Tribhuvan University

Faculty of Humanities and Social Sciences

FRONT-END DEVELOPER AT LOGISPARK TECHNOLOGIES

AN INTERNSHIP REPORT

Submitted to

Department of Computer Application

DWIT College

In partial fulfillment of the requirements for the Bachelors in Computer Application

Submitted by

Kristina Maharjan

January 2023

Under the Supervision of

Sarada Pokhrel

Tribhuvan University

Faculty of Humanities and Social Sciences

Deerwalk Institute of Technology

MENTOR'S RECOMMENDATION

I hereby recommend that this internship report prepared under my supervision by KRISTINA MAHARJAN entitled "**FRONT-END DEVELOPER AT LOGISPARK TECHNOLOGIES**" in partial fulfillment of the requirements for the degree of Bachelor of Computer Application be processed for the evaluation.

……

SIGNATURE

Sayal Baidya

Chief Operating Officer

Logispark Technologies

Tribhuvan University

Faculty of Humanities and Social Sciences

Deerwalk Institute of Technology

SUPERVISOR'S RECOMMENDATION

I hereby recommend that this internship report prepared under my supervision by KRISTINA MAHARJAN entitled "**FRONT-END DEVELOPER AT LOGISPARK TECHNOLOGIES**" in partial fulfillment of the requirements for the degree of Bachelor of Computer Application is recommended for the final evaluation.

……

SIGNATURE

Sarada Pokhrel

SUPERVISOR

Faculty

Program Head

Deerwalk Institute of Technology

Tribhuvan University

Faculty of Humanities and Social Sciences

Deerwalk Institute of Technology

LETTER OF APPROVAL

This is to certify that this internship report prepared by KRISTINA MAHARJAN entitled "**FRONT-END DEVELOPER AT LOGISPARK TECHNOLOGIES**" in partial fulfillment of the requirements for the degree of Bachelor in Computer Application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

…… Sarada Pokhrel, Supervisor Program Head, Junior Year Deerwalk Institute of Technology	…… Mr. Hitesh Karki Chairman Deerwalk Institute of Technology
…… Mr. Ritu Raj Lamsal Internship Coordinator, Assistant Director of Research Program Deerwalk Institute of Technology	…… Mr. Kumar Prasun External Examiner, Assistant Professor Padmakanya Multiple Campus

ACKNOWLEDGEMENT

First and foremost, I would like to thank the LogiSpark Technologies team for providing me with the internship opportunity. It has helped me immensely with my coding aptitude and skilfulness while doing wonders for my personal growth.

I would like to express my gratitude and special thanks to my mentor **Mr. Sayal Baidya,** who guided and helped me through the project. I am thankful for his encouragement, constructive suggestions, and support from the beginning till the end. His advice, guidance, and assistance are the only reason I have been able to do the project.

Also, I would like to thank Deerwalk Institute of Technology for the platform they gave me and my colleagues. Without their help, I would not have been able to soldier on till the end. Last but not the least, I would like to thank my family, colleagues, and seniors for their guidance and support on the course of this report and internship.

Kristina Maharjan

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Date:- January 9, 2023

ABSTRACT

The internship was carried out at LogiSpark Technologies Pvt. Ltd. Nepvent is a restaurant management system designed for managing the kitchen/bar orders from a single device. The project is built by using Angular for front-end. Angular is an open-source front-end web application framework to develop single page applications using HTML and TypeScript. It implements core functionality as a set of TypeScript libraries that are imported in the applications.

A restaurant management system is a type of point-of-sale (POS) software specifically designed for restaurants, bars, and others in the food service industry. The restaurant management system is there to help communication between all teams within a restaurant by minimising the probability of human errors.

Nepvent is web and mobile based application that offers restaurant management system (RMS). The project is built to manage the kitchen/bar orders from a single device timely notification for new/completed ones. The objective is to find visual reports of the restaurant's sales & inventory totals to uncover critical problems and what's causing them.

Keywords: POS, RMS, restaurant, kitchen/bar orders

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LIST OF ABBREVIATIONS

API	Application Programming Interface
CI/CD	Continuous Integration and Continuous Delivery
CRUD	Create Read Update and Delete
CSS	Cascading Style Sheets
HTML	Hypertext Markup Language
JS	JavaScript
JSON	JavaScript Object Notation
QA/QC	Quality Assurance and Quality Control
SEO	Search Engine Optimization
UI	User Interface
UNIX	UNIplexed Information Computing System
XML	Extensible Markup Language

CHAPTER 1
INTRODUCTION

1.1 Introduction

Nepvent, an events management software of sorts. While the original idea didn’t take off, the team had managed to build a barebones sub-system to handle kitchen orders into the original Nepvent project. It quickly became evident that the market for restaurant billing systems was wide open with only a couple of big names that either used older software technologies or completely repurposed billing systems that weren’t built with restaurants in mind.

The internship was carried out at LogiSpark Technologies Pvt. Ltd. Nepvent is a restaurant management system designed for managing the kitchen/bar orders from a single device. The project is built by using Angular for front-end. Angular is an open-source front-end web application framework to develop single page applications using HTML and TypeScript. It implements core functionality as a set of TypeScript libraries that are imported in the applications.

In many well-known restaurants, waiters and waitresses frequently overlook tables or customers' calls during peak times, which could reduce their clientele. Despite the fact that this is a persistent problem, there is currently no solution on the market that significantly enhances customer and server communication. Therefore, the objective is to create a system that will enable patrons to readily contact their waiters and aid in the restaurant's overall operational efficiency. When a customer needs support, an internal wired communication system will enable fast notice to the server. Additionally, servers can spend less time and energy constantly keeping an eye out for clients in need and instead concentrate more on serving their current clients.

