



**An Internship Report on**  
**“Hamropasal - An Ecommerce Website”**  
**At**  
**CRUMET TECH. PVT. LTD**

Submitted in Partial Fulfillment of the Requirement for Degree of  
Bachelor of Science in Computer Science and Information Technology  
(B.Sc. CSIT) Awarded by Tribhuvan University

**Submitted by:**  
**Binay Adhikari (21828/075)**

**Supervisor:**  
**Er. Santosh Panth**  
**Assistant Professor**



DEPARTMENT OF COMPUTER SCIENCE AND  
INFORMATION TECHNOLOGY  
**MOUNT ANNAPURNA CAMPUS**  
**Pokhara-5, Parshyang**

**October, 2023**

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**Pokhara-5, Parshyang**

**October, 2023**

## MENTOR RECOMMENDATIONS

This is to certify that Mr. **Binay Adhikari (21828/075)** a student of Mount Annapurna Campus, Parshyang-5, and Pokhara has effectively completed his/her three months internship work at this company. He joined our company from 2023/06/01 to 2023/09/06 as an intern of backend development in python/django. During his/her tenure as interns, we found him/her very honest, hardworking, loyal and punctual in his assigned task and responsibilities. We know nothing against his moral characters.

I hereby recommend the submission of the internship work and accompanying report entitled **Hamropasal** completed under my guidance in the partial fulfillment of the requirements for the degree of the Bachelor of Science in Computer Science and Information Technology awarded by Institute of Science and Technology, Tribhuvan University, to be accepted for further evaluation.

We wish him all the best for his future endeavors

.....

**Mr. Milan Poudel**

Project Lead

Crumet Tech

crumettech@gmail.com

Date: 2023/10/01

## **SUPERVISOR RECOMMENDATIONS**

This is to certify that this internship work and internship report entitled **Hamropasal** submitted by Mr. **Binay Adhikari (21828/075)** in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Information Technology awarded by Institute of Science and Technology, Tribhuvan University, has been prepared and completed under my supervision.

I hereby recommend the same for acceptance by Tribhuvan University.

.....

**Er. Santosh Panth**

**Assistant Professor**

Department of CSIT

Mount Annapurna Campus

Date: 2023/10/01

## ACCEPTANCE LETTER

The undersigned certified that the internship work entitled **Hamropasal** submitted by **Mr. Binay Adhikari (21828/075)** in the partial fulfillment for the degree of Four Years Bachelor Degree of Science in Computer Science and Information Technology has been examined and accepted for the degree awarded Tribhuvan University

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## **ACKNOWLEDGEMENT**

The completion of this internship report would not have been possible without the support and assistance of many individuals and organizations. I feel immensely blessed to have gotten this during the course of my internship program. I would like to take this opportunity to offer my earnest administration to each and every one of them. First and foremost, I am highly indebted to Mr. Binay Adhikari who took confidence in me and provided me with the opportunity to work as an intern at Crumet Tech. I had a wonderful and an unforgettable experience being part of such a lovely and lively team.

My Special thanks to Er. Santosh Panth for his constant guidance towards preparing this report standard as per the norm and values. I am also grateful to Mount Annapurna Campus for making me qualified enough to work in the IT platform. I have learnt a lot in 4 years in this college.

Finally, my thanks and appreciations go to each and every one of my colleagues and the entire Crumet Tech team who irrespective of the situation, always encouraged and supported me to prepare this report

**Binay Adhikari (21828/075)**

## ABSTRACT

Information Technology has made our life so much easier that we use technology to perform our everyday tasks. Nowadays people prefer to buy products online rather than to go to the markets. Taking this concept in mind, we built an e-commerce website targeting the people who want their desired products where they are. During the internship at the Crumet Tech, I was assigned to several tasks by my mentors. I was given simple tasks at first and complexity of tasks increased according to time. I worked under the supervision of Mr. Milan Poudel who was senior Backend Developer of the company. I was given the opportunity to work on an e-commerce website project. There was a team of UX/UI designers, Backend developers, Frontend developers and Project Manager. Tools that were used for the development of this web application project include python django, PostgreSQL, RestAPI, React.js. Our web application was built using these tools. The main objective of the internship was to learn by working in a practical environment and to apply knowledge acquired during the studies in a real world scenario in order to tackle the problems using the knowledge and skill learned during the academic process. The main objective of the internship project was to create a user-friendly e-commerce site which includes departments such as Admin, User, Products, and Payment etc. It is a complete system with authorization, authentication and e-payment features.

**Keywords:** *django, ecommerce, python, Web*

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## LIST OF ABBREVIATIONS

API	Application Programming Interface
B2B	Business to Business
B2C	Business to Consumer
DOM	Document Object Model
EFT	Electronic fund transfer
EDI	Electronic data interchange
Ecommerce	Electronic Commerce
IS	Information System
ICT	Information and communication technology
MVT	Model-view-Template
ORM	Object Relational Mapping
QA	Quality Assurance
WTO	World Trade Organization

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Introduction to Internship**

An internship is a structured work experience related to a student's major and/or career goal. It is an experience that should enhance a student's academic, career, and personal development. It is an involvement, closely aligned with the student's major and arranged with an employer who believes it is desirable to aid in the training and education of the student. It is of a short duration, typically three to four months, through direct personal contact hours or through a training program, and to aid the intern in developing a summary report of his/her experience.

Internship provides real world experience to those looking to explore or gain the relevant knowledge and skills required to enter into a particular career field. Internships relevant knowledge and skills required to enter into a particular career field. Internships are relatively short term in nature with the primary focus on getting some on the job training and taking what's learned in the classroom and applying it to the real world.

During the internship at CrumetTech, I was assigned to several tasks by my supervisor. I worked as a backend developer during my internship period. As we were working on an ecommerce app called Hamropasal, I was asked to create backend functionalities and API's for different routes. API calls were performed by frontend developers and data is shown on the frontend. The project required high communication with fronted developers, UI/UX designers and testers. The project was all about teamwork.

Via this internship program, I gained several really valuable talents, like communication, interpersonal, technical, collaboration, management, and problem solving abilities. These abilities will undoubtedly assist me in furthering my development and becoming a professional.

### **1.2 Introduction to Project Work**

Project work is an activity which aims to give students learning experience with the chance to Synthesize their knowledge from different areas of learning, which is critically and creatively applied to current life situations. Project work is the collection of knowledge about the particular subject. Project work has helped me to communicate effectively and to present ideas clearly and logically to specific audiences in both the written and oral forms. E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These

business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business.

### 1.3 Problem Statement

As there are advantages and disadvantages of everything. Despite the fact that the internship was profitable, I believe there are a few things that make the internship time more effective and beneficial:

- **Mismatched Expectations and Realities:** Many interns enter their roles with high expectations of gaining valuable, hands-on experience, but often find themselves performing routine or menial tasks that don't align with their career goals. This disconnect between expectations and reality can lead to dissatisfaction among interns and undermine the overall effectiveness of internship programs.
- **Digital Disparity in Remote Internships:** The increasing prevalence of remote internships has highlighted a digital divide, where not everyone has equitable access to the necessary technology and resources. This divide can hinder certain individuals, particularly those without reliable internet access or suitable remote work setups, from participating in remote internship opportunities, exacerbating disparities in career development.

### 1.4 Objective

#### 1.4.1 Objectives of Internship

The main goals of the internship are to put what you've learned in class into practice in a real-world setting.

- To gain job experience in a variety of settings.
- To learn work ethics as well as to build self-awareness, self-discipline, and confidence.
- To improve communication, time management and professional abilities for self-development.

#### 1.4.2 Objectives of Project

The main objective of the project is to build a system to reduce the manual work for managing the daily activities. The project is totally built at the administrative end and thus only the administrative is guaranteed access. Some other objectives are:

- To develop a user-friendly web-based e-commerce application for tailored shopping experience.

- To manage all the departments such as Admin, User, Products, and Delivery through a single integrated system.

## 1.5 Scope and limitation

### Scope

- **Increases productivity:** "Hamropasal," the e-commerce site, had the potential to increase productivity for both its customers and the business. Customers could quickly browse and purchase products online, saving them time compared to traditional shopping methods. For the business, e-commerce had streamlined operations, automated processes, and reached a wider customer base.
- **Provides motivation:** By offering an engaging and user-friendly shopping experience, "Hamropasal" will motivate customers to explore and make purchases. Features like product recommendations, discounts, and personalized content had encouraged repeat visits and conversions.
- **Improves memory:** E-commerce sites often provided tools for customers to create accounts, save their preferences, and keep track of their purchase history. This had improved memory for customers by allowing them to easily recall past orders and preferences, making the shopping experience more convenient and personalized.
- **Reduce stress:** "Hamropasal" will reduce the stress associated with traditional shopping, such as dealing with crowded stores, long queues, and parking hassles. Online shopping had allowed customers to browse and buy from the comfort of their homes, which had led to a more relaxed and stress-free shopping experience.
- **Provides the sense of accomplishment:** Completing a successful online purchase had given customers a sense of accomplishment. Features like order confirmation emails and order tracking had enhanced this feeling, making customers more satisfied with their shopping experience on your site.

### Limitations

- **System cannot be accessed offline:** The primary limitation of "Hamropasal" was that it could not be accessed offline. Customers needed an internet connection to browse products, place orders, and access account-related features. This limitation may have inconvenienced potential customers who had limited or no internet access.

## **1.6 Report Organization**

**Chapter 1:** Introduction of the project, Introduction of the internship, Problem Statement, Objectives, Scope and limitations.

**Chapter 2:** Introduction to organizations, Organizational hierarchy, working domain of organizations, Tech Stack used and projects accomplished in organization, Description of the Intern Department, internship duration.

**Chapter 3:** Literature review, Background and related information about project.

**Chapter 4:** Internship activities, Roles and Responsibilities, Weekly log, Description of the project Involved during internship, Task/Activities Performed.

**Chapter 5:** Conclusion marks an end to the document by summing up the entire project and also opening the door further for research in improving the developed system. The lesson learnt is also included in this chapter.



## **CHAPTER 2**

### **ORGANIZATION DETAILS**

#### **2.1 Introduction of Organization**

Crumet Tech Pvt. Ltd. is a private limited business that was established in 2021 AD and registered with the Ministry of Industry, Commerce, and Supplies office of company registration. Its main goal is to provide consulting services in the field of Software development, Block chain and web 3.0, computer and software engineering.

Crumet Tech's Organizational structure has been kept flexible in order to respond positively to the expanding needs of governmental agencies. This company is backed up by the skilled and devoted resource employees to maintain the quality level (Crumet Tech, 2021).



**Figure 1: Logo of Crumet Tech Pvt. Ltd. (Crumet Tech, 2021)**

#### **Details:**

Name of Organization: Crumet Tech Pvt.Ltd.

Type of Organization: Private Limited Company

Contact Details: Malepatan, Pokhara, Nepal

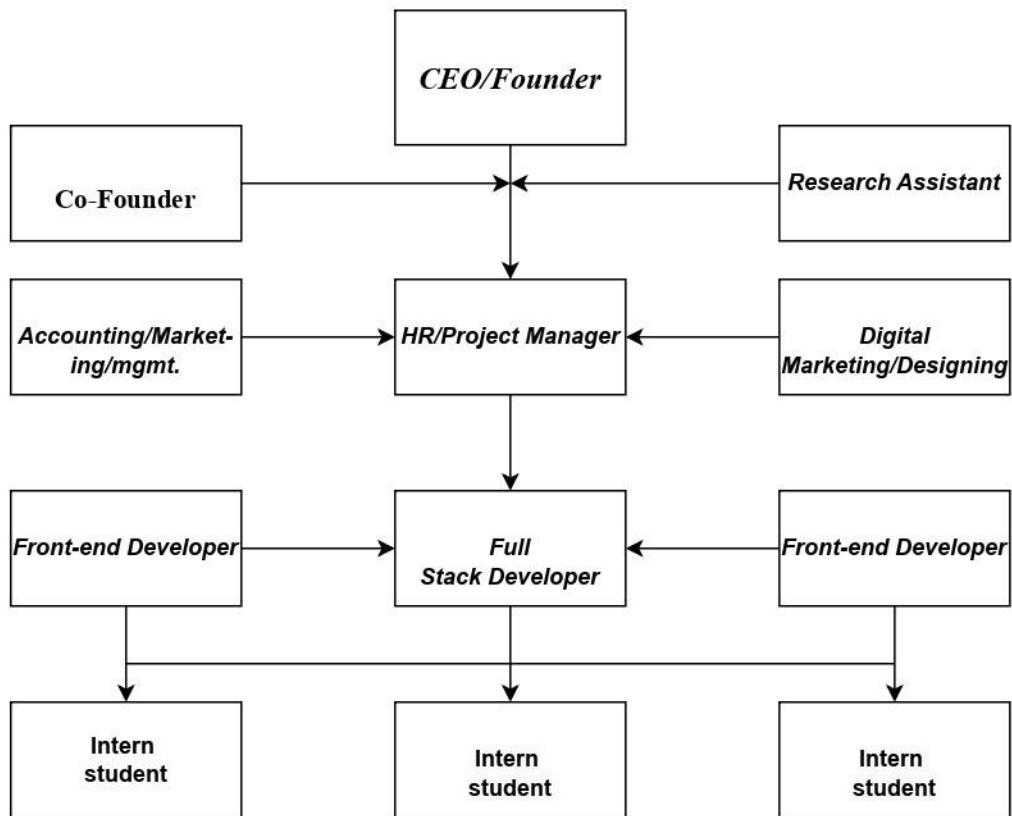
Contact Number: +977-9869141173

Email Address: [crumettech@gmail.com](mailto:crumettech@gmail.com)

Website: [crumet.com](http://crumet.com)

#### **2.2 Organization Hierarchy**

The following diagram depicts the organizational structure of Crumet Tech Pvt. Ltd:



**Figure 2 : Organization Hierarchy of Crumet Tech Pvt.Ltd (Crumet Tech, 2021)**

### 2.2.1 Products and Services Provided

- Netvrk.co
- Icilome.com
- IAAS World
- Batas Agro
- DV Excellus
- Trainings and workshops on Web and Application Development Courses

### 2.2.2 Web Development

A remarkable study shows that 7 out of 10 businesses have embraced the potential of websites to interact with their target markets. In this situation, Crumet stands out as a flexible solution provider, providing both static and dynamic websites that are specifically built to match the needs of clients' enterprises. A trustworthy partner in the field of website creation, Crumet stands out in a time when online presence and interaction are crucial. With a portfolio

that includes both static and dynamic websites, Crumet has the knowledge to support businesses and help them succeed online.

