Register Page

E-Mart
Home
Product Category
Contact Us
Sell Product
Account
Sujan5658

Please Provide Correct Information. All Fields Are Required Except Warranty

Enter Product's Name

Category : Computers

Condition : Excellent

Used For About [ eg : 2 yrs]

Price : 0

Price Negotiable : Yes : No :

Delivery Area

Warranty Period. If not then enter -

Delivery Charges : 0

Product Specification :

Title	Description
-------	-------------

#### Upload Product Pictures

To Make Your Product Picture Look Attractive, Please upload the Picture of size height=170px and width=230px

Choose File No file chosen

Choose File No file chosen

Choose File No file chosen

Fig 4.3 Product Upload Page

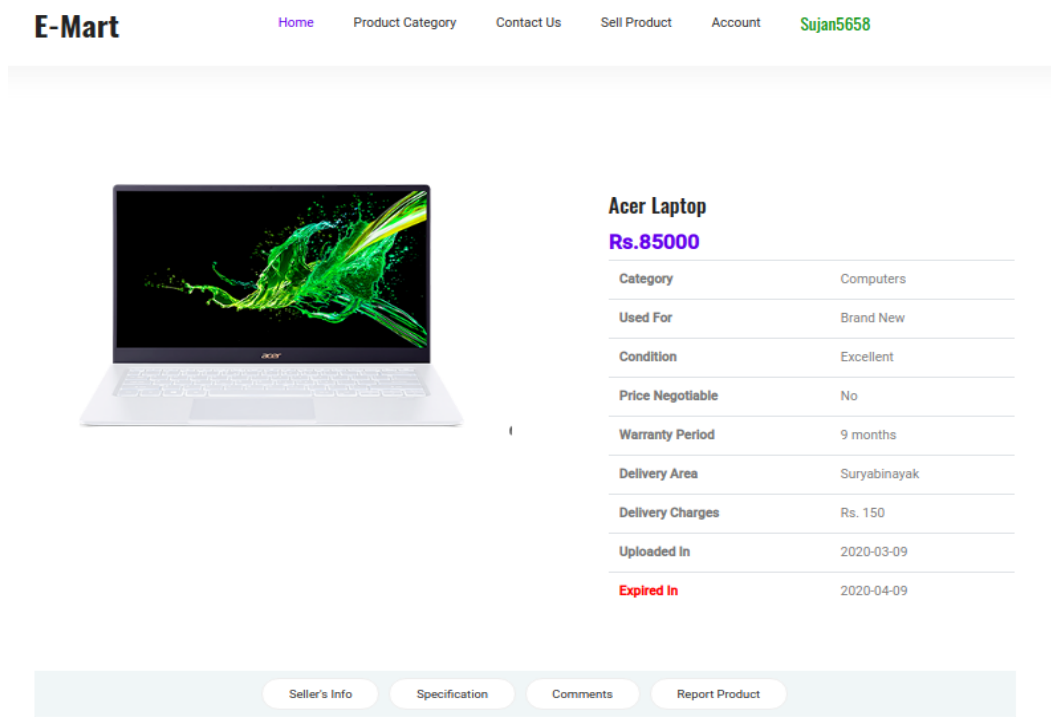


Fig 4.4 Single Product Display Page

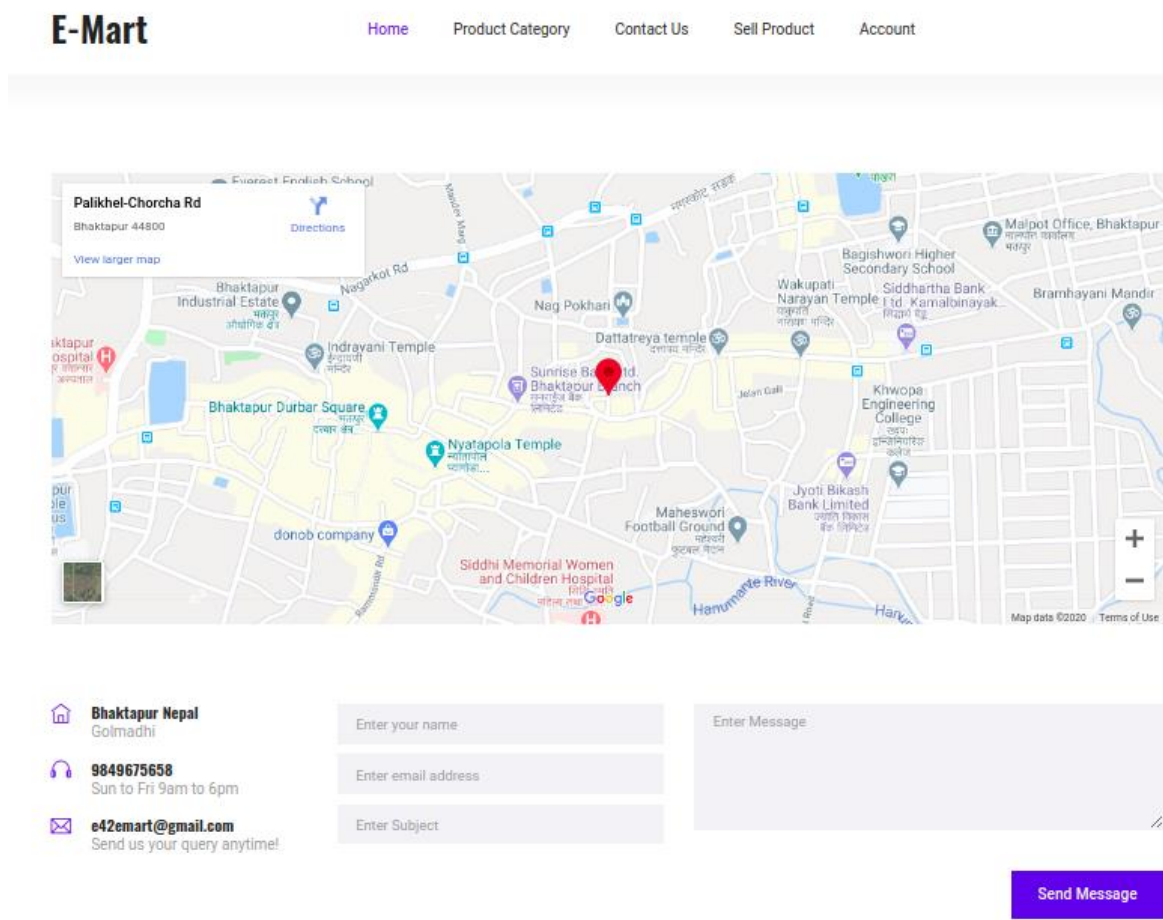


Fig 4.5 Contact Us Page



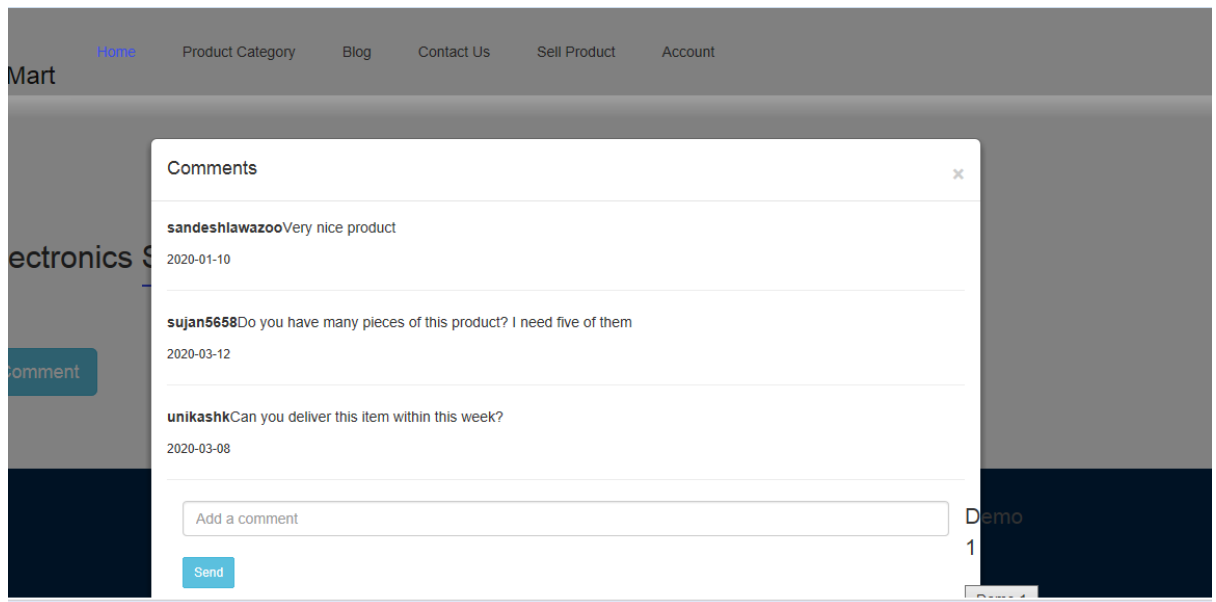


Fig 4.6 Comment Product Page

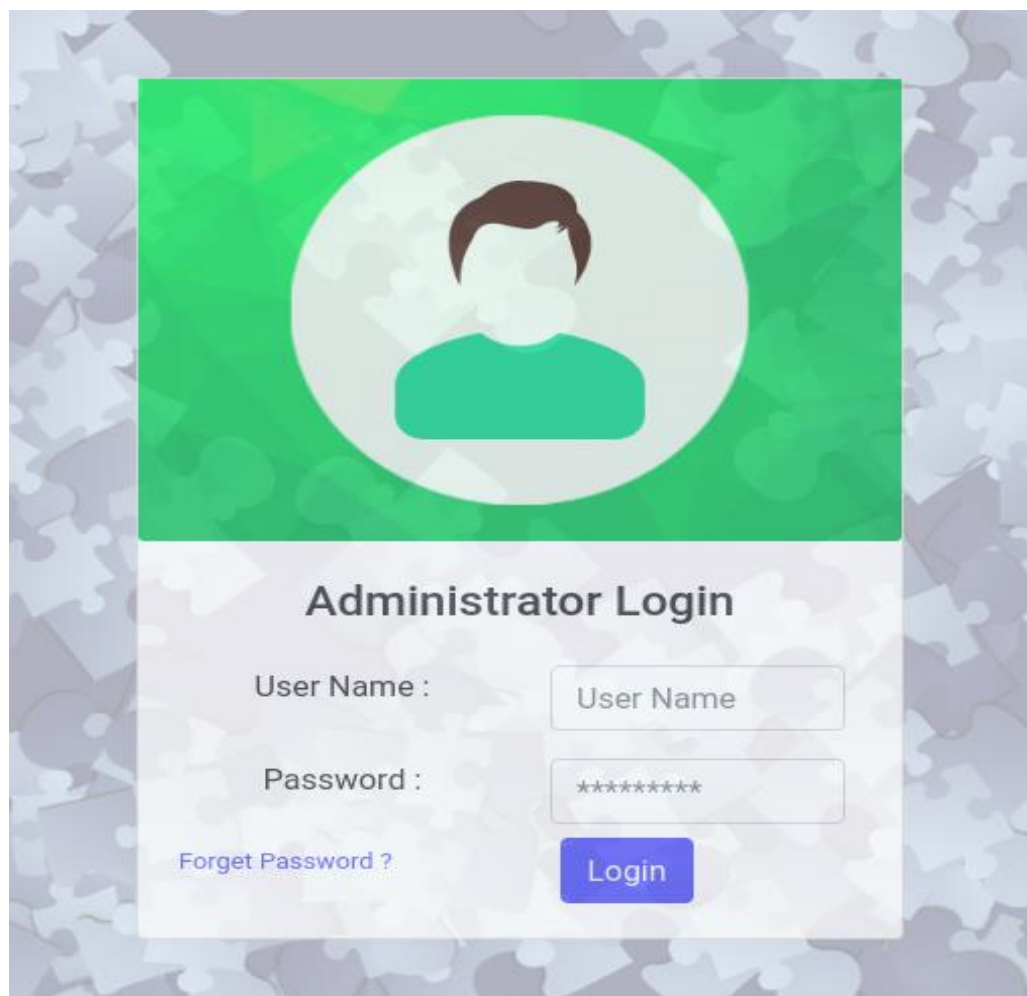