1.2 Problem Statement

The challenge for many businesses is to make sure they not only draw in new consumers, but also keep their current client. It has frequently been stated that an existing client is worth more to a business than a new one because it might cost up to five times as much to acquire a new customer as it does to keep an existing one. A customer is more likely to

return to a restaurant in the future in the restaurant industry if they experienced exceptional customer service in addition to delicious food. It's highly unlikely that a consumer would return if they had to wait an unreasonable period of time or if their order was incorrect. Therefore, minimizing errors in the order and bill, assisting in the elimination of delays, and increasing teamwork and communication within the team would all be solutions to this issue.

1.3 Objectives

The following are some of the main objectives of the project at the initial phase:

- To create an electronic restaurant management system while adhering to best practices and avoiding the repetition of typical development errors
- To maximize profit by enhancing productivity and reducing costs, without sacrificing customer happiness
- Many restaurants already employ a paper-based method that can be seen to be on paper to communicate between the restaurant and kitchen

1.4 Scope and Limitation

Scope:

- The system comprises generating reports, inventories, employee records, customer records, and managing orders
- The creation and deletion of orders, addition of the menu items, adding and removing order, and closing the orders can be done

Limitations:

- The upgrade of the system and hardware can be expensive
- The installation is complex
- Desktop application is not available

1.5 Report Organization

This report on is organized into five chapters:

Chapter 1 includes the 'Introduction' to the project including the project's objectives, scopes, and limitations.

Chapter 2 goes briefly into the organization's introduction. It also includes the review of the literature available on the topic of the current state of e-commerce for alcohol in the United States.

Chapter 3 is a deep dive into the background study and literature review.

Chapter 4 is about the project that details description of the tasks assigned as part of the internship, weekly log of the activities, and the roles and responsibilities that came as part of the internship.

Chapter 5 is a conclusion to the report, and it documents the overall outcome of the system, the lessons learned from working in the system's development starting from conception to the alpha release, and key takeaways in terms of how the system can be improved and perfected over time.

CHAPTER 2
INTRODUCTION TO ORGANIZATION

2.1 Organization Details

LogiSpark Technologies started out as a humble team of 4 developers trying to find their place in the IT space in Nepal. With time, the company managed to find their footing when they launched Nepvent, an events management software of sorts. While the original idea didn't take off, the team had managed to build a barebones sub-system to handle kitchen orders into the original Nepvent project. It quickly became evident that the market for restaurant billing systems was wide open with only a couple of big names that either used older software technologies or completely repurposed billing systems that weren't built with restaurants in mind.

With their initial success, the LogiSpark team quickly expanded in terms of numbers as well as services. Currently, the company has more than 20 employees, mostly developers, and work primarily on web and mobile application development while also branching out into enterprise level software, SEO, digital marketing, data visualization, web scraping, designing, and more.

LogiSpark has always held quality to the highest of standards and the team believes in exceeding expectations. The team aspires to adapt to the best industry practices and stay ahead of the curve in terms of being flexible and adaptable so that they can continue to provide software solutions to both local and international clients that sit on par with the competition.

2.2 Organizational Hierarchy

The following diagram describes the organization's hierarchy:

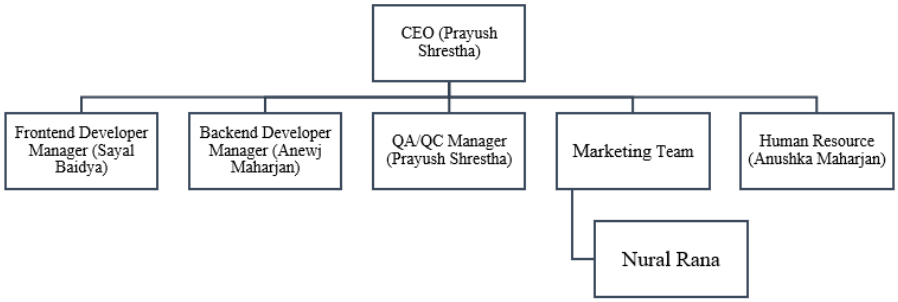

Figure 1: Organizational Hierarchy of LogiSpark Technologies

2.3 Working Domains of Organization

LogiSpark works primarily in the web application development space but also offers services in many other fields, inside and outside of the domain of software development. The company deals mainly with local clients but also works on outsourced projects like To Go Liquors from time to time. The international clients bring quite the challenge with regards to software quality, requirements gathering, and so on and these difficulties has taught the company to adapt to the best development practices and tech stacks. This has translated quite well over the years into all the projects and continues to be the case. Most of the work the company takes on falls under the category of enterprise software development but that has never kept the company from exploring more creative lines of work. The following are the domains that the organization works in:

- Website/web apps design and development
- Enterprise software development
- Social media marketing and management
- Designing and digital branding
- SEO

2.4 Description of Intern Department

The internee worked as an intern at LogiSpark Technologies for a total of three months. During their internship period, they were assigned to the frontend development and tasked with working on a handful of projects that required them to learn and work with JS frameworks like Angular.

The internee was one of five different interns who'd joined the company at the time. Two of said interns were assigned to the QA/QC department, and the other two were assigned to the backend and CI/CD department. Interns were stationed somewhere near their respective mentors but were required to move around frequently. This was mainly because of the fast-paced sprints which were a lot more fruitful when the frontend and backend developers assigned to the project at hand stayed in proximity to one another, distanced from those working on other projects. It encouraged more conversations about the projects and kept all the team members accountable. The working environment was different from all your other office settings, but in all the good ways possible. The mentors were very helpful, and those in the project teams were very encouraging. During the internship period, the internee spent most of their time in one project but switched between projects frequently as needed.

