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A Project Proposal

on

"KinMell"

[COMP 206]

(For partial fulfillment of 2nd year 1st Semester in Computer Engineering)

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Abstract

It's not always practical to buy new items or leave purchased items behind as we travel to another location for education or job. This led us to choose to create a mobile application called "KinMell" which is an ecommerce application that facilitates the purchasing and selling of new and used things for this semester's project. Our team "KinMell" is working to find a solution to the issue with conventional methods of purchasing second hand items in Nepal. E-commerce, as the name implies, offers a platform for buyers and sellers to buy and sell goods online. Flutter Frameworks and Dart will be our front-end development languages of choice. Node.js will be used as the backend tool, and MongoDB will be used for data management. Our program offers a login and registration interface where users who have not yet registered can do so. Once registered, users can continue on to the next interface where they can examine the market's listed products and either buy them or list their own on the marketplace.

Keywords: Dart, Flutter, Node.js, MongoDB

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Abbreviation

E-commerce   : Electronic commerce

JS   : Java Script

eBay   : Echo Bay

OLX   : On-Line eXchange

Chapter 1: Introduction

1.1 Background

E-commerce, commonly referred to as electronic commerce or internet commerce, is the term used to describe the exchange of money and data for the purpose of transacting business through the internet. The internet is what drives e-commerce. Customers use their own devices to access an online store to browse the selection and place orders for goods or services. E-commerce has many advantages, including round-the-clock accessibility, quick access, a wide range of products and services, ease of accessibility, and global reach. We are working to develop an application that offers a local market place that is accessible online at any time and from any location, taking into account the significance of E-commerce in the modern era.

KinMell can be considered as a broker application where the sellers can sell their goods and buyers can buy it much more efficiently by the means of the internet.

1.2 Objectives

The objectives of the project work are enlisted below:

- To provide an online platform for trading locally.
- To ease the buying and selling process.
- To promote the practice of use of ecommerce.
- To buy and sell goods at a comparatively cheaper price.

Secondary objectives of the project work is:

- To get us started with mobile app development with flutter.

1.3 Motivation and Significance

Moving to a new place is always stressful. Huge economical investments are required for furniture, aesthetic, flooring and many more. Not only me, we all have faced this same problem down the road when we moved to this place where everything was new. Basically, we spend a month or two buying the minimal things that are in the room. Being victims of the same problem there was always a question in our minds, **"What if there was an application where I could buy everything?"** Not only new students enroll in the university, but a similar number of students graduate every year. Graduates are in search of people to sell their products while freshers are in need of these products. In order to address everyone, we came up with an idea to build such a platform where the sellers could sell their products at a minimal price so that both of the buyers and sellers will get equal benefits.

Some of the importance of our project work are enlisted below

- Rather than going to stores our application helps to buy the products in a much easier and more efficient way.
- Since, one can buy second hand or used products the price of the products is minimal. Proper condition products can be bought in way cheaper prices than at stores.
- Buyers can save a lot of time since they could buy products lying on their bed via online rather than going to the actual store and bargaining which could even take a whole day.
- Our application can be a medium to know new people as both the buyers and sellers are of the same area which helps to increase our connections and will be easier for future transactions.
- This platform is available 24/7 so that buyers can buy goods or look up goods anytime they want to.

1.4 Expected Outcomes

An application which could be a medium to buy and sell goods with the means of the internet. We expect it to be such a platform that could benefit both sides.

Chapter 2: Related works

There are applications that were developed in the past to provide such facilities of trading goods online to the general public on a bigger scale. Some other web or mobile applications that provide such platform are:

2.1 eBay

eBay Inc. is an American multinational e-commerce company based in San Jose, California, that facilitates consumer-to-consumer and business-to-consumer sales through its website. eBay was founded by Pierre Omidyar in 1995. The company manages the eBay website, an online auction and shopping website in which people and businesses buy and sell a wide variety of goods and services worldwide. eBay previously offered online money transfers as part of its services (via PayPal, which was a wholly owned subsidiary of eBay from 2002 to 2015); online classified advertisements (via Kijiji, or eBay Classifieds Group); and online event ticket trading (via StubHub).
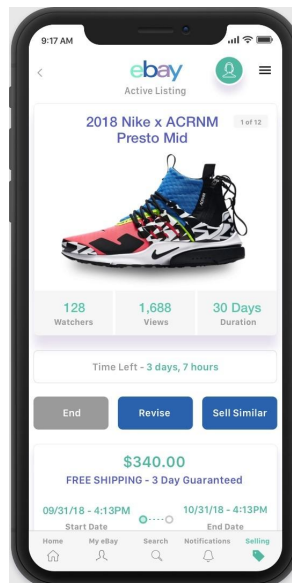

Figure: 2.1.1. eBay mobile application

2.2 OLX

The OLX marketplace is a platform for buying and selling services and goods such as electronics, fashion items, furniture, household goods, cars and bikes. In 2014, the platform reportedly had 11 billion page views, 200 million monthly active users, 25 million listings, and 8.5 million transactions per month.