### **2.2.3 Mobile Application Development**

Mobile applications have become essential tools for organizations to communicate with their audiences in the quickly changing digital ecosystem. Crumet offers client to build high-end mobile applications for both Android and iOS devices. Due to the widespread use of smart phones, creating mobile applications for both the Android and iOS platforms is now essential for remaining relevant and successfully interacting with clients.

### **2.2.4 Architect software system**

Designing a software system in Crumet involves a strategic approach tailored to the company's unique objectives, resources, and operational landscape. It begins with a thorough comprehension of the company's mission and goals, followed by close collaboration with stakeholders across various departments. Throughout development, emphasis is placed on data management, user experience, and comprehensive testing to deliver a high-quality system.

## **2.3 Working Domains**

The organizations choose the field of action, the part of the environment which they choose to be vital to their company, so if that part changes, they must react. It is the area where the organization will sell its products and services.

There are different sectors which make up the environment for an organization, each of which affects different organizations in different ways. These are shown below:

### **Task Environments**

These are the sectors which an organization will interact with directly and therefore have a direct impact on the company itself. This includes the sectors:

- Industry
- Raw Materials
- Human Resources
- International Sectors

### **General Environments**

These are sectors which an organization will interact with indirectly, not directly every day, but it will indirectly influence the firm. The sectors which are included are the following:

- Government
- Sociocultural
- Economic Conditions
- Technology
- Financial Resource Sector

## **2.4 Description of the Intern Department**

Crumet tech Pvt. Ltd is one of the best companies in Pokhara to provide internship in .It offer backend developers, frontend developers, UI/UX developers, and QA chances internships. All of the interns at this location have access to a suitable workspace and internet resources. Interns are also given a mentor who will provide assistance to them. All interns receive a work-friendly environment.

### **Financial department**

The Financial Department in an IT company is responsible for overseeing all financial aspects of the organization's operations within the technology sector. This includes managing budgets, financial planning, expense tracking, and financial reporting. The department collaborates with various teams to allocate funds for IT projects, ensuring efficient resource utilization and alignment with strategic goals. They conduct analyses to assess the financial viability of technology investments, contribute to cost optimization, and ensure compliance with financial regulations. In short, the Financial Department is essential for preserving the IT Company's cash flow and supporting its growth and development.

### **Human Resource department**

An organization's human resources (HR) department manages and promotes its most precious asset its employees serving as the foundation for organizational success. Staffing, hiring, initiation, and employee development are just a few of the many responsibilities that fall within the scope of the department. HR makes ensuring that the business attracts and keeps talented IT specialists, establishing a lively and inclusive work environment. They manage staff growth and skill development through performance reviews, training initiatives, and career advancement opportunities. HR additionally manages employee interactions, dispute resolution, and labor law regulation, creating a positive workplace culture. In summary, the HR Department plays an important role in developing a solid, determined, and high-performing IT personnel, which affects the overall success of the business.

### **Project Department**

The project department in an IT company is responsible for organizing, carrying out, and concluding numerous technological projects. This team manages projects throughout their entire lifecycle, from beginning to delivery, making sure they are finished on schedule, under budget, and in accordance with quality standards. In order to set project objectives, distribute resources, and control schedules, the department works closely with clients, stakeholders, and teams from different departments. To meet project goals, they keep an eye on the status, minimize risks, and adjust strategies as necessary. The department's project managers are skilled at organizing projects, controlling spending, and encouraging productive teamwork. In the end, the Project Department is responsible for the smooth deployment of IT solutions, providing the business and its clients with value and innovation.

### **Quality Accuracy Department**

The Testing and Quality Assurance (QA) Department in an IT company is responsible for ensuring software quality. They create testing strategies, conduct various tests, and collaborate with developers to fix issues. Their goal is to guarantee that software meets high standards, functions well, and is secure. They also maintain testing environments and continuously improve testing processes. This department plays a crucial role in delivering reliable and user-friendly software products.

## **2.5 Internship Duration**

The minimum required internship period is 10 weeks/180 hours, as per the requirements of the BSc. CSIT 8th Semester program. It consists of various training phases or assignments that are carried out with a particular purpose for each phase. Each stage displays the intern's progress throughout the program. It also includes details on how and when interns will complete each task's objectives.

**Table 1: Duration of Internship**

Office Hours	12:00 AM - 6:00 PM
Working Hours	6 Hours

Working Days	5 Days a Week
Position	Intern
Internship Duration	3 Months
Mentor	Milan Poudel

## 2.6 Motivation

With the goal of developing innovative technologies in the field of web and software development, Crumet tech represents a vibrant group of young, talented, and motivated people. With a strong emphasis on various projects like mobile applications, web application, and responsive websites with tons of content, Crumet tech' works are carefully constructed for performance, scalability, and long-lasting impact. As part of their academic journey, B.Sc. CSIT final-year students complete a six-credit internship that lasts at least 180 hours in accordance with the Tribhuvan University (TU) curriculum. The academic and professional worlds are connected by means of this internship. While meeting TU requirements is the primary driving force behind selecting Crumet, the internship has many implications. It opens up a world of practical experience and gives students the chance to get involved in concrete, real-world initiatives. This exposure not only meets academic requirements but also piques their interest in their topic of study even more. Along with fulfilling academic requirements, I discovered as I started this journey with Crumet that I had a strong desire to make a significant contribution to the field of online and software development.

## **CHAPTER 3**

### **LITERATURE REVIEW**

#### **3.1 Background**

E-Commerce stands for electronic commerce and caters to trading in goods and services through the electronic medium such as internet, mobile or any other computer network. It involves the use of Information and Communication (ICT) and Electronic Fund Transfer (EFT) in making commerce between consumer and organizations, organization and organization or consumer and consumer. With the growing use of the internet worldwide, Electronic Data Interchange (EDI) has also increased in humongous amounts and so has flourished e-commerce with the prolific virtual internet market inside the digital world which is rightly termed as e-malls (investopedia, 2015) .

Electronic commerce (E-commerce) has been a popular topic in literature since the Internet began to be commonly used for commercial purposes in the 1990s. It could be regarded as the key achievement of applying information communication technology (ICT) in the economy (internet public library, 1995). In 1998, the Committee on Trade and Development of the World Trade Organization (WTO) defined E-commerce as “the production, distribution, marketing and sale or delivery of goods and services by electronic means”. Similarly, in the survey conducted by Organization for Economic Cooperation and Development (OECD, 1999) on 200 companies of different sizes, most companies agreed that E-commerce is about business activities, both communications and transactions, conducted electronically that include not only ordering, invoicing and payment but also marketing, advertising and communications. Therefore, the understanding of ecommerce is quite dynamic and manifold. It can be various due to different context and research aims (Grandson and pearson, 1999). Though there is no consensus for the definition of E-commerce, the measuring elements can be summarized into business activities that occur by electronic means and technological means that enable these activities (Springer, 1999). Some research defines E-commerce broadly by including all business activities done by any electronic means while others define narrowly by centering on certain parts.

##### **3.1.1 Amazon**

Amazon, founded in 1994 as an online bookstore by Jeff Bozos, has undergone a remarkable evolution in its online shopping platform. From its humble beginnings, it has transformed into

a global e-commerce giant, with milestones such as the introduction of Amazon Prime in 2005 and the development of the Alexa ecosystem for voice-activated shopping. A key factor behind Amazon's success has been its relentless focus on enhancing the user experience through personalized recommendations and seamless shopping. Additionally, the Marketplace platform, introduced in 2000, opened the doors for third-party sellers, expanding product offerings while raising concerns about product quality. Amazon's impact on the e-commerce landscape and broader economy is undeniable, leading to the decline of traditional brick-and-mortar retailers, setting new standards in supply chain efficiency, and becoming a major player in digital advertising. Looking ahead, Amazon's future in online shopping is marked by trends like increased reliance on artificial intelligence, sustainability initiatives, and expansion into emerging markets, offering both opportunities and challenges in an ever-changing e-commerce landscape. Monitoring Amazon's developments and adapting to its influence will remain crucial for businesses and consumers alike. Since its inception in 1994 as an online bookstore, Amazon has undergone a remarkable evolution in its online shopping platform, ultimately becoming a global e-commerce juggernaut. Over the years, it has achieved significant milestones such as the introduction of Amazon Prime in 2005, revolutionizing the e-commerce landscape with free two-day shipping and further expanding into a suite of entertainment and retail-related services. Moreover, the development of the Alexa ecosystem, including devices like the Amazon Echo, has pushed the boundaries of convenience, enabling voice-activated shopping and smart home integration.

A core driver of Amazon's success lies in its unwavering commitment to enhancing the user experience. Amazon leverages advanced algorithms and data analytics to provide highly personalized product recommendations, creating a seamless and engaging shopping journey for its customers. This personalized touch has contributed significantly to customer retention and satisfaction, setting a benchmark for the industry.

Another pivotal moment in Amazon's journey was the introduction of the Marketplace platform in 2000, allowing third-party sellers to list their products on the site. However, it also brought to the forefront concerns related to counterfeit and low-quality goods, prompting Amazon to focus on improving its seller verification and product quality control processes.

The impact of Amazon's online shopping platform extends far beyond its virtual aisles. It has disrupted traditional brick-and-mortar retail, causing the decline of numerous legacy retailers. Its sheer market share and aggressive pricing strategies have compelled competitors to rethink their business models, innovate, and adopt robust online strategies to stay competitive in the digital age (Amazon, 1995).



### **3.1.2 Daraz**

Daraz, originating in Pakistan in 2012 and subsequently becoming part of the Alibaba Group, represents a compelling and multifaceted force within the dynamic e-commerce landscape of South Asia. Its establishment marked a transformative moment in the region, as Daraz embarked on the mission of introducing and catalyzing the rapid adoption of e-commerce. Initially, Daraz focused on providing a diverse array of products, but over the years, it has strategically expanded its services to encompass critical components of the e-commerce ecosystem. This includes pioneering digital payment solutions, building robust logistics networks, and nurturing an ecosystem of sellers, both large and small. Daraz's impact transcends mere retail; it has been a key catalyst in driving greater digitalization, stimulating economic growth, and fostering the development of a vibrant digital ecosystem across South Asia.

One of Daraz's most notable contributions lies in the platform it provides to local businesses, enabling them to reach a much broader and diverse audience than traditional brick-and-mortar establishments. By democratizing access to e-commerce, Daraz has empowered countless entrepreneurs and enterprises, offering them the opportunity to thrive in a digital age. Additionally, Daraz has facilitated enhanced convenience and choice for consumers, granting them access to an extensive and diversified product catalog, ranging from everyday essentials to specialized and niche items.

Furthermore, Daraz's emphasis on localized adaptation has been pivotal to its success. It recognizes and responds to the unique dynamics and challenges presented by emerging markets, ensuring that its platform and services are attuned to the specific needs and preferences of South Asian consumers. This includes accommodating the prevalence of mobile commerce, where mobile devices are often the primary means of online interaction. Daraz has adeptly leveraged this trend by offering user-friendly mobile apps and optimizing its platform for mobile access, contributing to the proliferation of online shopping through handheld devices.