Table 2.1 Internship Details

Start Date	August 2022
End Date	November 2022
Mentor's Name	Sayal Baidya
Days of work	Monday to Friday (5)
Office hours	12:00 AM to 6:00 PM (6 hours)
Position	Frontend Developer (Intern)
Internship Period	3 months

CHAPTER 3

BACKGROUND STUDY AND LITERATURE REVIEW

3.1 Background Study

The restaurant has become popular and had increases the rate in business sector. The competition between the restaurants is high. But still many restaurants still uses the paper-based system where the calculation of money and taking orders of food are done manually. Paper-based system is a traditional method which make the work difficult for the worker when giving service toward their customers. Also, the paper-based system is time consuming.

3.2 Literature Review

3.2.1 CrossOver Nepal

CrossOver Nepal is a leading software provider for hotel, resorts, restaurant, and bar business with more than 700 clients all over Nepal. It was established in 2006 (Software Design Company, Software Development Nepal, Web Development Nepal, SEO Optimization Nepal, Offshore software development Nepal, 2022). CrossOver Nepal create cost-effective solutions based on technical expertise to deliver the ultimate customer satisfaction. CrossOver Restaurant Manager is a robust restaurant POS software system integrated with a complete business accounting & inventory management software package with production journal.

3.2.2 IMS Software

IMS Software Private Limited was established in 2000 AD (IMS Restaurant Management System - IMS Software Pvt. Ltd., 2022). IMS Software have been involved in developing software that helps fulfil demands of the local market, such as IRD approved IMS POS software, IMS Restaurant Software, IMS Distribution Management, IMS Petrol Pump Management, IMS Parking Management, and many more. IMS Restaurant Management Software is the ultimate solution for F&B outlets that need to operate KOT/BOT, Fast Billing and maintain efficient Inventory, Cost Analysis and Financial Reporting systems. They have been associated with more than 20,000 retail and restaurant clients in Nepal, India, Malaysia, and Japan. IMS Software have more than 3000 satisfied customers in Nepal who are using different types of software of IMS.

CHAPTER 4

INTERNSHIP ACTIVITIES

4.1 Roles and Responsibilities

The internship program at LogiSpark Technologies subjected the internee to an atmosphere they'd not ever been a part of before in any organization. The internee was assigned to multiple projects depending on what took priority in terms of the projects' deadlines which is the main reason why the internee started out working on frontend projects that used the Angular framework.

The following are some of the few responsibilities that were assigned to the internee during their internship period:

- Work on websites using the Angular web framework, creating new as well as maintaining existing modules and components
- Document, develop, and maintain said web apps
- Improve applications for hosting with modularization, lazy-loading and other optimizations

4.2 Weekly log

Table 4.1 Weekly Log

WEEK	TASKS ASSIGNED
1-2	• Polish up on the basics of HTML, CSS, JS, and Typescript • Study the basics and core concepts of the Angular library including lifecycle methods, concepts.
3-5	• Learn the basics of Angular • Learn the basics of routing in Angular projects with the Angular Navigation library • Learn Nebular, the UI library of Angular • Migrate an existing project to the latest version of Angular
6-8	• Understand the flow of the project

	• UI changes • Integrate said pages with the application's server, i.e., RESTful API
9-10	• Add various filters in the report • Create new pages and components for various CRUD operations
11-12	• Create angular pipes • Generate report

4.3 Description of the Project(s) Involved During Internship

The major project that I was involved in was Nepvent.

4.3.1 Nepvent

Nepvent, an events management software of sorts. While the original idea didn't take off, the team had managed to build a barebones sub-system to handle kitchen orders into the original Nepvent project. It quickly became evident that the market for restaurant billing systems was wide open with only a couple of big names that either used older software technologies or completely repurposed billing systems that weren't built with restaurants in mind.

Nepvent is web and mobile based application that offers restaurant management system (RMS). The project is built to manage the kitchen/bar orders from a single device timely notification for new/completed ones. The objective is to find visual reports of the restaurant's sales & inventory totals to uncover critical problems and what's causing them.

4.4 Tasks / Activities Performed

- **Attended the sprint plan meeting**

  The sprint plan meeting used to occur once a week to discuss about the project. The whole team used to attend the meeting to update their part of tasks. Also, the mentor assigned new tasks to the team.

- **Performed CRUD operation**

  In the project, the create, read, update, and delete operation was carried out. It was used for the vendor page of Nepvent. Vendors are a company or store from which a restaurant gets the supply of items in their inventory.

- **Created the pipe for the project**

  In angular, pipes are simple functions to use in template expressions to accept an input value and return a transformed value. In the project, the pipe was used to convert long number into abbreviated string.

- **UI changes**

  The user interface of Nepvent was updated to make it neat and clean. It was done using HTML and CSS.

- **Generated the report**

  The important part of Nepvent is generating the report of the restaurant's sales and inventory to uncover critical problems. There are different types of report format in the project and each one of them was exported in the excel file.

4.4.1 System Implementation

4.4.1.1 Front End Tools

- **HTML**

  HTML, or Hypertext Markup Language, is the standard markup language for documents intended to be displayed in a web browser. Technologies such as Cascading Style Sheets and programming languages such as JavaScript can help.

- **CSS**

  Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of documents written in XML or HTML. It describes how elements should be rendered on different media including paper, screen, speech, and so on. CSS enables the separation of presentation and layout including fonts, colours, and layouts.

