

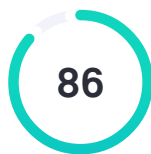
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by Subash Ranabhat

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characters	words	sentences	reading time	speaking time

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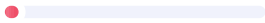
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Writing Issues

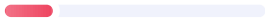
17	Engagement	
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17	Paragraph can be perfected	<div><div></div></div>
5	Intricate text	<div><div></div></div>
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1	Hard-to-read text	<div><div></div></div>
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6	Improper formatting	<div><div></div></div>
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3	Incorrect verb forms	<div><div></div></div>
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3	Punctuation in compound/complex sentences	<div><div></div></div>
2	Faulty subject-verb agreement	<div><div></div></div>
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1	Incorrect phrasing	<div><div></div></div>
1	Text inconsistencies	<div><div></div></div>
2	Comma misuse within clauses	<div><div></div></div>

2 Closing punctuation



7 Delivery

7 Incomplete sentences



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rare words

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Measures average sentence length

words per sentence

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10

CHAPTER 1: INTRODUCTION

Background

Internships have become a vital link between academia and industry, offering students practical work experience while enabling organizations to evaluate and cultivate potential employees. This experience not only offers interns an accurate job preview but also functions as a selection tool for companies to identify and recruit the most promising candidates.

In recent years, the software development sector has experienced substantial growth due to technological advancements and the rising demand for digital solutions across various industries. This expansion highlights the necessity of practical, hands-on experience for aspiring developers to reconcile academic learning with industry demands. Internships are essential in offering students the chance to gain real-world experience and apply theoretical knowledge in a professional context.

During my internship at Bibhuti Solutions, I engaged extensively in developing both frontend and backend infrastructure for VAT Billing, HRMS, and LMS software projects. This work encompassed designing and implementing various components to ensure the seamless operation of the applications. Key system features included user management, an Estimates & Invoice Generator with status-changing capabilities, customer transaction viewing, and management of cash, sales, and purchase receipts.

Current trend of the subject under study

Globally, there has been a noticeable trend towards enhanced collaboration between industry and academia through internships. Rapid evolution of the IT sector, the demand for skilled professionals has surged significantly. Internships have emerged as an effective strategy to meet this demand, allowing organizations to identify and cultivate emerging talent. This approach not only enriches the technical skills of interns but also provides them with essential domain-specific knowledge.

The software development industry is experiencing a major shift towards more robust, scalable, and efficient solutions. Frameworks like Laravel have risen in prominence for their ability to streamline development workflows, enhance code maintainability, and support rapid web application prototyping. As organizations increasingly focus on digital transformation, the need for proficient Laravel developers with expertise in backend development has markedly increased (Williams et al., 2023).

The digital industry has experienced substantial growth, largely driven by the rising consumer demand for online transactions. This surge highlights the necessity for robust backend systems capable of managing large data volumes, ensuring secure transactions, and delivering seamless user experiences. As businesses increasingly transition to digital platforms, the role of backend developers in crafting scalable and efficient systems becomes more crucial. This rapid expansion underscores the need for dependable and scalable backend development to maintain smooth platform operations. Backend systems are essential for handling critical functions such as user authentication, product management, order processing, and secure payment transactions (Documentation, n.d.).

Objective

The primary goal of this internship was to gain hands-on experience in backend development within a professional environment. This encompassed¹¹ comprehending the lifecycle of software development projects, refining coding skills in PHP and Laravel, and learning about industry best practices in backend architecture and database management.

Objective of Internship.

Practical Experience: Develop hands-on expertise in creating backend solutions using the Laravel framework.

Industry Standards Comprehension: Understand and implement industry best practices in software development and project management.

Technical Skill Enhancement: Improve proficiency in PHP programming, MVC architecture, database management, and API integration.

Professional Development: Cultivate the ability to collaborate effectively in a team environment, meet project deadlines, and communicate professionally.