As Daraz continues to innovate and evolve, its role in South Asia's e-commerce growth is likely to remain instrumental. The platform's dedication to leveraging data analytics, expanding its digital payment solutions, and refining its services to align with the ever-evolving preferences of South Asian consumers positions it uniquely in shaping the region's digital future. In a world increasingly reliant on digital commerce, Daraz's journey is not just a success story; it's a testament to the transformative power of e-commerce in emerging

markets, offering boundless opportunities for both businesses and consumers in South Asia and beyond (Daraz , 2015).

### **3.1.3 Flipkart**

Flipkart, founded in 2007 by Sachin Bansal and Binny Bansal, has emerged as a pioneering force in India's e-commerce landscape, shaping the way millions of Indians shop online. Over the years, it has evolved from an online bookstore to a comprehensive e-commerce platform, offering an extensive range of products, including electronics, fashion, and groceries. Flipkart's impact goes beyond retail, playing a pivotal role in the digital transformation of India. It facilitated the surge in e-commerce adoption, introducing millions of Indian consumers to the convenience and variety of online shopping. The company has been instrumental in creating jobs, driving economic growth, and nurturing an ecosystem of sellers, making it a crucial player in India's digital economy.

One of Flipkart's distinctive features has been its commitment to understanding and addressing the unique challenges of the Indian market. This has translated into innovative solutions, such as cash-on-delivery payments to accommodate the preference for cash transactions and extensive last-mile delivery networks to reach even remote areas. Flipkart's user-friendly interface and mobile app have further empowered consumers, especially those accessing the internet via Smartphone's.

In 2018, Flipkart made global headlines when it was acquired by Walmart, marking one of the largest e-commerce deals in history. This acquisition has enabled Flipkart to leverage Walmart's resources, supply chain expertise, and international presence, positioning it for further growth and competition in India's dynamic e-commerce landscape.

Looking ahead, Flipkart continues to invest in technology, logistics, and customer-centric initiatives to enhance user experience and expand its product offerings. As e-commerce in India continues to evolve and thrive, Flipkart's role as a key player remains pivotal, offering boundless possibilities for both consumers and businesses in the rapidly evolving digital landscape of India (Flipkart, 2007).

## **3.2 Related Work**

In the fast-paced world of digital commerce, Hamropasal has emerged as a dynamic and innovative player. E-commerce has become a fundamental component of the global economy, offering unparalleled convenience to consumers and boundless opportunities to businesses. With the rapid expansion of internet access, mobile devices, and evolving consumer

preferences, the e-commerce sector is experiencing unprecedented growth. Recent statistics indicate that global e-commerce sales are projected to soar, emphasizing the sector's significance. Hamropasal's mission is to harness this growth and deliver a seamless and personalized shopping experience.

Hamropasal operates in a competitive landscape alongside established e-commerce giants like Amazon, versatile platforms like Shopify, and Word Press-based solutions like Woo Commerce. These platforms have set benchmarks in user experience, scalability, and security. Additionally, the e-commerce industry has witnessed significant advancements in areas such as payment security, supply chain optimization, and user experience design through ongoing research and innovation. Hamropasal aims to draw inspiration from these industry leaders and incorporate the latest research and innovations to create a distinctive and competitive e-commerce platform. This documentation provides an insight into Hamropasal's architecture, features, and functionality as it strives to redefine the e-commerce landscape.

## CHAPTER 4

### INTERNSHIP ACTIVITIES

#### 4.1 Roles and Responsibilities

As an intern in “Crumet Tech”. I was given certain responsibilities to carry out during my internship period. The responsibilities involved various tasks that were assigned by my mentor Mr. Milan Poudel. The main responsibilities that i carried out during my internship period in Crumet Tech involves following tasks:

- Study and analysis of existing systems.
- Implementing various elements of a client’s website/web application.
- Development needs and developing required systems.
- Working in the research development and innovation department.
- Technologies for research and development projects.
- Participation in client calls/meetings during internship.
- Working on System Maintenance, Support and Testing.
- Testing the website developed.

#### 4.2 Weekly Log

**Table 2: Weekly Log**

Week	Department	Activities
Week 1	Learning	Completed Udemey Course on python and Django
Week 2	Familiarization	Learnt to use Libraries, Github and made small API for library app
Week 3	System Coding	Worked on refining API for library app and learning validations
Week 4	Familiarization	Studied the ongoing project Hamropasal and became familiar with it
Week 5	System Coding	Worked on API for various CRUD Operations
Week 6	System Coding	Worked on API for various CRUD Operations for file uploads and

		backend development
Week 7	Setting up DB and schemas	Defining database architecture for project
Week 8	System Coding	Worked on API for various CRUD Operations for file upload, delete
Week 9	System Coding/Testing	Tested the API using Postman, learned about PayPal sandbox
Week 10	System Testing/Documentation	System Testing in collaboration with frontend and Documentation of the project

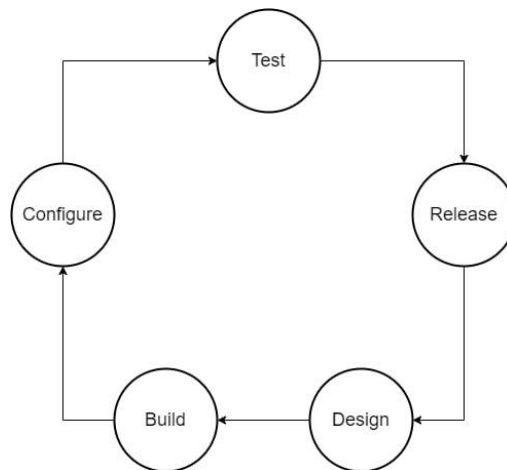
### 4.3 Description of the Project

Hamropasal is a cutting-edge e-commerce platform committed to delivering an unparalleled online shopping experience. This ambitious project, spanning multiple weeks of development, aims to revolutionize digital commerce by offering a vast product catalog, user-friendly features, and robust security measures. With a comprehensive product catalog encompassing diverse categories, customers are empowered to explore a wide range of offerings. The platform ensures secure user authentication, enabling customers to create accounts, manage profiles, and easily track their order history. A seamless shopping cart system accommodates both registered and guest users, enhancing convenience and flexibility. The checkout process is streamlined, guiding customers through payment, shipping, and billing with multiple integrated payment options. Business owners benefit from efficient order management tools, real-time order status updates, and the ability to process payments seamlessly. Customers can contribute to transparency and trust by leaving product reviews and ratings. The site's search functionality is robust, assisting users in quickly finding products through various filters and keywords. Security is paramount, with regular audits, error tracking, and encryption in place to safeguard user data. Performance optimization techniques, including caching and database query enhancements ensure high-speed and responsive performance. SEO best practices enhance the site's visibility on search engines. With a responsive design, the platform adapts seamlessly to various devices and screen sizes, providing a consistent and engaging user experience. Through meticulous development phases, pre-launch preparations, and post-launch monitoring, Hamropasal aims to set new standards in e-commerce, offering an exceptional environment for both customers and businesses in the digital marketplace.

### 4.3.1 System Development Methodology

For any project to be completed, it has to go through stages called Development Life Cycles. System Development Life Cycle (SDLC) is the process of understanding how an Information System (IS) can support business needs, designing the system, building it and delivering it to users. The SDLC comprises four phases: Planning, Analysis, Design and Implementation. In order for this project to be developed, the methodology that will be used is the System Structured Analysis and Design Methodology (SDLCpartners, 2000). Agile has gained a great deal of popularity. The model breaks down big projects into smaller, more manageable chunks, which can lead to a software product that represents a culmination of multiple, smaller projects. The model produces ongoing releases where each iteration includes small, incremental changes and improvements from the previous release.

**Uses:** Agile is particularly well-suited for large and complex projects; those that can be easily divided into smaller parts. It's also useful for mid-size custom software development projects where business requirements cannot be easily translated into detailed requirements.



**Figure 3: Agile Development Method**

- **Plan:** In this phase of software development, the system related information is gathered. The collected requirements are then planned accordingly for developing the system. The features required for the food ordering system were planned in this phase. Many feasibility studies were conducted and data were collected through sampling by visiting several restaurants and cafes. Several functional requirements were finalized in this phase. Planning and Requirements were finalized with respect to opinions of both restaurants and the customers. **Software Design:** The team then discussed how to tackle these requirements, and proposed the tools needed to achieve the best result. For example, Time requirement, cost analysis, programming language, frameworks, database, and libraries

that the project is going to be used, and what type of UI is best for the system. Considering the schedule, time and task are assigned; deadlines are allocated and need to be completed within it.

- **Development and Coding:** After agreeing on the plan and system design with the customer, the team develops the product itself. The product is delivered in stages, in separate sprints, each designed to improve the current version of the product. The initial release is likely to undergo many changes to provide improved functionality and new features. Each cycle includes testing, and the final product must also undergo final testing. For this phase the development process is based on individual tasks.
- **Integration and Testing:** At this point, the product becomes available to consumers, so the team must conduct a series of tests to ensure that the software is fully functional. If potential bugs or flaws are found, the developers will fix them immediately. At this stage, they also collected consumer feedback.
- **Implementation and Deployment:** This is the most important phase of the iterative model. Here, the actual implementation and coding process is executed. All planning, specification, and design documents up to this point are coded and implemented into this initial iteration of the project. In the implementation phase each member of the team was assigned with different tasks with deadlines. Frontend developers started working on designs created by UI/UX designers whereas Backend developers started working on creating controllers and models. As I was working as a Full Stack developer, I was assigned with full tasks. As I got familiar with the project the complexity of the task kept increasing. When I joined the company, the project was already in progress, Therefore I was asked to have a deep understanding of the code, designs and objectives of the project. Later I was assigned with certain tasks.
- **Review:** Once all previous development phases are completed, team members review progress made towards completing the requirements. The team introduces their ideas toward resolving the problems that arose during the previous phases. Afterwards, the agile software development lifecycle phases start either with a new iteration or by moving toward the next stage.

#### 4.3.2 Tools and Software Used

The tools and software used during my internship are:

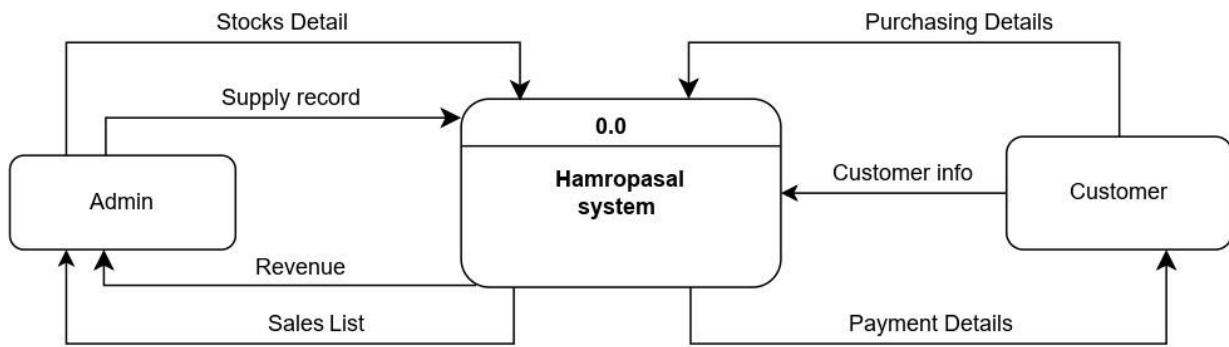
- **Visual Studio (VS) code:** Visual Studio Code (VS Code) is a free, open-source code editor developed by Microsoft. It's renowned for its versatility and extensive extensions ecosystem, making it a popular choice among developers for various programming languages and development purposes. VS Code offers features like IntelliSense for code completion, a powerful debugging environment, version control integration, and a customizable interface with themes and extensions that can tailor the editor to individual workflow needs. Its lightweight nature and cross-platform compatibility make it a preferred choice for coding tasks ranging from web development to data science, and it's widely embraced for its efficiency and user-friendly interface by developers across the globe.
- **SQLite Db:** Django defaults to using SQLite as the default database backend when you create a new project, as specified in the project's settings. The 'DATABASES' setting in the 'settings.py' file typically points to SQLite, with its engine set to 'django.db.backends.sqlite3'. You can create the SQLite database by running 'python manage.py migrate', and it's suitable for development and small to medium-sized projects. However, for larger projects or those with higher concurrency needs, you may consider switching to a more robust database system like PostgreSQL or MySQL, requiring an update to the 'DATABASES' setting in 'settings.py'.
- **Designing Tools:** Graphics designing tools such as Canva, Figma etc were used by graphics designers 18 to create design/prototype for the application.
- **Django:** Django is a high-level Python web framework known for its rapid development capabilities and robust feature set. It follows the Model-View-Template (MVT) architecture, offering an Object-Relational Mapping (ORM) layer for database interactions, a built-in admin interface for easy data management, and powerful tools for URL routing, template rendering, authentication, and security. Django encourages best practices, promotes code reusability through reusable apps, and is widely used across the web development spectrum, from small projects to large-scale enterprise applications, making it a top choice for Python-based web development.
- **Thunder client:** Thunder client is software or a tool that is used to test APIs by sending requests and receiving responses. We can send POST, PUT, GET, PATCH and DELETE requests along with body and header. All the API's were tested using postman to see the response of the request sent. We also checked the validation for the API's using Thunder client. Bearer tokens are sent along with the request to check if authorization works on the