Fig 4.7 Admin Login Page

Welcome Administrator

Dashboard

Client Control

User's Message

Reported Products

Administrator Credentials

Change Credentials

Log Out

Be careful before making changes... (\*\_\*). Today is : 2020-03-09

Administrator Info

User Nameadmin

Emailmyselfsujan67@gmail.com

Contact No9849675658

Change Credentials

New User Nameadmin

Emailmyselfsujan67@gmail.com

Contact No9849675658

Old Password\*\*\*\*\*

New Password\*\*\*\*\*

Retype Password\*\*\*\*\*

UPDATE

Fig 4.8 Admin Home Page

## 4.2 Work to be Done

Further, we need to add following features in this website:

1. Implement user personalization.
2. Implement chat filter.

## REFERENCES

1. Binshan Lin, "E-commerce in Nepal: a case study of an underdeveloped country" in International Journal of Management and Enterprise Development , January 2005 (17 November 2019)
2. <http://leafcloud.blogspot.com/2016/09/an-article-on-e-commerce-in-nepal.html> (17 November 2019)
3. Richard Boateng and Richard Heeks, "E-Commerce in Developing Economies: A Review of Theoretical Frameworks and Approaches", January 2008 (18 November 2019)
4. J. Srinivasan and Deepika Kathirvel, "ARTIFICIAL INTELLIGENCE OF E-COMMERCE PLATFORM", January 2018 (18 November 2019)
5. Deepika Kathirvel,"ARTIFICIAL INTELLIGENCE OF E-COMMERCE PLATFORM" in Asian Journal of Marketing , January 2018 (20 November 2019)
6. <https://becominghuman.ai/how-ecommerce-companies-are-using-ai-to-drive-higher-sales-user-experience-20d9d9bbb2b0> (20 November 2019)
7. <https://www.forbes.com/sites/bernardmarr/2019/04/26/the-amazing-ways-ebay-is-using-artificial-intelligence-to-boost-business-success/#41b4ef02c2ee> (20 November 2019)
8. <http://icetoday.net/2018/09/the-new-daraz-app-comes-with-artificial-intelligence/>(20 November 2019)
9. <https://neoteric.eu/blog/6-ways-to-use-artificial-intelligence-in-e-commerce/> (20 November 2019)