OLX was founded in 2006. In 2021, the OLX brand was active in Poland, Brazil, India, Indonesia, Portugal, Romania, South Africa, Argentina, Bosnia and Herzegovina, Bulgaria, Colombia, Ecuador, Kazakhstan, Peru, Ukraine, and Uzbekistan.
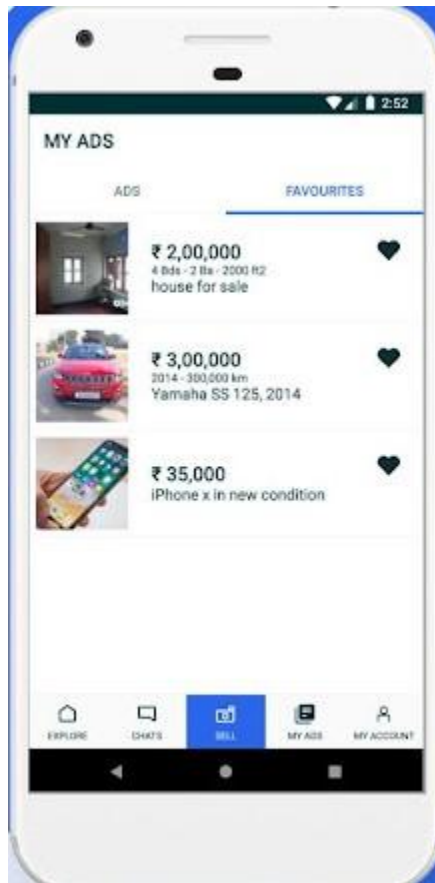

Figure: 2.2.1. OLX mobile application

2.3 Amazon

Amazon.com, Inc. is an American multinational technology company which focuses on e-commerce, cloud computing, digital streaming, and artificial intelligence. Our application is similar to Amazon e-commerce.

Amazon.com's product lines available on its website include several media (books, DVDs, music CDs, videotapes and software), apparel, baby products, consumer electronics, beauty products, gourmet food etc.Amazon has separate retail websites for some countries and also offers international shipping of some of its products to certain other countries. In November 2020, the company started an online delivery service dedicated to prescription drugs as well.
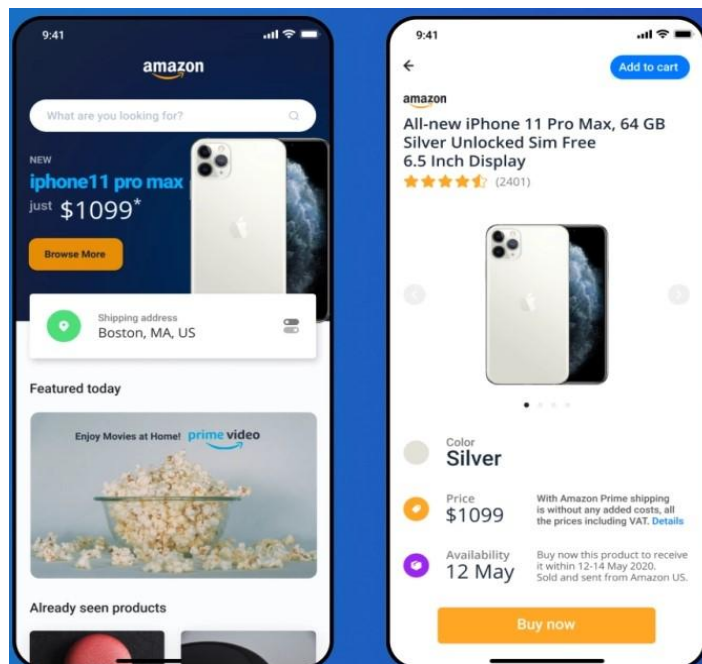

Figure: 2.3.1. Amazon mobile application

Chapter-3: Procedure and methods

Our goal here is to make a mobile application which will help people to seamlessly trade goods and products new and old in the platform that we provide. For this we plan on using Flutter framework and figma for designs of our frontend and Node.js Express.js and MongoDB for backend. We will be using Git as our version control system and Github for collaboration with the team.