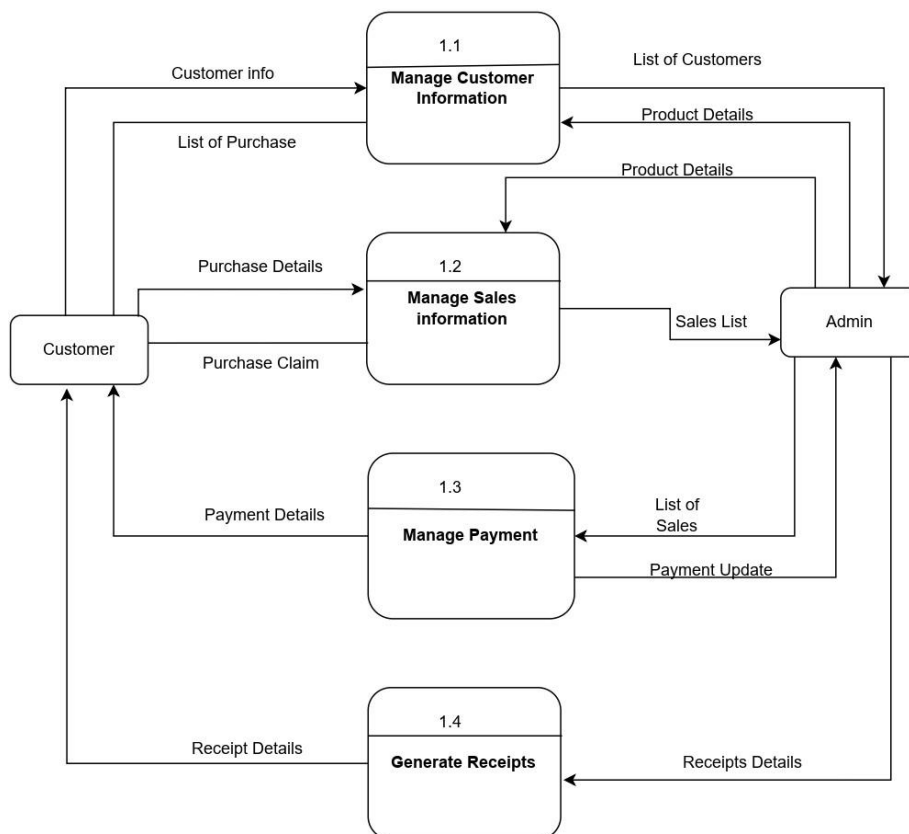
routes. If the API's passed a certain test they were sent for documentation. If they failed the test they were debugged (Thunderclient, 2021).

- **GIT/GITHUB:** As we had a number of developers working on this project, collaboration was required. Hence, we used git and github and started working on different branches. After some days of learning technologies used in this project we collaborated with the company's main project on Github. We were assigned different tasks by the company. After finishing the task we were asked to push the code to a certain branch. Then the senior developer would test our code and he would only push the code to the master branch if it was good from his perspective.
- **React.js:** React.js, often referred to as React, is an open-source JavaScript library for building user interfaces (UIs) and user interfaces for web and mobile applications. Developed and maintained by Facebook (now Meta) and a community of individual developers and companies, React has gained widespread popularity for its efficiency and flexibility in creating interactive and dynamic UIs. React uses a component-based architecture, where UIs are broken down into reusable and self-contained components, making it easier to manage and maintain complex applications. React also employs a virtual DOM (Document Object Model) that efficiently updates only the parts of the actual DOM that have changed, reducing the need for full-page reloads and enhancing performance. React can be used in conjunction with other libraries and frameworks, and it is commonly paired with tools like React Router for routing and Redux for state management. Overall, React is a powerful tool for building modern, responsive, and highly interactive web and mobile applications.
- **Documentation Tools:** Google Docs is the cornerstone of our project's documentation, enabling real-time collaboration, version tracking, and accessibility from anywhere, ensuring efficient project management. Google Docs and Microsoft Word are powerful documentation tools widely used for creating and editing documents. Google Docs offers collaborative features that allow multiple users to work on a document simultaneously, making it ideal for teamwork and real-time collaboration. On the other hand, MS Word offers a robust set of formatting and styling options, making it a go-to choice for creating polished and professional documents. Both tools provide cloud storage, ensuring accessibility from anywhere with an internet connection. The choice between them often depends on specific needs, preferences, and the extent of collaboration required.

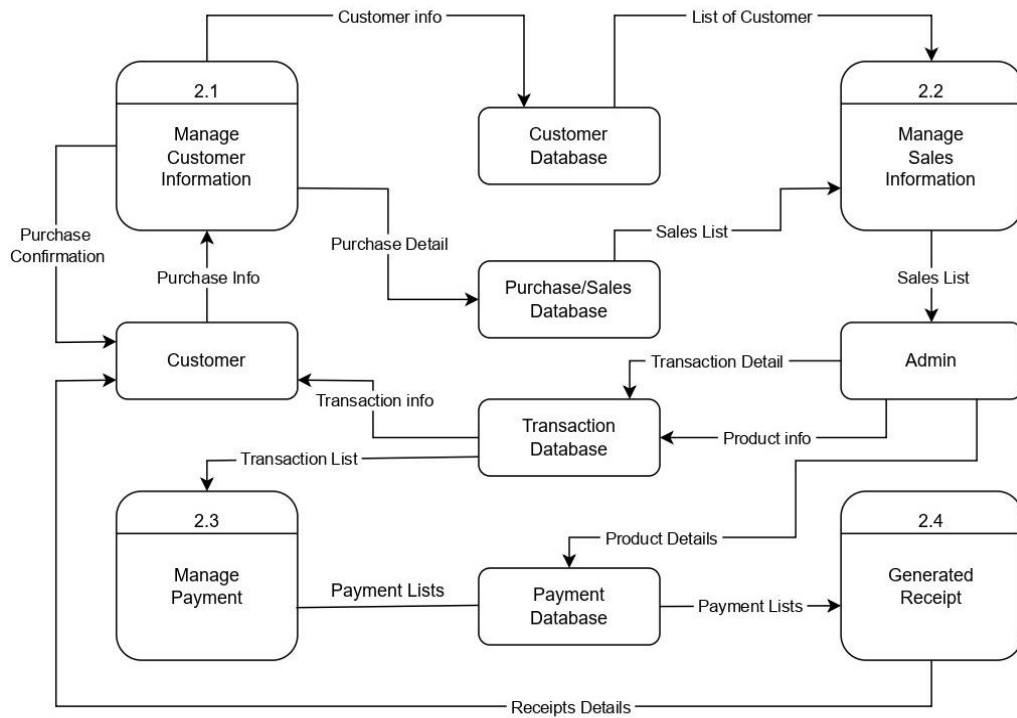
### 4.3.3 Data Flow Diagram



**Figure 4: Data Flow diagram level 0**



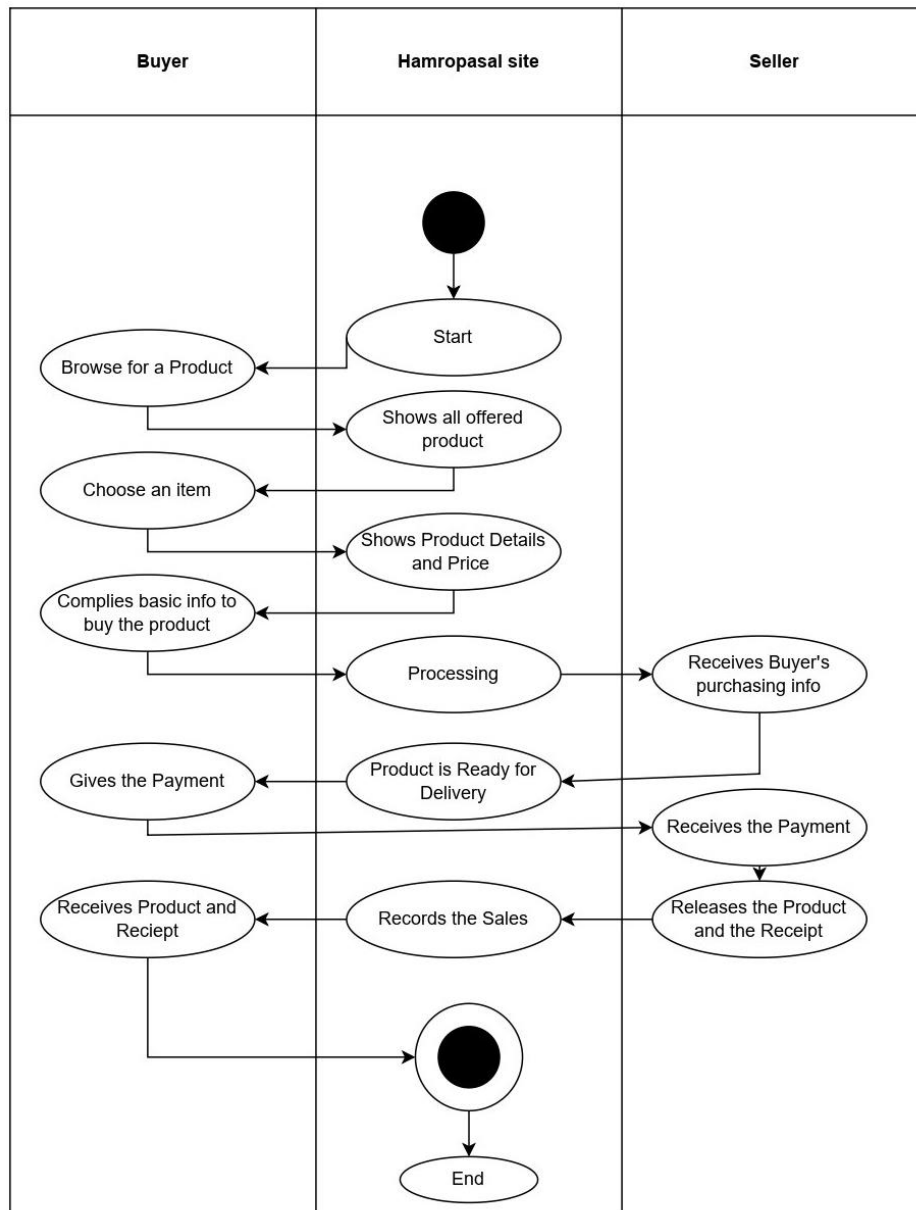
**Figure 5: Data Flow diagram level 1**



**Figure 6: Data Flow diagram level 2**

#### 4.3.4 Activity Diagram

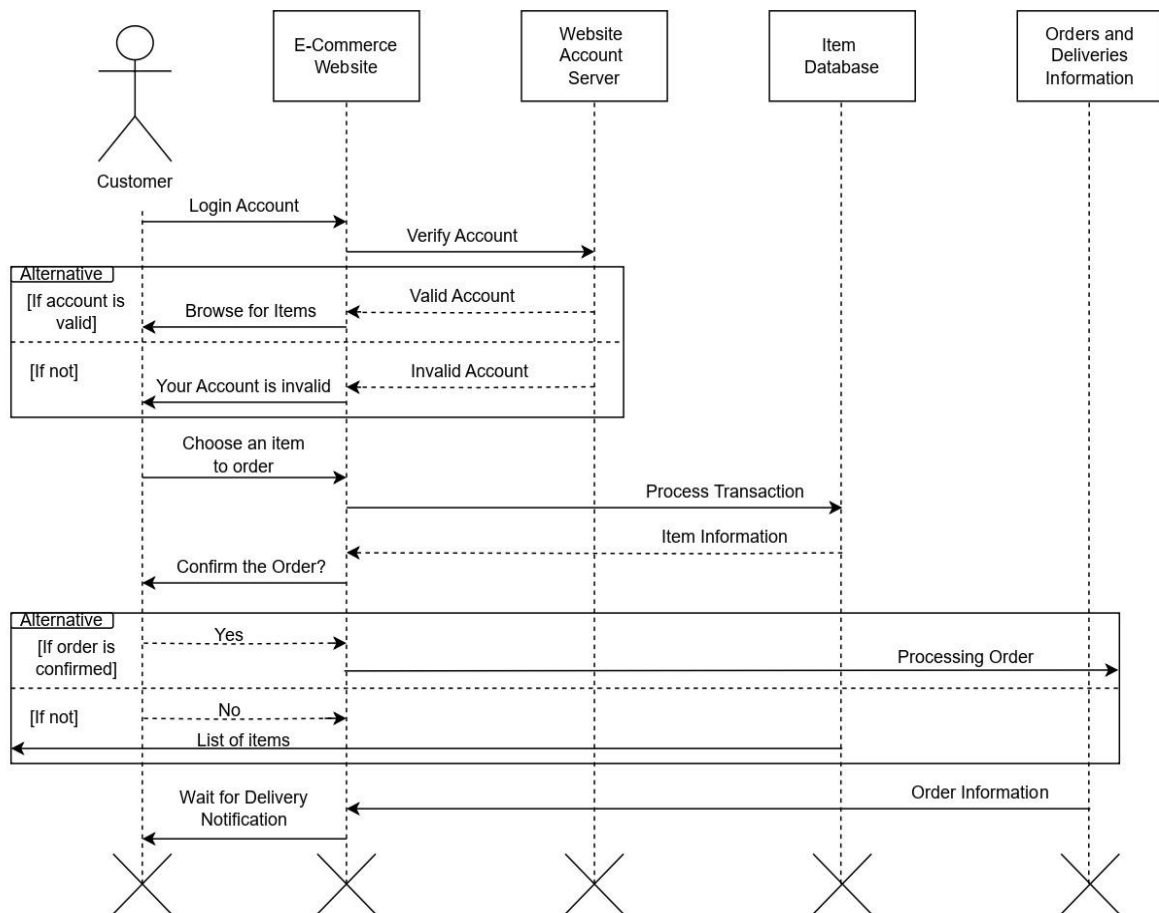
Activity diagrams proved to be invaluable for illustrating the high-level workflow of the ecommerce platform. By visually mapping out the various activities and processes involved in a user's journey on the site, I could effectively convey the logic behind each step. This facilitated a deeper understanding among both the development team and stakeholders, allowing for smoother collaboration and more efficient problem-solving.