- **JavaScript**

  JavaScript is a lightweight, object-oriented programming language designed to create network-centric applications. It is a powerful, flexible, and interpreted scripting language that powers the dynamic behaviour of most websites. JavaScript is used in web development to do things like add and manipulate HTML components to the DOM, create dynamic style declarations, fetch content from other websites and APIs, and more.

- **Typescript**

  TypeScript is a primary language for Angular application development. It is a superset of JavaScript with design-time support for type safety and tooling. Browsers can't execute TypeScript directly. Typescript must be "transpiled" into JavaScript using the tsc compiler, which requires some configuration.

- **Angular**

  Angular is an open-source web application framework that allows us to build single-page client applications using HTML and Typescript. It implements core and optional functionality as a set of TypeScript libraries. Angular apps load quickly with the new component router, which delivers automatic code-splitting so users only load code required to render the view that is requested. The basic building blocks of the angular framework are angular components that are organized into NgMogules.

CHAPTER 5

CONCLUSION AND LEARNING OUTCOMES

5.1 Conclusion

The report provides a summary of the Nepvent project, its objectives, how it works, and what technologies and techniques were used to develop the system. Internships are certainly one of the most effective ways of learning and having had the opportunity to learn and grow while working in the real world has been an absolute pleasure.

The internship at LogiSpark technologies has been an eye-opener and nothing short of one of the internees' best decisions in life. It has helped increase the internee's coding, problem-solving and people skills while providing the necessary insights into exactly how and why real-world projects are different from what anyone learns in books. The internee had to switch between entirely different code stacks, working on multiple projects during the course of their internship. The internee has managed to learn significantly more than they had initially hoped for and has managed to do stay efficient along the way. The internship has helped the internee in building soft skills like multitasking and goal setting while also helping them build become a better communicator.

In terms of the software, the system is in an alpha release being tested by stakeholders (admin team), and restaurants alike and is scheduled for a beta release soon. The system is highly adaptable and can work in improvements and additional features on a regular basis. The alpha testing managed to provide some insights as to how the system could be improved over time. Possible improvements to the current system included a more connected order tracking system that could keep the users up to date on their order statuses in more detail and possibly in real time.

5.2 Learning Outcome

The duration of the internship has been a special and monumental experience for the internee. The LogiSpark team had a very no-nonsense approach to everything they did and the internee was made aware of that energy from day one. The internee got a front-row seat to the world of business and has learned invaluable lessons about business, leadership, teamwork, and more.

Despite being unfamiliar with almost the entirety of the code stack used by the team, the internee was entrusted with critical tasks relating to the projects. This pressure and trust may have scared the internee initially, but it worked wonders in the long run. The intern quickly learned a significant amount about Angular.

To summarize, the internship gave the internee the opportunity to improve on their interpersonal skills and coding mastery and build on their confidence and demeanour. It has also taught them business side of things and the importance of having transparency and open communication about the businesses' numbers and how it goes a long way in keeping the team together and the team's spirit unchanging.

