CHAPTER 1

INTRODUCTION

1.1 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 Consumer2Comsumer [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.

1.2 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.

1.3 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.

1.4 Objectives

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 [5].

In the context of Nepal, Munchahouse.com was started in 2000, by a department store Muncha house which was probably the first online shopping site in the History of Nepal [3]. 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 [4]. 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 [8].

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' [7].

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.
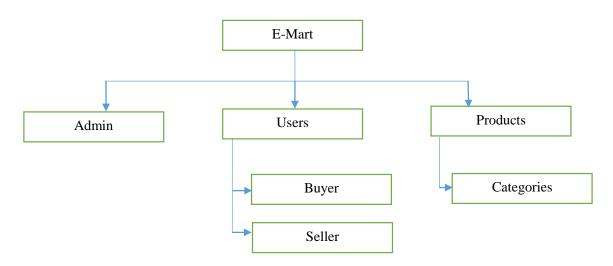
3.1 System Block Diagram

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.
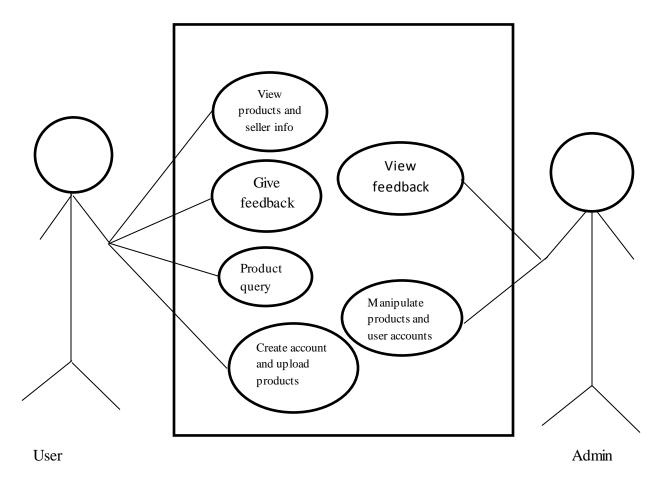
3.2 Use Case Diagram
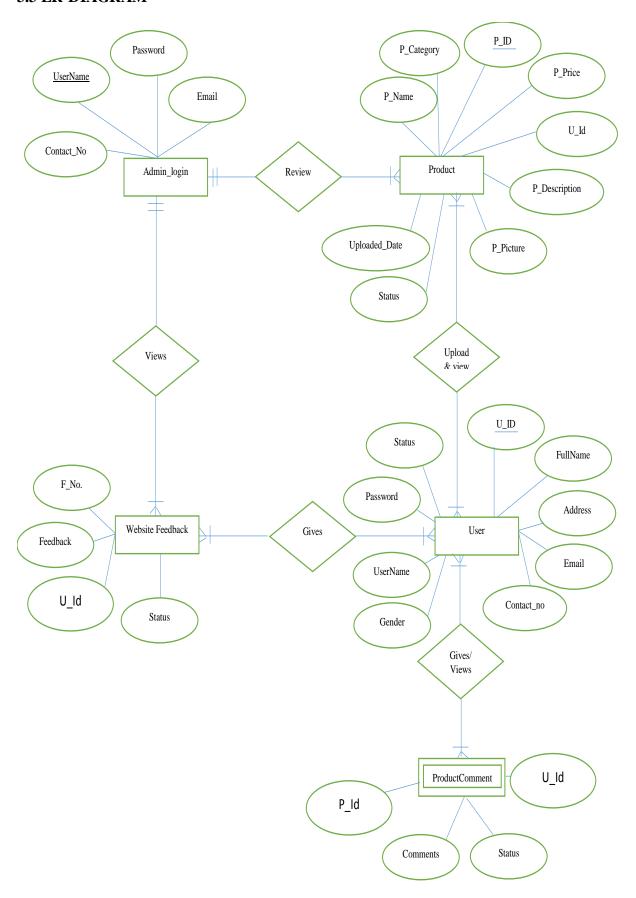

Fig 3.2: Use case diagram

3.3 ER-DIAGRAM

Fig 3.3: ER diagram

3.4 Work Schedule

S.N	Week Job Description	1st Week	2nd Week	3rd Week	4th Week	5th Week	6th Week	7th Week	8th Week
1.	Problem Identification	██							
2.	Analysis		██						
3.	Design			██	██				
4.	Coding					██	██		
5.	Testing and Debugging							██	██
6.	Documentation	██	██	██	██	██	██	██	██

Fig 3.4: Work Breakdown Structure

3.5 Tools and Platform

1. Front End
- HTML
- CSS
- JavaScript

2. Back End
- Java
- Hibernate
- Spring-MVC
- MYSQL Database

3. XAMPP Server, Tomcat Server

4. Ecllipse IDE

CHAPTER 4
EXPECTED RESULTS

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.

4.2 Work Done

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

1. Implement user recommender.
2. Implement chat filter.

References

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2. Richard Boateng and Richard Heeks, "E-Commerce in Developing Economies: A Review of Theoretical Frameworks and Approaches", January 2008 (18 November 2019)

3. J. Srinivasan and Deepika Kathirvel, "ARTIFICIAL INTELLIGENCE OF E-COMMERCE PLATFORM", January 2018 (18 November 2019)

4. Deepika Kathirvel,"ARTIFICIAL INTELLIGENCE OF E-COMMERCE PLATFORM" in Asian Journal of Marketing , January 2018 (20 November 2019)

5. http://leafcloud.blogspot.com/2016/09/an-article-on-e-commerce-in-nepal.html (17 November 2019)

6. https://becominghuman.ai/how-ecommerce-companies-are-using-ai-to-drive-higher-sales-user-experience-20d9d9bbb2b0 (20 November 2019)