**Figure 7: Activity Diagram**

### 4.3.5 Sequence Diagram

Sequence diagrams played a crucial role in documenting the intricate interactions between different system components and external entities. By depicting the chronological order of messages and actions exchanged between objects, I was able to pinpoint potential bottlenecks, dependencies, or areas requiring optimization. This not only aided in the development phase but also served as a valuable reference point for troubleshooting and future system enhancements.

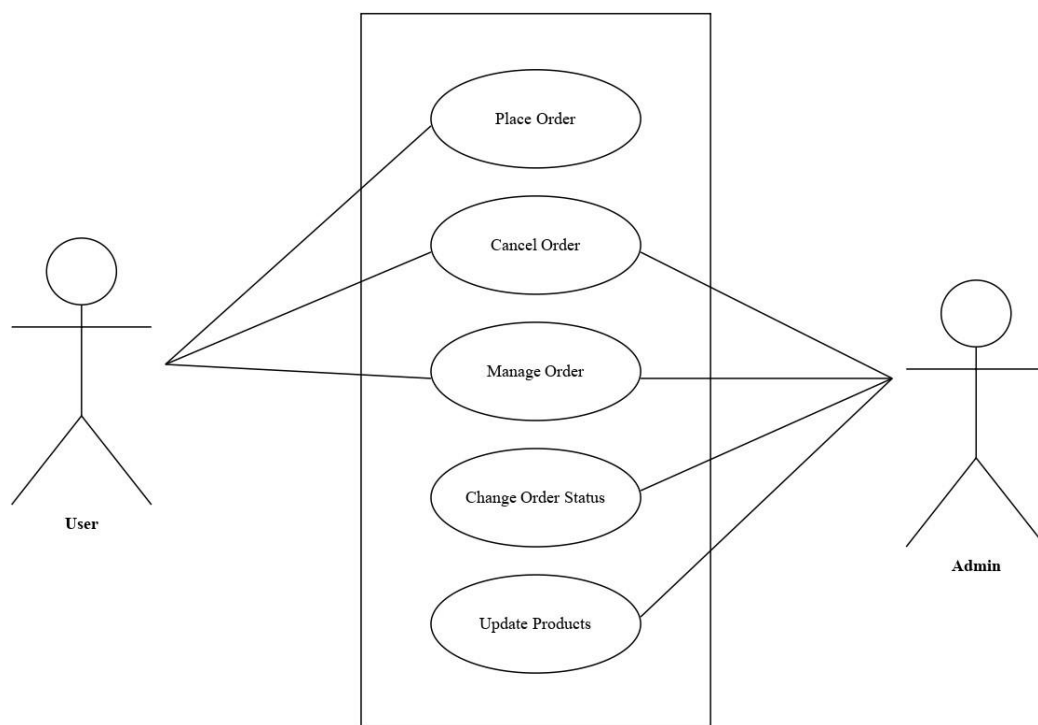


**Figure 8: Sequence diagram**

### 4.3.6 Use-Case Diagram

Use case diagram are typically developed in the early stage of development and often applied for the following purposes:

- Specify the context of a system
- Capture the requirement of the system
- Validates the system architecture
- Drive implementation and generates test cases
- Developed by analyst together with domain experts



**Figure 9: Use Case Diagram**

### 4.4 Requirement elicitation

Requirement elicitation refers to the search for details about the functions to be performed by the system and the limitations under which the system must operate. It is regarded as the process of obtaining data from stakeholders or, in other words, it can be defined as the elicitation process that takes place once the data analytics has interacted with stakeholders to understand their requirements. The goal of requirement elicitation is to thoroughly identify the business needs, risks, and assumptions associated with any given project.

#### 4.4.1 Functional Requirements

Requirement specification is mainly categorized into two types:

The functional requirements for a system describe what the system should do. Those requirements depend on the type of application being developed, the expected users of the application.

- **Home:** The application must have a home page visible for all the users of the application.
- **Signup/login:** The application must have a login and signup page.
- **Inventory management:** Track, manage and control inventory on a computerized platform across multiple stores and locations.
- **E-commerce:** Hamropasal offers a robust ecommerce platform to take your business online and attract sales.
- **Payments:** Hamropasal supports contactless payment methods like electronic wallet, bank transfer, and credit and debit cards.
- **Customer Support:** It offers a variety of customer support options via email, phone for a smooth experience.

#### 4.4.2 Non Functional Requirements

Nonfunctional requirements are requirements that are not directly concerned with the specified function delivered by the system. They describe how, how well or to what standard a function should be provided. Non-functional requirements may also describe aspects of the system that don't relate to its execution, but rather to its evolution over time (e.g. maintainability, extensibility, documentation, etc.). Some non-functional requirements for this website are:

- **Performance:** The developed application must have fast operation, quick response, and low consumption of hardware resources.
- **User Friendly:** The application should be interactive and easy to use the interface.
- **Maintainability:** Hamropasal should be easy to maintain the application in the coming future if any features are to be added later. Admin can easily maintain (insert, update and delete) the content of the application.
- **Accessibility:** The application must be easily accessible to all the users. Users can simply access this application by using the internet.
- **Security:** Application should be secure from unauthorized access, which provides efficient security to the application.

- **Easy Access:** Application must be easily accessible for all types of user. Users can easily access all features of the application from any device.

## 4.5 Tasks / Activities Performed

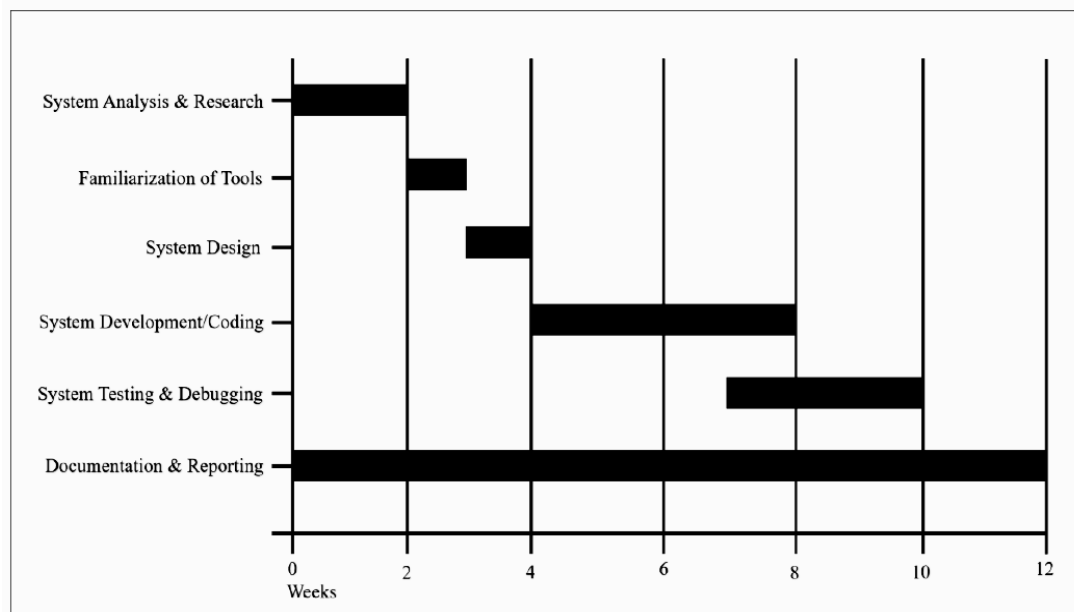
During the internship period different activities were performed to develop the e-commerce website and the performed activities are as follows:

### 4.5.1. Study about the Project

Since the project was in a planning phase, I was given a task to study the project, its goal, and objectives and asked to complete the fundamentals of the project during my internship period.

### 4.5.2 Making Timeline for the development

Timelines were made and deadlines were set for the development of the project that I was going to work on. Discussion about the deadlines and project were done in Discord. Discord is a new way to communicate with a team. It's faster, better organized, and more secure than email.



**Figure 10: Working Schedule**

### 4.5.3 Setting up the development environment

In order to start developing the website various software and tools were Configured and installed. Some of the tools are:

- Installation of Visual Studio Code
- Setting up the Environment variable



- Installation of Python/Django Framework
- Installation GIT and set up GIT profile
- Installation of Thunder client

#### **4.5.4 Research about the frameworks, tools and libraries**

Tools/language such as GIT, Visual Studio Code, Django, React's, bootstrap were used to make the web application so these tools were studied in depth before using it in the project. We were asked to learn about them using YouTube, Udemy, stack overflow and documentation. Mentor provides required document, article, blog, video content, etc about the tool for the research purpose.

#### **4.5.5 Creating Models and Routes**

As I was working as a Backend developer, I was assigned with backend tasks. As I got familiar with the project the complexity of the task kept increasing. When I joined the company, the project frontend had already been completed, therefore I was asked to have a deep understanding of the code, designs and objectives of the project. Later I was assigned with certain tasks. Some of the tasks I did are as follows:

- **API for admin to create products:**

An API for admin was created to create products .Only the admin role is able to create, edit or delete products. I designed an API specifically tailored for administrative users, granting them exclusive privileges to create, modify, and delete products within our system. This robust access control ensures that only users with the admin role can exercise these critical functions, maintaining data integrity and security. The API empowers admin's to seamlessly add new products, update existing ones, and remove outdated entries, streamlining product management tasks. This level of control and granularity optimizes the workflow for our administrative team, enhancing the overall efficiency and accuracy of our ecommerce platform.

- **API that does CRUD operations on categories:**

API's that do Create, Read, Update and Delete operations on categories of items was created. Authorized users i.e. admin can only have access to create update and delete operations while basic role users can read the data. I've developed a comprehensive set of APIs focused on performing Create, Read, Update, and Delete (CRUD) operations specifically for product categories. Within this system, authorized users, such as administrators, are granted exclusive privileges to execute the Create, Update, and Delete

operations on category data, thereby ensuring complete control over category management. On the other hand, basic role users are limited to Read operations, allowing them to access category information without the ability to make changes. This role-based access control model ensures data security and integrity while providing an efficient and user-friendly interface for managing product categories within the platform.

- **API for uploading images for receipt:**

API's that helped to upload images for receipts also created. And the images were stored in the uploads folder inside the system. And the database for the product stored a link as an image which would direct the image stored in the folder. I implemented APIs dedicated to the seamless uploading of receipt images within the system. These APIs facilitated the process of uploading images, storing them securely in a designated "uploads" folder. Additionally, the system's database was configured to store image links as references, allowing for efficient retrieval and display of the corresponding images from the designated folder. This approach optimized data management, ensured image accessibility, and enhanced the user experience by associating images with the respective products stored in the database.

- **API for soft delete of products, add-ons and category:**

API for soft deletion of products, add-ons and categories are also created. The deleted data was stored in the database although they were deleted and filtered while viewing with the help of is deleted field. I implemented a dedicated API for the soft deletion of products, add-ons, and categories within the system. This feature allowed for the removal of data while retaining it in the database, thanks to the use of an "is deleted" field. By employing this approach, deleted items could be easily filtered out when viewing data, ensuring a clean and organized user interface while preserving historical information in the database. This feature provided an added layer of data management and traceability, enhancing overall system flexibility and user-friendliness.