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Appendix

Figure 2: Dashboard

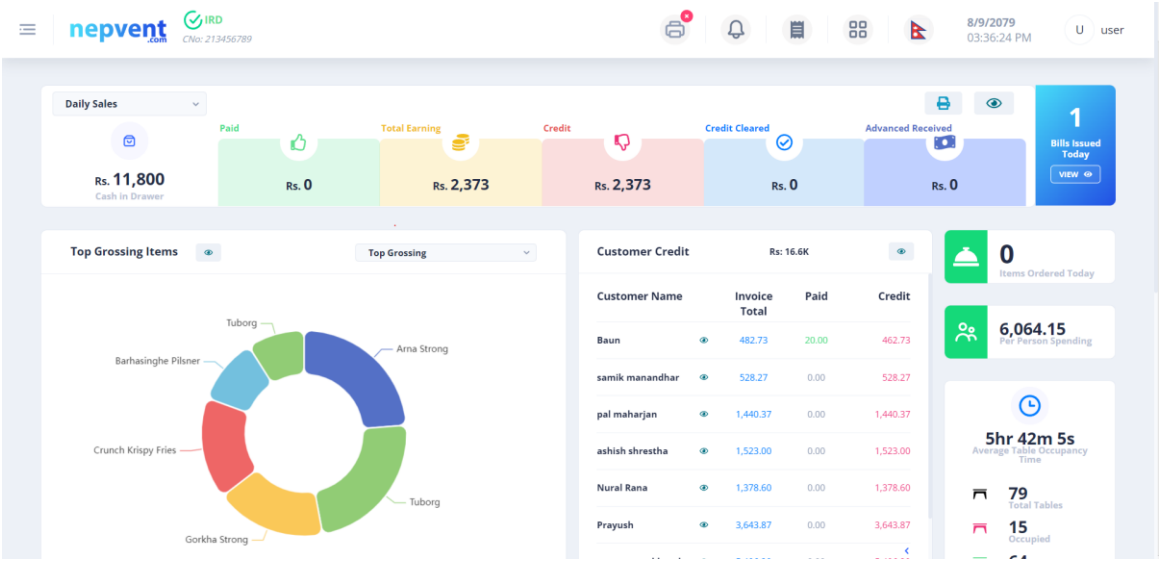


Figure 3: Report in dashboard

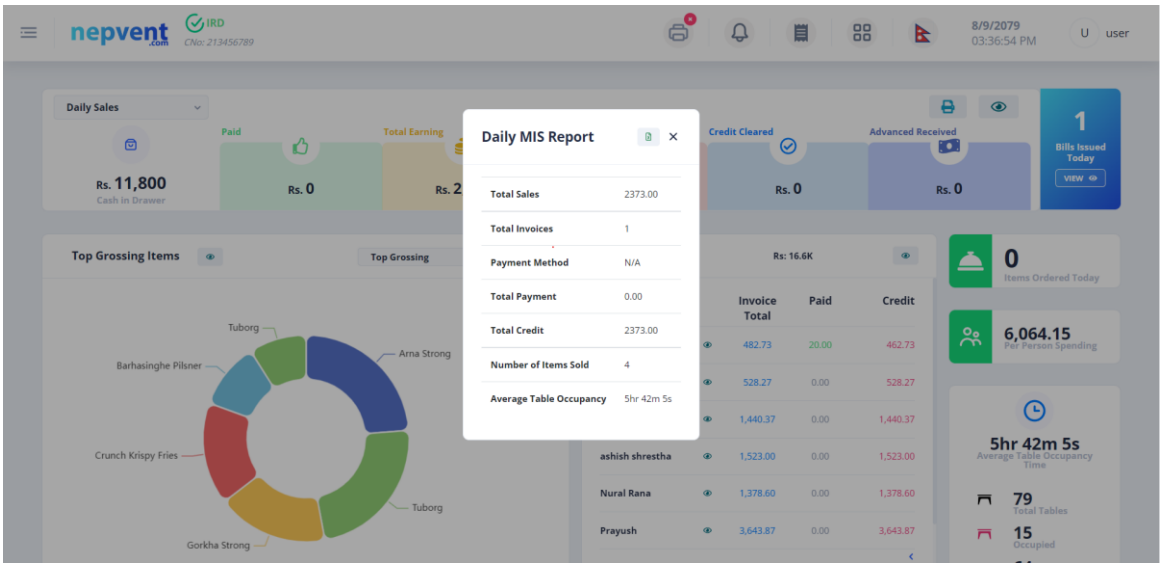


Figure 4: Print

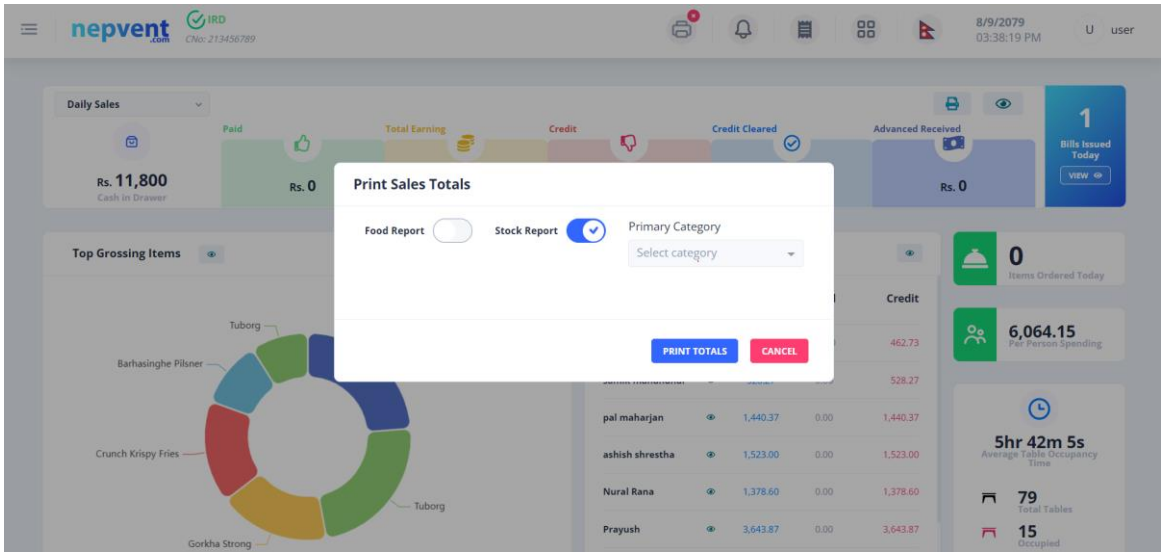