We are planning on creating an interactive application where a user has to create an account for using the application. Then they will be able to browse through the listed products by other sellers and also put their own product to sell. The product that they intend to sell will be listed in the marketplace. And trade products directly.The following is a flowchart on how we are planning to build our application.
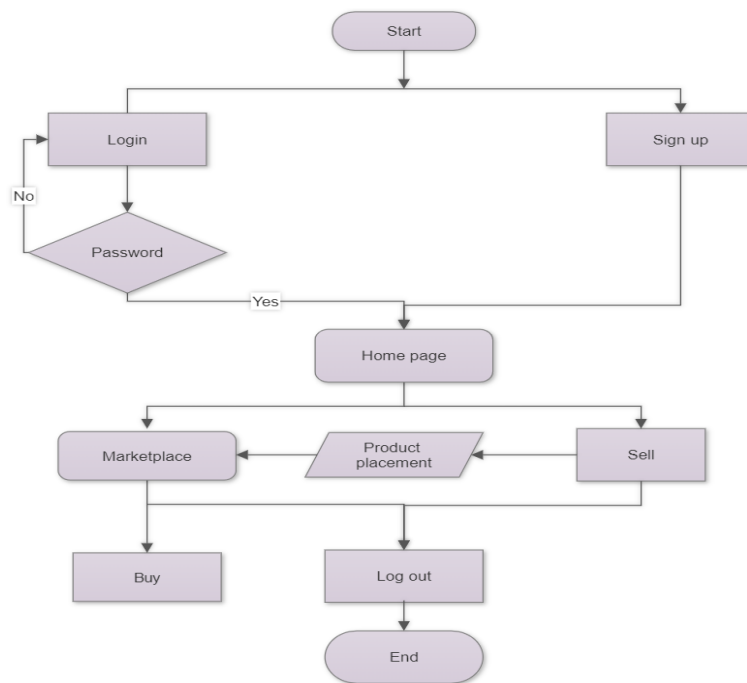

Figure: 3.1. Flowchart

Chapter-4: System Requirement Specifications

4.1   Software Specifications

4.1.1   Front End Tools

- Frontend design: Flutter, Figma
- Code editor: Visual Studio Code, Android Studio
- Operating System: android, ios, windows, macos, and any modern web browser that supports JavaScript

4.1.2 Back End Tools

- APIs: RESTful API
- Backend tool: Node.js, Express.js
- Database: MongoDB

4.1.3   Utility Tools

- Source Control: Git, GitHub
- Project Management: Jira Software, Discord

4.2   Hardware Specifications

Any modern mobile phone either android or iPhone with computing power enough to connect to the Internet and having enough storage capacity.

Chapter 5: Project Planning and Scheduling

A good amount of dedication and sheer hard work is essential for the research and development of the project. So, we have planned to complete the project in 12 weeks and the time frame has been divided as follows:
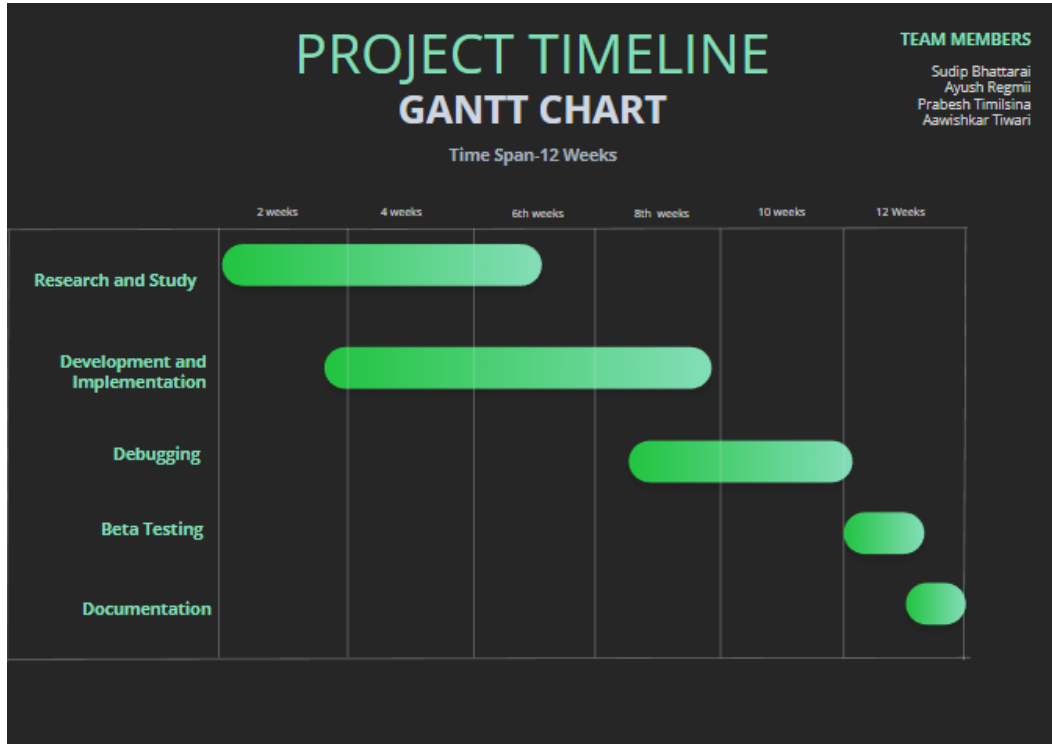

Table: 5.1. Gantt Chart

Tasks:

1. Research and Study
2. Development and Implementation
3. Debugging
4. Beta Testing
5. Documentation

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