#### **4.5.6 API Testing**

The created API's were tested individually as a unit with the help of Thunder client. Thunder client is a software/technology that helps to test API's by sending GET, PUT, PATCH, POST and DELETE requests. Different data were put on the body of the API endpoints to test their validation. The response of the request also had to be in a standard JSON format so that it would be easier for the frontend developers to use the data and show it on the UI. This includes the use of status codes such as 200, 400, 500 etc. If the API calls was a success. We

used 200 status codes. If the user (user error) sends some invalid data we use 400 status codes. And if it was a server error we used 500 status codes.

## **CHAPTER 5**

### **CONCLUSION AND LEARNING OUTCOMES**

#### **5.1 Conclusion**

In the current context, the increasing information Technology has built up the software development trend. So to follow the trend internship provides a bridge for the industrial environment for the undergraduate to learn and experience the real world. Internship has helped in adapting well to working under pressure. Working with multiple features in a single week long sprint and handling immediate and urgent bugs have assisted in enhancing professionalism to meet deadlines. The technical tasks that were undertaken during the internship period have helped the intern in improving software development and debugging skills. It has helped in gaining knowledge about various technical tools and frameworks used in software development and the process that should be followed for proper development completion. Working as an intern in one of the popular IT companies of Nepal, has boosted the confidence and has polished the professional as well as soft skills of the intern in the IT sector. As a whole, this report includes project and the internship experiences, findings, knowledge and the technical skills.

#### **5.2 Learning Outcomes**

It was a great pleasure working in a reputed organization as an intern, as it was exposed to the real working environment of the organization and the development phases of software. It was a great opportunity to learn the disciplines, effort, hardships and morals necessary in the real scenario of the working organization. Through the internship from Crumet Tech, the lessons learnt were:

- Importance of time management and working with multiple features under pressure to meet deadlines.
- Understanding the differences between theoretical and practical knowledge.
- Working in a team with coordination and cooperation to make quality decisions.

During the period of internship, the interpersonal and professional skills learnt from the organization are as follows:

### 5.3 Accomplishment

I gained an insightful look into the real working dynamics of the company while working as an intern in a famous organization, particularly in the area of software development. This experience provided a fantastic chance to develop crucial skills, work hard, overcome obstacles, and comprehend the moral framework crucial to the real-world organizational context. I got the opportunity to develop a variety of interpersonal and professional skills throughout the internship. Therefore, I discovered:

**Backend Development Phases:** During my internship, I gained a comprehensive understanding of Backend/Server Development and the collaborative processes within a project team. Specifically, I learned how tasks are allocated among team members and how version control and code management are achieved using GIT. Additionally, I became well versed in utilizing REST APIs to facilitate interactions with the database. These lessons and experiences have not only enriched my professional growth but also equipped me to tackle real-world software development challenges with confidence.

**Real Environment Experience:** For students like me who are about to graduate, the internship program has been quite beneficial. It is like getting a behind-the-scenes look at how IT roles actually work in businesses. We get to work in a real workplace and pick up a lot of knowledge that will be useful when we begin our IT jobs. It is like making the connection between what we study in college and how it is applied in the information technology field. We have seen how daily IT professionals complete tasks during the internship. We have acquired a variety of abilities, from technical knowledge to interpersonal communication and teamwork. When we begin working in IT careers, these abilities will be important. The best part is that the internship has made our classroom-learning make more sense. It is like taking what we read in books and making it real. We can see how all the things we learn in school actually help solve problems and make cool stuff happen in the real world.

## References

- *Amazon*. (1995). Retrieved from About: <https://www.amazon.com/>
- *Crumet Tech*. (2021). Retrieved from Crumet Tech: <https://crumet.com/>
- *Daraz* . (2015). Retrieved from Daraz: <http://www.daraz.com>
- *Flipkart*. (2007). Retrieved from Flipkart: <http://www.flipkart.com>
- *Grandson and pearson*. (1999). Retrieved from Article:  
<https://www.scirp.org/reference/referencespapers.aspx?referenceid=2371899>
- *internet public library*. (1995, 03 17). Retrieved from internet public library:  
<https://www.ipl.org/>
- *investopedia*. (2015). Retrieved from investopedia :  
<https://www.investopedia.com/terms/e/ecommerce.asp>
- *OECD*. (1999). Retrieved from Organization for economic corporation and development: <https://www.oecd.org/>
- *Postman*. (n.d.). Retrieved from Postman: <https://www.postman.com/>
- *SDLCpartners*. (2000). Retrieved from SDLCpartners: <https://sdlcpartners.com/why-choose-sdlc/who-we-are/>
- *Springer*. (1999). Retrieved from Springer:  
<https://link.springer.com/article/10.1007/s11187-007-9091-9>
- *Thunderclient*. (2021). Retrieved from Thunderclient: <https://www.thunderclient.com/>