Objective of the Project

The objective of the billing software project was to develop a comprehensive system for managing billing operations, including invoice generation, payment processing, and account management. This required implementing secure¹² authentication mechanisms, designing efficient database schemas, and integrating various backend services to ensure accurate and reliable billing operations. The internship project aims to develop a robust

¹³
billing software backend system using Laravel, focusing on scalable architecture, efficient database management, and secure API integrations. Key objectives include:

Core Functionality Development: Design and implement essential features such as user management, invoice generation, managing customer transactions, and account management.¹⁴

Operational Efficiency: Optimize backend processes for speed, reliability, and scalability to handle high transaction volumes and large datasets.

Security Measures: Implement secure authentication mechanisms, data encryption, and protection against common web vulnerabilities.

Comprehensive Testing: Conduct thorough testing to ensure seamless integration with frontend technologies and third-party services.¹⁵

Scope of the Project

The scope of the billing software project encompassed developing essential backend functionalities such as user authentication, estimates and invoice generation, adding billing components, customer transactions, managing purchase & sales receipt following Nepal Government Vat Billing Standards. My contributions were primarily focused on the backend aspects of the project.¹⁶¹⁶¹⁶¹⁶¹⁶¹⁷

¹⁸
The scope of the project includes the development of critical backend modules for a billing software system using Laravel. It includes:

User Management: Implement user registration, authentication, profile management, and role-based access control.

Generating Estimate Invoice Records: Develop features for creating and managing estimate invoices, allowing users to generate preliminary billing

records before finalization.

Managing Customer Transactions: Design workflows for handling various payment methods, processing transactions, and managing payment records.

Managing Purchase & Sales Records: Implement systems for tracking and managing purchase orders and sales records, ensuring accurate and up-to-date financial data.

Methodology

Organization Selection

Choosing the right organization for my internship was essential for gaining valuable practical experience in backend development within a professional setting. I aimed to find an organization that prioritizes innovation and offers a collaborative work environment conducive to learning and growth in backend technologies. Bibhuti Solutions stood out as the ideal choice due to its strong reputation for excellence in software development and its commitment to nurturing talent in backend technologies. Bibhuti Solutions offered a supportive atmosphere and opportunities to work with cutting-edge technologies such as Laravel and WordPress. This environment allowed me to challenge myself, enhance my understanding of software architecture, and learn industry best practices in backend development. The organization's focus on Laravel-based solutions made it a perfect fit for hands-on learning and professional development in backend technologies.

Placement

At Bibhuti Solutions, I served as a backend development intern with the Development Team from May 2, 2024, to August 4, 2024. This three-month internship provided an in-depth exploration of backend development practices

²⁵ and a comprehensive understanding of the role ²⁶ backend systems ²⁶ play in ²⁵ ecommerce applications. Throughout the internship, I was guided by seasoned developers and actively engaged in projects involving user authentication, database design, and API integration. This experience significantly advanced my technical skills in the Laravel framework, PHP programming, and database management, ²⁷ while also highlighting the critical importance of teamwork and collaborative problem-solving in the field of ²⁸ software development.

Duration

Table 1.1: Internship Duration

Department

Backend

Start Date

2th May, 2024

End Date

3rd Aug, 2024

Office Hour

10 a.m. – 6 p.m.

Internship Period

²⁹ 3 months

Supervisor

Bikems Rijal

Activities, Roles, and Responsibilities

The major goals of the "Backend Intern" Bibhuti Solution were to acquire a solid foundation of frontend development with particular focus on user interface, component creation, and working with frontend frameworks. The following are the list of roles and responsibilities assigned during the internship:

Developing new Billing components as per client requirements.

Collaborating with the frontend team to ensure seamless integration and functionality.

Designing and implementing database schemas and migrations.

Integrating Website for Dynamic webpages.

Work Procedure

The development process utilized agile methodologies, including daily stand-up meetings and iterative development cycles, to effectively deliver incremental updates and meet project requirements. Requirements were systematically gathered, analyzed, and translated into actionable backend tasks. These tasks underwent thorough review and rigorous testing before deployment to ensure quality and functionality.