7. http://icetoday.net/2018/09/the-new-daraz-app-comes-with-artificial-intelligence/(20 November 2019)
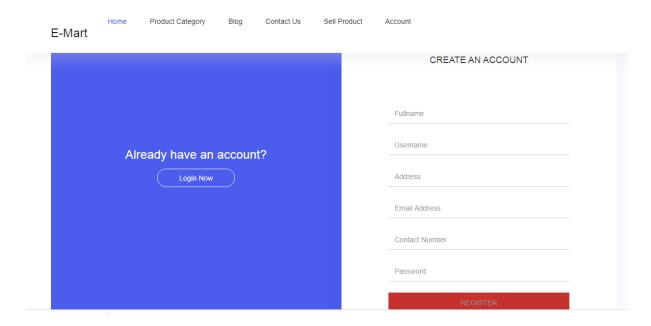
Appendix

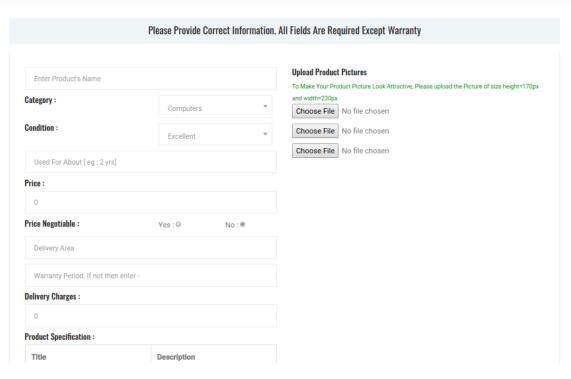Fig a: Home page

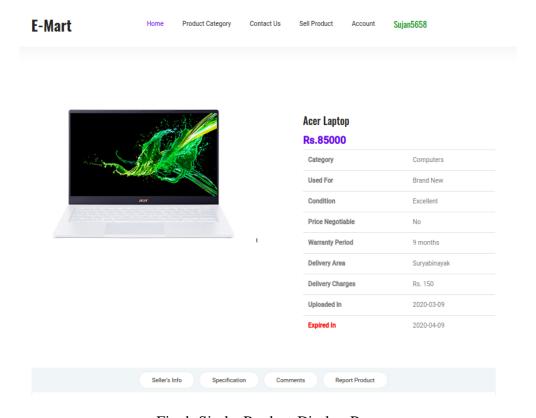Fig b: User Account Register Page

Fig c: Product Upload Page

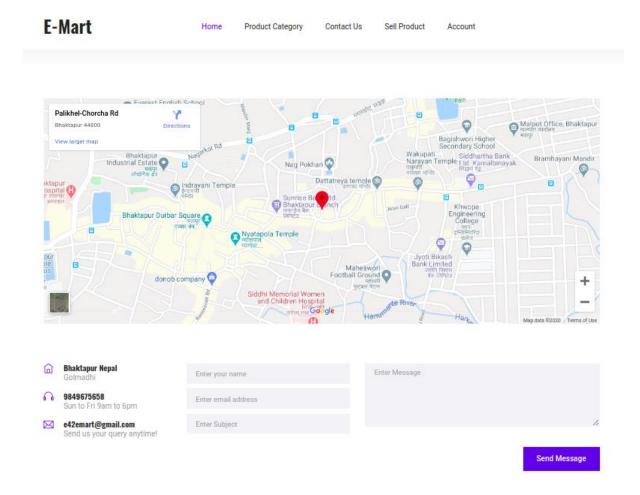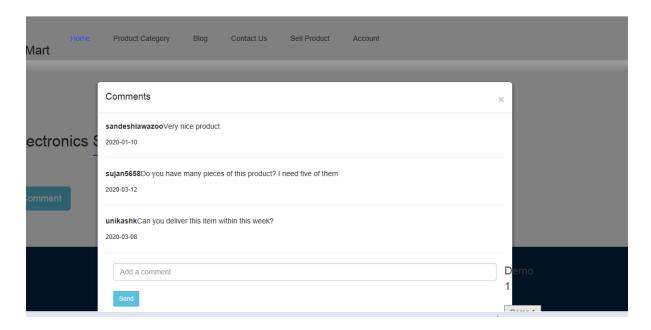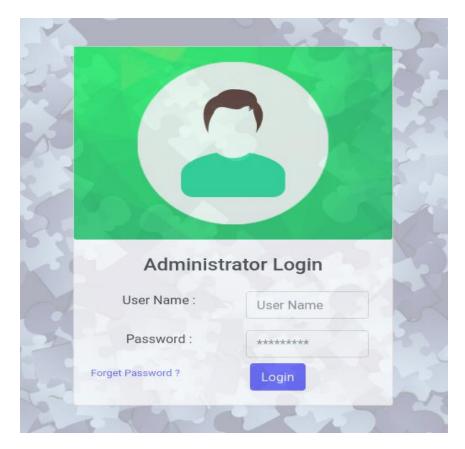Fig d: Single Product Display Page

Fig e: Contact Us Page
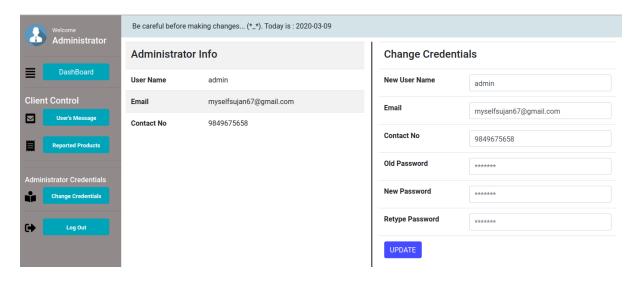

Fig f: Comment Product Page

Fig g: Admin Login Page

Fig h: Admin Home Page