# Appendix

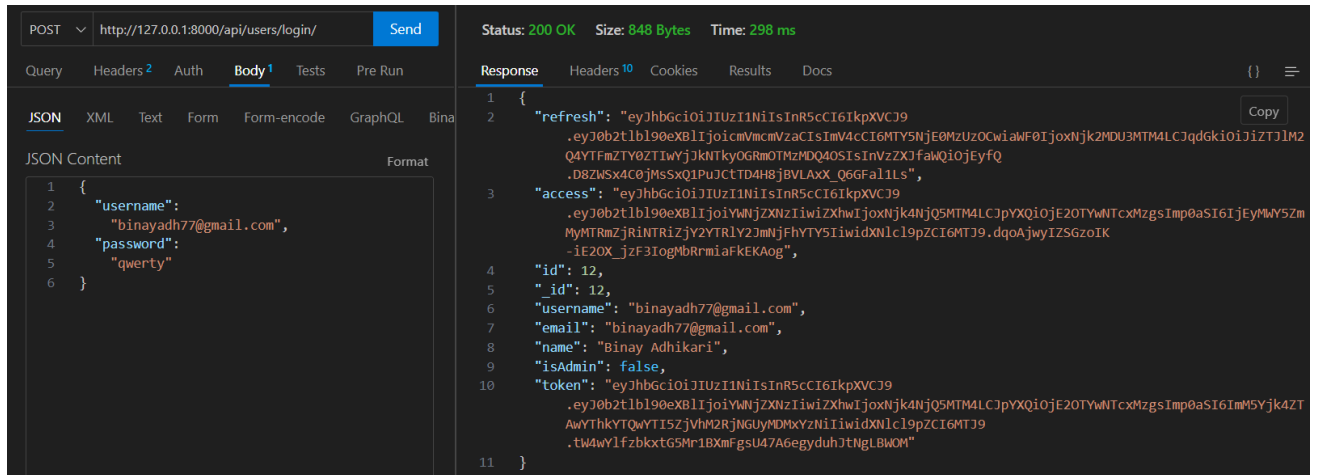


Figure 11: Thunder client testing of User Login

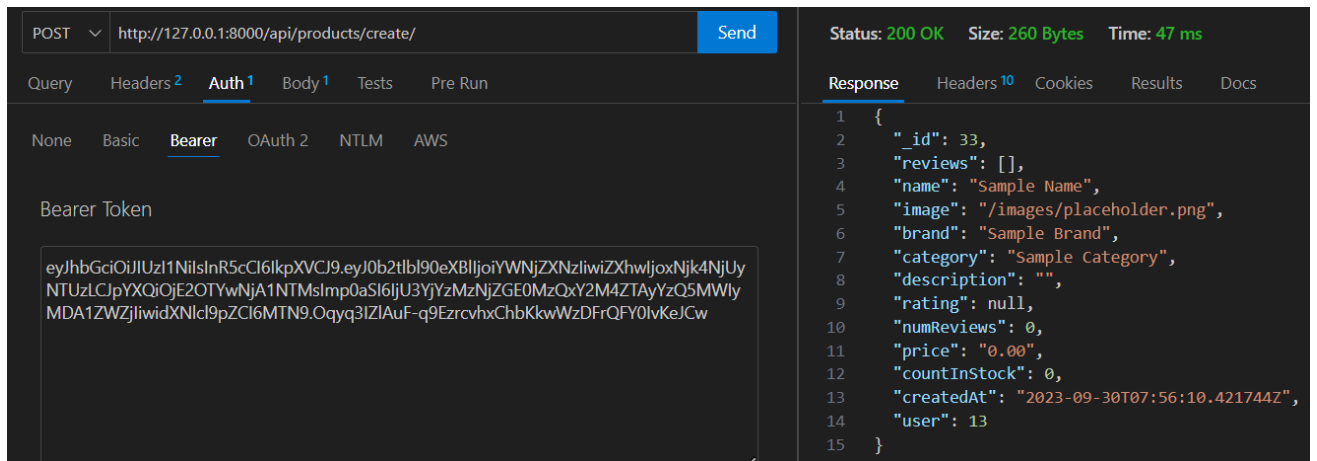


Figure 12: Add new product API

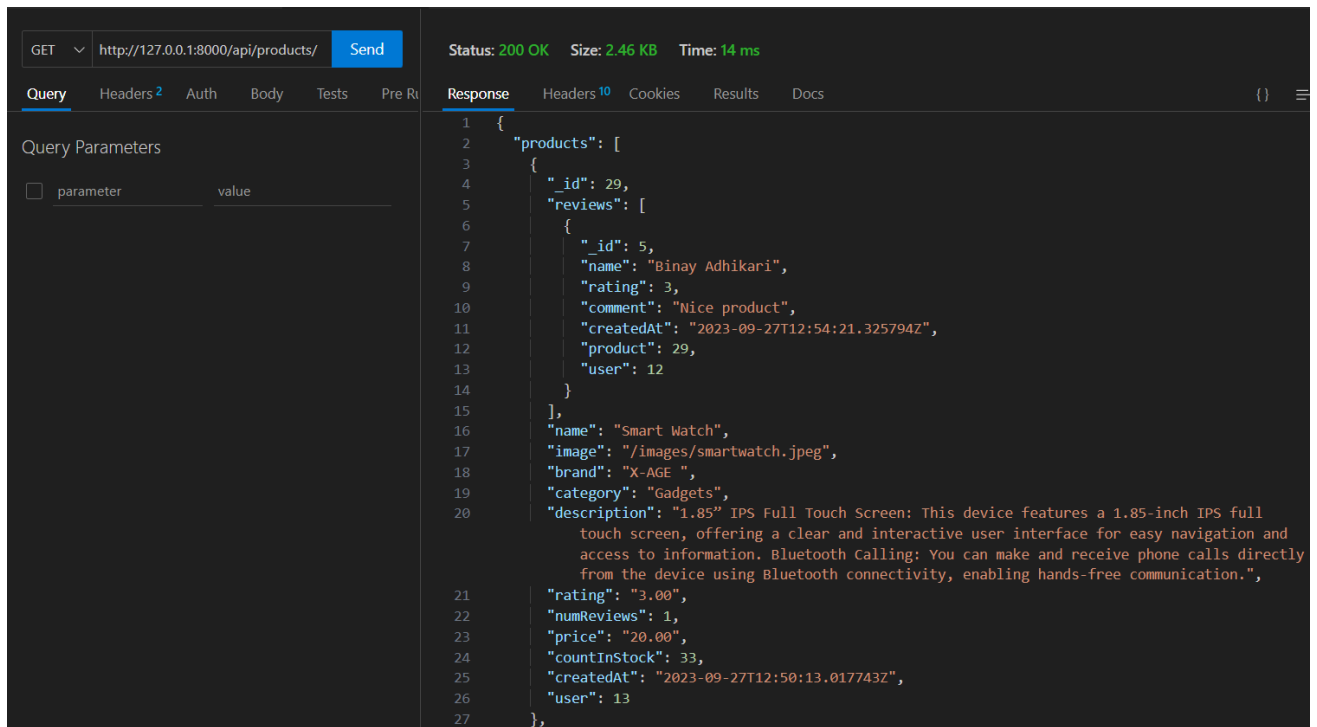


Figure 13: Thunder client API for getting all products

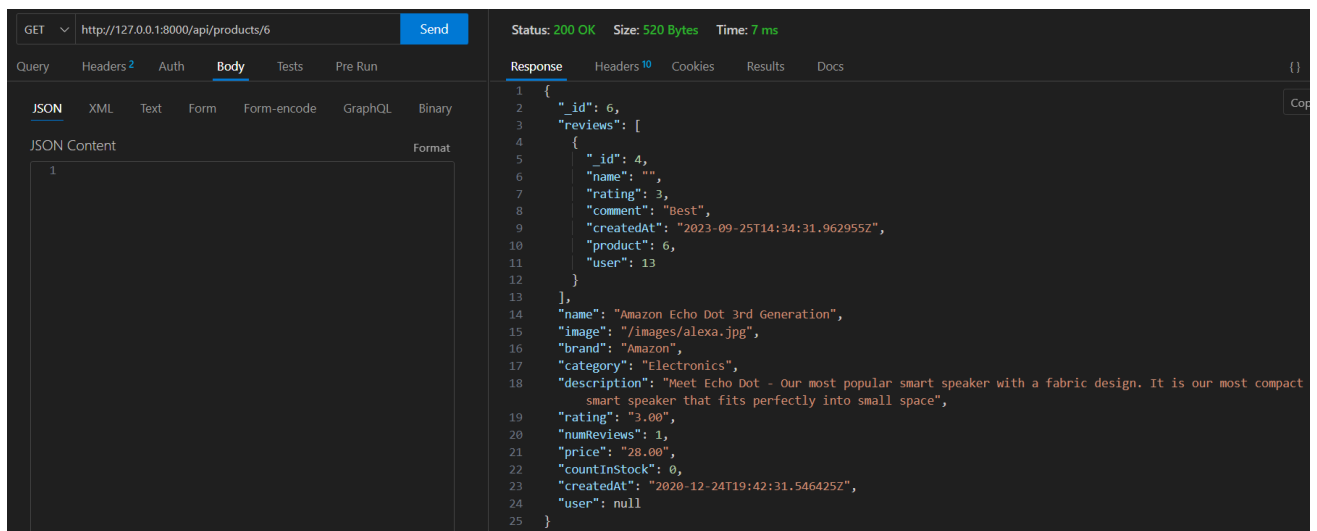
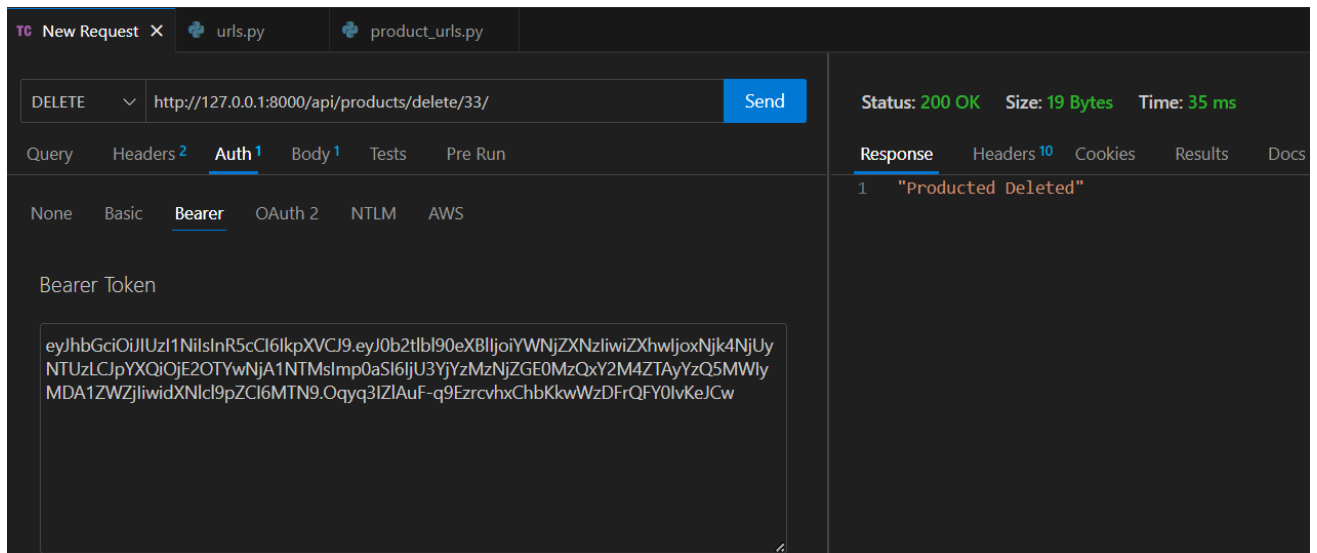
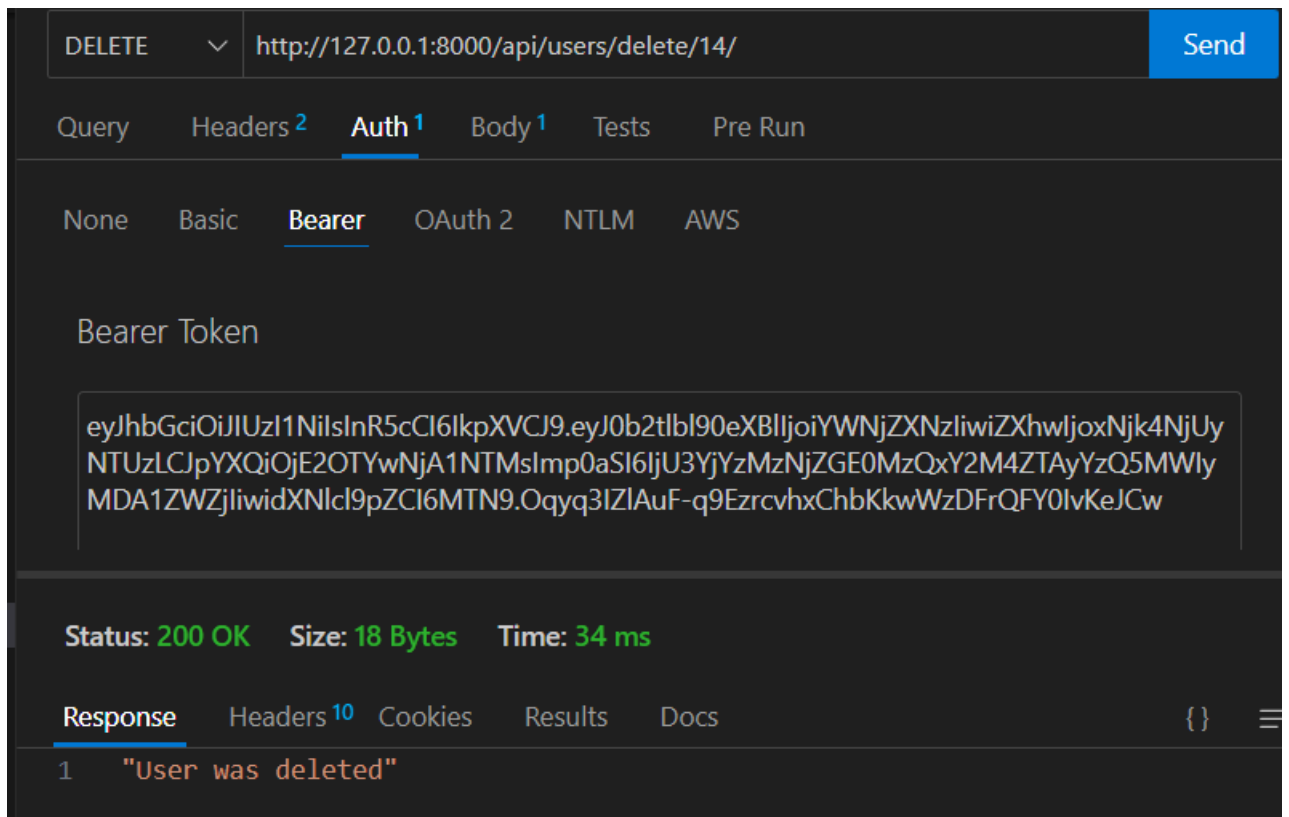


Figure 14: Thunder client API for product details





**Figure 15: Thunder client delete product API**



**Figure 16: Thunder client API for deleting user**

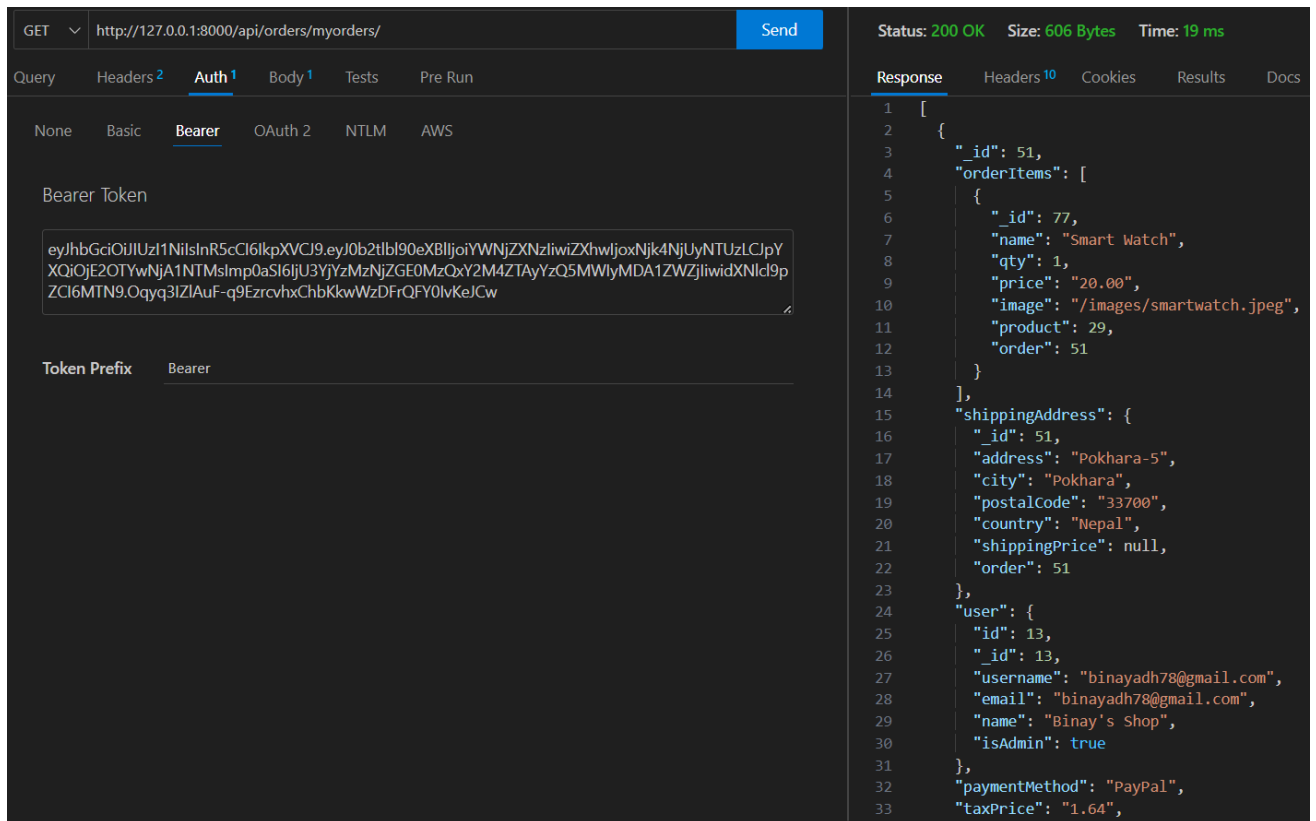


Figure 17: API for user order

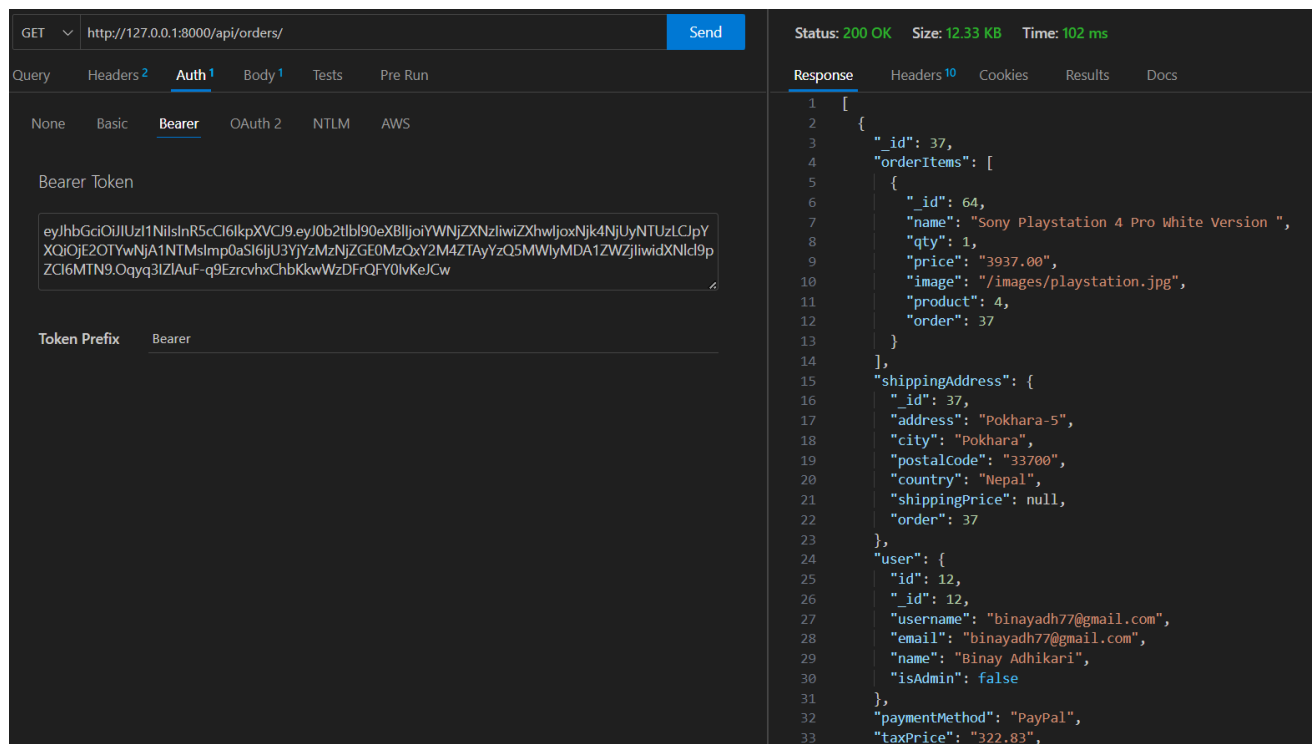


Figure 18: API for Admin order management



GET

http://127.0.0.1:8000/api/products/top/

Send

Query

Headers<sup>2</sup>

Auth

Body

Tests

Pre Run

Enter Request Url

HTTP Headers

☒ Accept

\*/\*

☒ User-Agent

Thunder Client (https://www.thunderclient.com)