Figure 5: Cash in Drawer

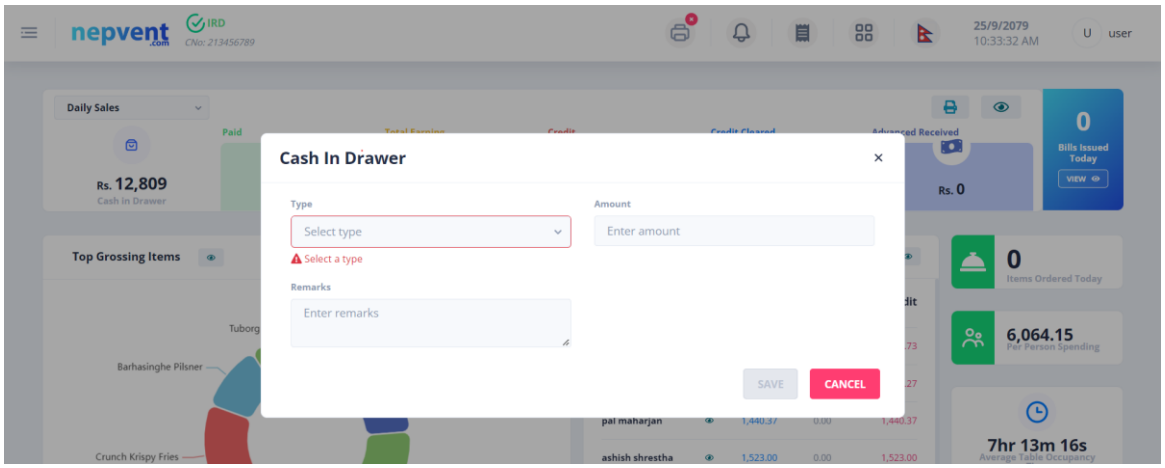


Figure 6 : CRUD operation

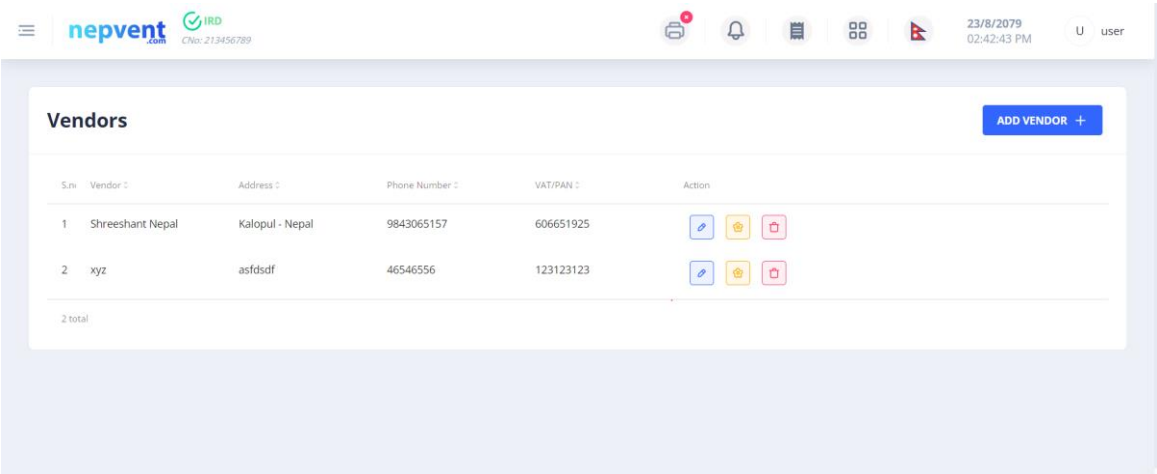


Figure 7: Add

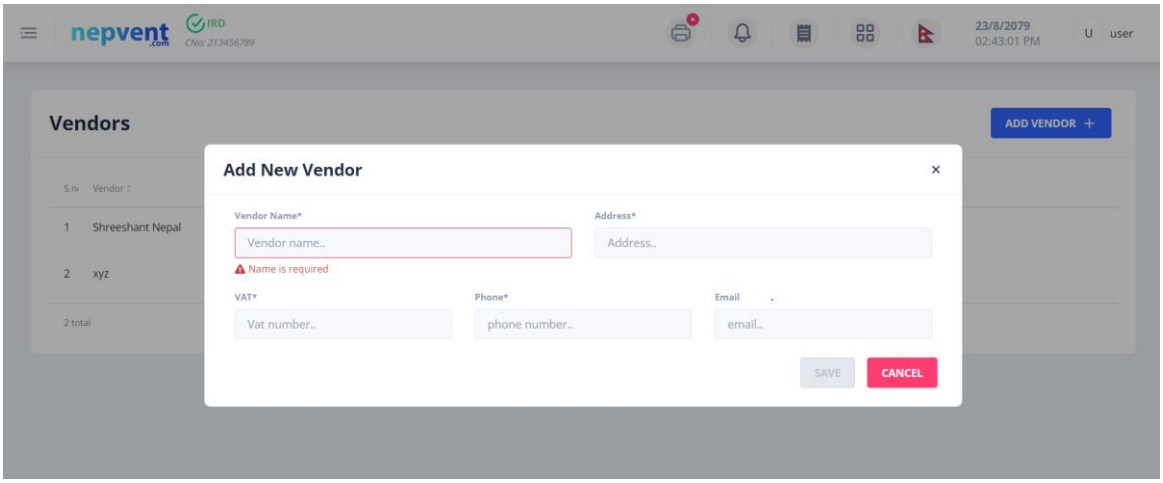


Figure 8: Edit

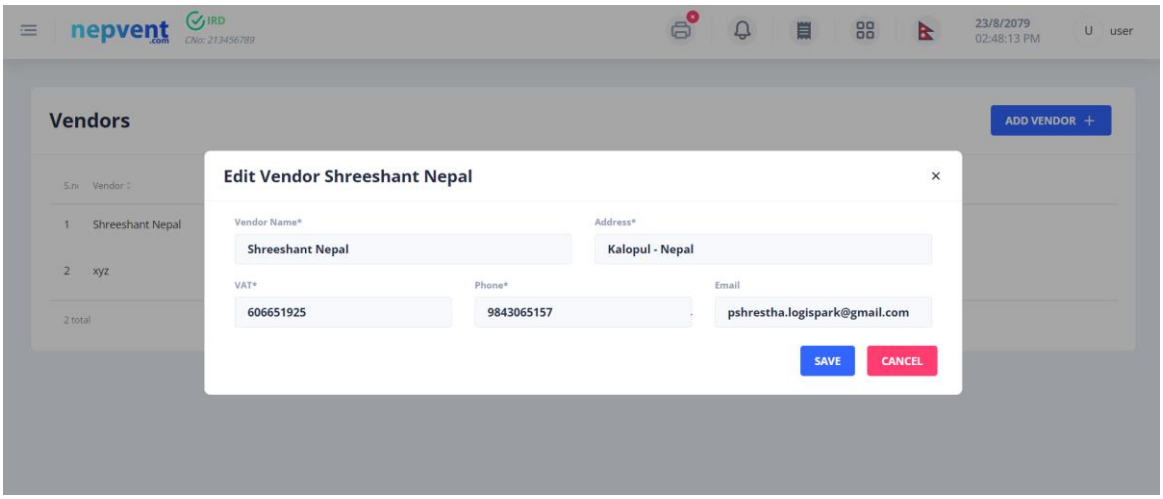


Figure 9: Delete

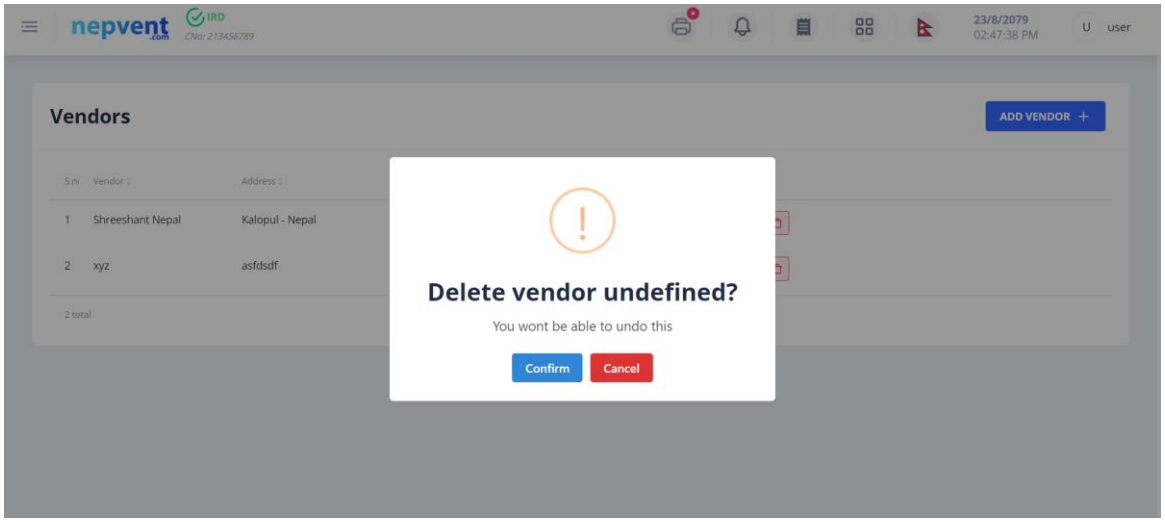


Figure 10: List of reports

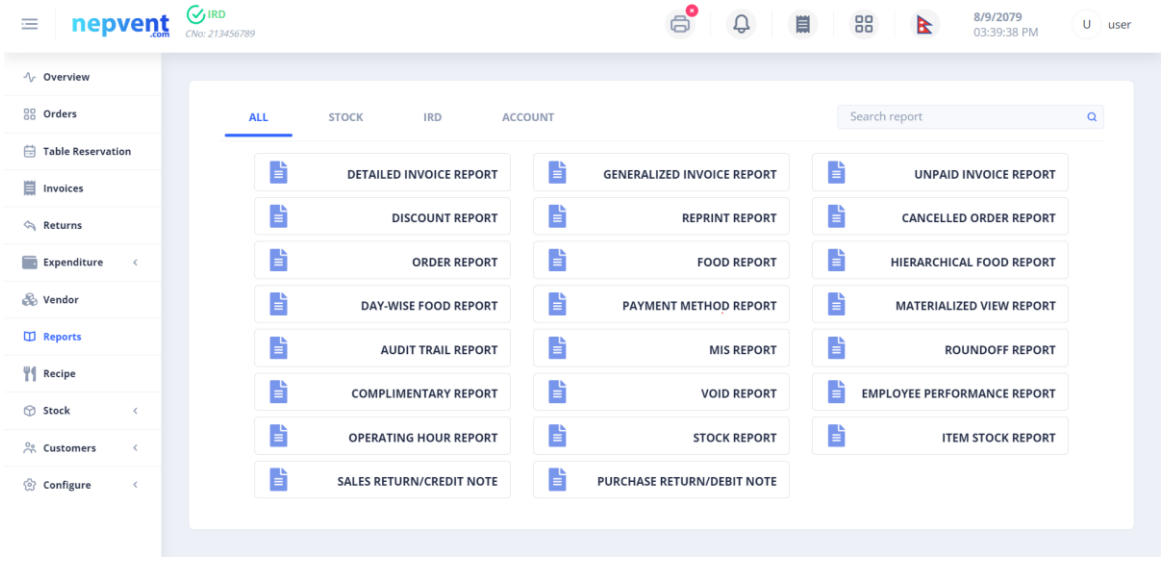


Figure 11: Search in report

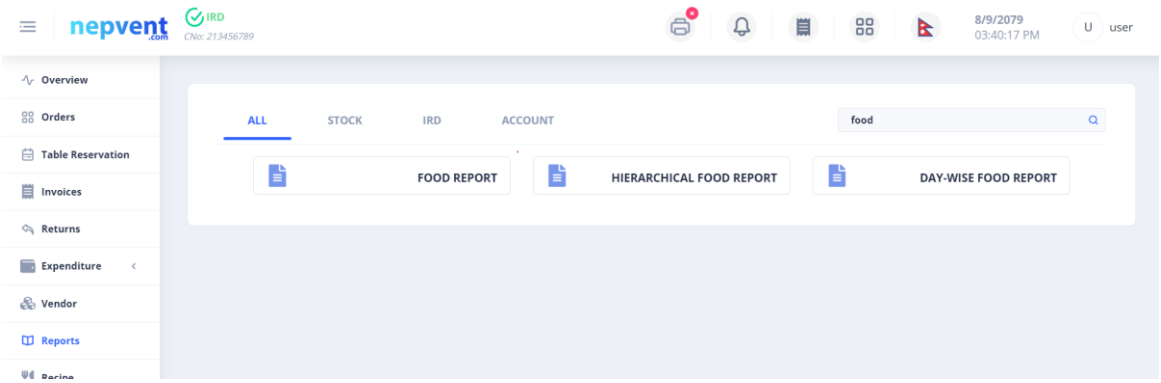


Figure 12: Report

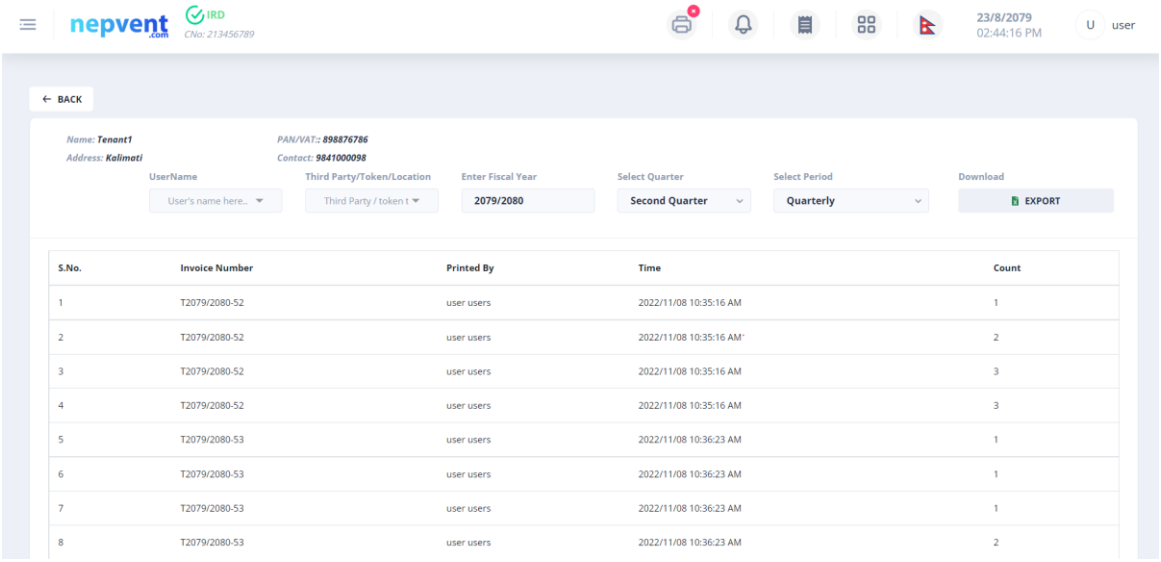