☐ header

value

☐ Raw

Status: 200 OK

Size: 2.66 KB

Time: 13 ms

Response

Headers<sup>10</sup>

Cookies

Results

Docs

```


1  [
2  {
3      "_id": 29,
4      "reviews": [
5          {
6              "_id": 5,
7              "name": "Binay Adhikari",
8              "rating": 3,
9              "comment": "Nice product",
10             "createdAt": "2023-09-27T12:54:21.325794Z",
11             "product": 29,
12             "user": 12
13          },
14          {
15              "_id": 6,
16              "name": "product Buyer",
17              "rating": 5,
18              "comment": "Excellent product worthy buying.\n ",
19              "createdAt": "2023-09-30T05:10:16.257315Z",
20              "product": 29,
21              "user": 15
22          },
23          {
24              "_id": 7,
25              "name": "test test",
26              "rating": 5,
27              "comment": "This is Absolutely amazing...",
28              "createdAt": "2023-09-30T05:10:59.636410Z",
29              "product": 29,
30              "user": 14
31          }
23          }
24      ]
25  }

```

Figure 21: API for top products




LATEST PRODUCTS



Smart Watch

★★★★☆ 1 reviews


\$20.00



Amazon Echo Dot 3rd Generation

★★★★☆ 1 reviews


\$28.00



Logitech G-Series Gaming Mouse

★★★★☆ 10 reviews


\$49.00



Sony Playstation 4 Pro White Version

★★★★☆ 1 reviews

\$397.00



Cannon EOS 80D DSLR Camera

★★★★☆ 12 reviews

\$930.99

GO BACK



## SONY PLAYSTATION 4 PRO WHITE VERSION

★★★★☆ 1 reviews

Price: \$397.00

Description: The ultimate home entertainment center starts with PlayStation. Whether you are into gaming, HD movies, television, music

Price: \$397.00

Status: In Stock

Qty

ADD TO CART

## REVIEWS

No Reviews

## WRITE A REVIEW

Rating

Select...

Review

SUBMIT

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## Product and Description Page

## SHOPPING CART



Sony Playstation 4  
Pro White Version

\$397.00

1



Smart Watch

\$20.00

1



Airpods Wireless  
Bluetooth  
Headphones

\$85.55

3



SUBTOTAL (5)  
ITEMS

\$673.65

PROCEED TO CHECKOUT

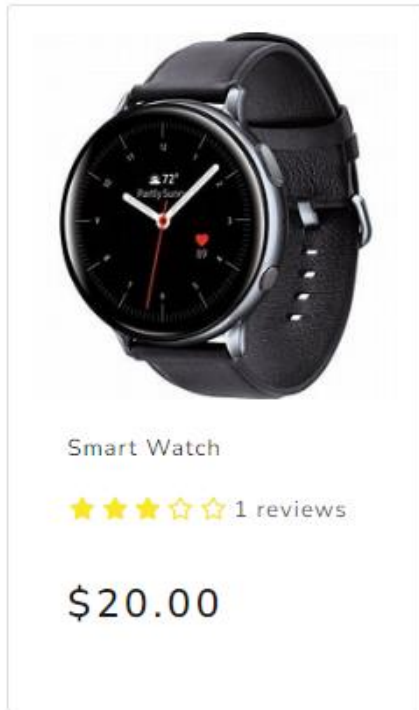
## Full featured shopping cart

HAMROPASAL

Smart Watch

SUBMIT

## LATEST PRODUCTS



### *Searching Products*



### *Top Products Carousel*

## SIGN IN

Email Address

Enter Email

Password

Enter Password

New Customer? [Register](#)

Copyright © Hamropasal

*User login page*

## SIGN IN

Name

Enter name

Email Address

Enter Email

Password

Enter Password

Confirm Password

Confirm Password

Have an Account? [Sign In](#)

Copyright © Hamropasal

*New user Registration page*



## USER PROFILE

Name

Binay Adhikari

Email Address

binayadh77@gmail.com

Password

Enter Password

Confirm Password

Confirm Password

UPDATE

## MY ORDERS

ID	DATE	TOTAL	PAID	DELIVERED
37	2023-09-27	\$4259.83	2023-09-27	<a href="#">DETAILS</a>
39	2023-09-27	\$4259.83	✗	<a href="#">DETAILS</a>
45	2023-09-27	\$5408.92	✗	<a href="#">DETAILS</a>
46	2023-09-27	\$64918.91	2023-09-27	<a href="#">DETAILS</a>
47	2023-09-27	\$10.00	✗	<a href="#">DETAILS</a>
48	2023-09-27	\$64918.91	✗	<a href="#">DETAILS</a>
49	2023-09-27	\$64918.91	✗	<a href="#">DETAILS</a>
50	2023-09-27	\$64918.91	2023-09-27	<a href="#">DETAILS</a>

## User Profile and Order history

## PRODUCTS

[+ CREATE PRODUCT](#)

ID	NAME	PRICE	CATEGORY	BRAND	
29	Smart Watch	\$20.00	Gadgets	X-AGE	<a href="#">✎</a> <a href="#">✖</a>
6	Amazon Echo Dot 3rd Generation	\$28.00	Electronics	Amazon	<a href="#">✎</a> <a href="#">✖</a>
5	Logitech G-Series Gaming Mouse	\$49.00	Electronics	Logitech	<a href="#">✎</a> <a href="#">✖</a>
4	Sony Playstation 4 Pro White Version	\$397.00	Electronics	Sony	<a href="#">✎</a> <a href="#">✖</a>
3	Cannon EOS 80D DSLR Camera	\$930.99	Electronics	Cannon	<a href="#">✎</a> <a href="#">✖</a>

1 2

## Admin Product Management

[Go Back](#)

## EDIT PRODUCT

Name

Smart Watch

Price

20.00

Image

/images/smartwatch.jpeg

Choose File

Browse

Brand

X-AGE

Stock

39

Category

Gadgets

Description









1.85" IPS Full Touch Screen: This device features a 1.85-inch IPS full touch s

UPDATE

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## Admin Product Management

## USERS

ID	NAME	EMAIL	ADMIN	
11	Bipin Adhikari	adhikaribipin008@gmail.com	✓	 
12	Binay Adhikari	binayadh77@gmail.com	✓	 
13	binayadh78@gmail.com	binayadh78@gmail.com	✓	 
14	test test	test@test.com	✓	 

## Admin User Management

## ORDERS

ID	USER	DATE	TOTAL	PAID	DELIVERED	
37	Binay Adhikari	2023-09-27	\$4259.83	2023-09-27	✓	DETAILS
39	Binay Adhikari	2023-09-27	\$4259.83	✓	✓	DETAILS
40	test test	2023-09-27	\$4259.83	✓	✓	DETAILS
43	test test	2023-09-27	\$5408.92	✓	✓	DETAILS
44	test test	2023-09-27	\$5408.92	✓	✓	DETAILS
45	Binay Adhikari	2023-09-27	\$5408.92	✓	✓	DETAILS
46	Binay Adhikari	2023-09-27	\$64918.91	2023-09-27	✓	DETAILS
47	Binay Adhikari	2023-09-27	\$10.00	✓	✓	DETAILS
48	Binay Adhikari	2023-09-27	\$64918.91	✓	✓	DETAILS
49	Binay Adhikari	2023-09-27	\$64918.91	✓	✓	DETAILS
50	Binay Adhikari	2023-09-27	\$64918.91	2023-09-27	2023-09-27	DETAILS
51	binayadh78@gmail.com	2023-09-27	\$31.64	✓	✓	DETAILS

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*Admin Order Details & Management Page*

Login

Shipping

Payment

Place Order

## Select Method

☒ PayPal or Credit Card

CONTINUE

*Payment Methods Selections*

[Login](#)
[Shipping](#)
[Payment](#)
[Place Order](#)




## SHIPPING

Shipping: Pokhara-5, Pokhara 33700, Nepal

## PAYMENT METHOD

Method: PayPal

## ORDER ITEMS

	Sony Playstation 4 Pro White Version	1 X \$397.00 = \$397.00
	Smart Watch	1 X \$20.00 = \$20.00
	Airpods Wireless Bluetooth Headphones	3 X \$85.55 = \$256.65

## ORDER SUMMARY

Items: \$673.65

Shipping: \$0.00

Tax: \$55.24

Total: \$728.89

PLACE ORDER

Copyright © Hamropasal

## Order Summary and shipping details

## ORDER:

### SHIPPING

Name: Binay Adhikari

Email: binayadh77@gmail.com

Shipping: Pokhara-5, Pokhara 33700, Nepal

Not Delivered

### PAYMENT METHOD

Method: PayPal

Not Paid

## ORDER SUMMARY

Items: \$673.65

Shipping: \$0.00

Tax: \$55.24




Total: \$728.89

PayPal

Debit or Credit Card

Powered by PayPal


## ORDER ITEMS

	Sony Playstation 4 Pro White Version	1 X \$397.00 = \$397.00
	Smart Watch	1 X \$20.00 = \$20.00
	Airpods Wireless Bluetooth Headphones	3 X \$85.55 = \$256.65

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## Order Summary and shipping status

BA




\$ 728.89 USD

Ship to Binay Adhikari

[Change](#)

Pokhara-5, Pokhara, GANDAKI 33700

Pay with



Mastercard

\*\*\*\*5656 Preferred

\$ 728.89

USD

[+ Add debit or credit card](#)

Complete Purchase

Consumer advisory - PayPal Pte. Ltd., the holder of PayPal's stored value facility, does not require the approval of the Monetary Authority of Singapore. Users are advised to read the [Terms and Conditions](#) carefully.

*Payment Gateway paypal sandbox*

## ORDER:

## SHIPPING

Name: Binay Adhikari

Email: binayadh77@gmail.com

Shipping: Pokhara-5, Pokhara 33700, Nepal

Not Delivered

## ORDER SUMMARY

Items: \$673.65

Shipping: \$0.00

Tax: \$55.24




Total: \$728.89

## PAYMENT METHOD

Method: PayPal

Paid on 2023-09-27T20:35:25.632757Z

## ORDER ITEMS

	Sony Playstation 4 Pro White Version	1 X \$397.00 = \$397.00
	Smart Watch	1 X \$20.00 = \$20.00
	Airpods Wireless Bluetooth Headphones	3 X \$85.55 = \$256.65

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*Payment, charges with tax amount*

## ORDER:

## SHIPPING

Name: Binay Adhikari

Email: binayadh77@gmail.com

Shipping: Pokhara-5, Pokhara 33700, Nepal

Not Delivered

## ORDER SUMMARY

Items: \$673.65

Shipping: \$0.00

Tax: \$55.24

Total: \$728.89

MARK AS DELIVERED

## PAYMENT METHOD

Method: PayPal

Paid on 2023-09-27T20:35:25.632757Z

*Admin Review after Payment*

## ORDER:

### SHIPPING

Name: Binay Adhikari

Email: binayadh77@gmail.com

Shipping: Pokhara-5, Pokhara 33700, Nepal

Delivered on 2023-09-27T20:39:36.350683Z

### ORDER SUMMARY

Items: \$673.65

Shipping: \$0.00

Tax: \$55.24

Total: \$728.89

### PAYMENT METHOD

Method: PayPal

Paid on 2023-09-27T20:35:25.632757Z

### ORDER ITEMS



Sony Playstation 4 Pro White Version

1 X \$397.00 = \$397.00



Smart Watch

1 X \$20.00 = \$20.00



Airpods Wireless Bluetooth Headphones

3 X \$85.55 = \$256.65

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***Final receipt after product delivery***