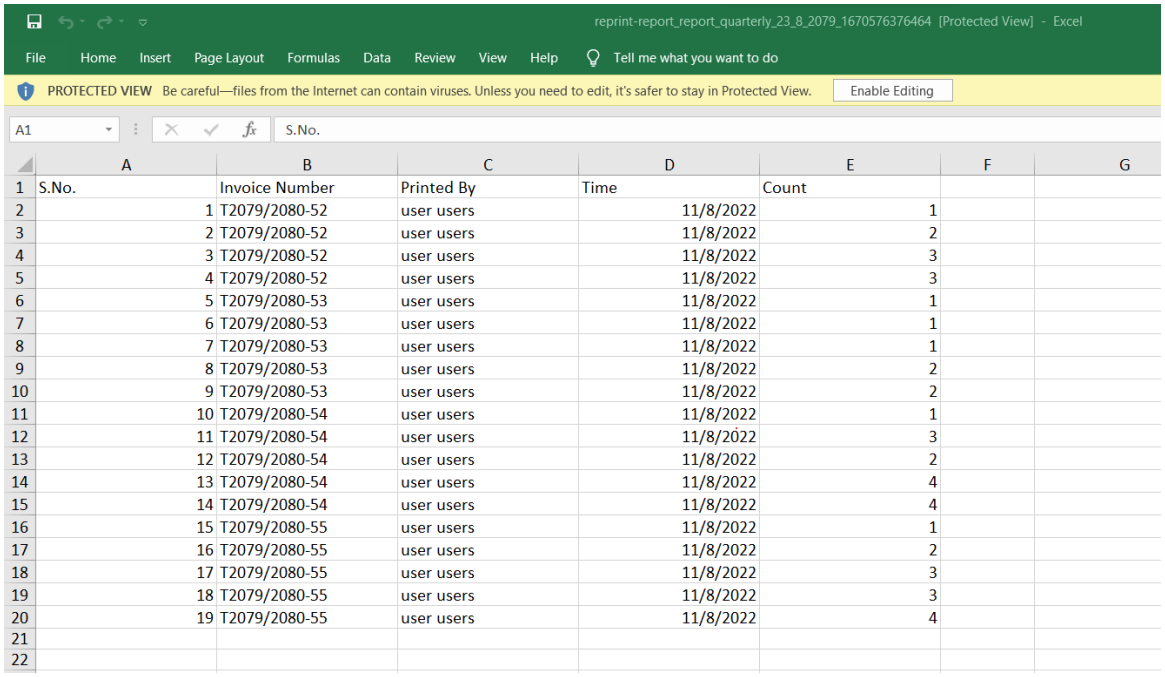


Figure 13: Report exported in excel file



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PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. Enable Editing

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