Tools Used

The core development framework for this project was Laravel, chosen for its advanced MVC architecture, ORM capabilities, and routing features. Git was

used for version control, ensuring effective code management and collaboration across the development team. Communication tools supported interactions with team members, while online resources and tutorials were frequently consulted to augment my understanding of Laravel's advanced features.

⁴¹Key tools and technologies utilized during the internship included:

Laravel Framework: Central to backend development, leveraging its MVC architecture, ORM, and routing capabilities to structure and manage the application (Laravel Documentation, n.d).

⁴²PHP: The primary server-side scripting language used for implementing backend logic and dynamic functionality (Duckett, 2011).

MySQL: The database management system employed for efficient storage, retrieval, and management of application data.⁴³

Git: A version control system used to track changes, manage code revisions, and facilitate collaborative development (Jon Loeliger, 2012).

Postman: An API testing tool utilized to verify the functionality and integration of backend API endpoints (Postman Docs n.d).⁴⁴

Visual Studio Code (VS Code): The Integrated Development Environment (IDE) used for coding, debugging, and testing to enhance development efficiency and productivity (Duckett, 2011).⁴⁵

Limitations of the tools used

Although Laravel and the associated tools provided comprehensive solutions for backend development, certain limitations were encountered, particularly concerning scalability under high traffic and resource-intensive operations. To address these challenges^{46 47}, strategies such as code performance optimization, implementation of caching mechanisms, and periodic infrastructure scaling⁴⁸ were employed.

The tools utilized during the internship exhibited several limitations:

Learning Curve of Laravel: The initial learning curve for newcomers to the Laravel framework posed challenges, requiring significant time and effort to achieve proficiency (Inclin, 2019).

Scalability of MySQL: Scaling MySQL databases for large-scale applications presented difficulties, impacting performance and efficiency as data volume and user load increased.

Integration of Tools: Issues arose with integrating and maintaining consistency across various development tools, occasionally leading to workflow disruptions and compatibility concerns (O'Reilly Media, 2022).

CHAPTER 2: INTRODUCTION OF THE INDUSTRY

Brief Introduction of Industry^{49 50}

⁵¹Encompassing a broad spectrum of services and products, the software industry spans application software, system software, and various web programming solutions. This sector has become a crucial component of contemporary society, fuelling innovation and enhancing efficiency in fields such as⁵² healthcare, finance, education, and entertainment (A History of Modern Computing | Paul E. Ceruzzi n.d).

As a crucial segment of the software industry, web programming is dedicated to the creation of applications and services that function over the Internet. This field covers everything from straightforward websites to sophisticated web-based systems for e-commerce, social networking, online education, and cloud computing. Essential technologies in web programming include [HTML](#), [CSS](#), [JavaScript](#), and [server-side languages such as PHP, Python, and Java](#). Widely used frameworks like Laravel, Django, and Node.js are employed to streamline development processes and enhance both functionality and security.

[The accelerated pace of technological innovation and the rising need for digital solutions have driven significant expansion in the web programming industry.](#) [Organizations are progressively depending on web-based solutions to engage larger audiences, enhance customer experiences, and optimize their operations.](#) This shift has resulted in a surge in demand for proficient web developers who can design, maintain, and refine these digital platforms ([The Innovators | Walter Isaacson, 2014](#)).

[Brief Introduction of Industry in Nepal](#)

[The Information Technology \(IT\) industry in Nepal has experienced substantial growth and development in recent years, emerging as a critical driver of the nation's economic advancement.](#) With a focus on software development, IT services, and digital solutions, the sector has garnered increased investment and innovation. Local tech companies and start-ups are playing a crucial role in enhancing IT infrastructure and services, addressing both domestic and international market demands ([Nepal Telecommunications Authority, Nepal Software Association](#)).

The IT sector in Nepal is making significant contributions to various fields, including education, healthcare, and finance. Digital initiatives such as online payment systems, e- governance, and virtual learning platforms are transforming traditional practices and improving accessibility. For instance, companies like eSewa and F1Soft are spearheading digital financial solutions, while educational institutions are integrating technology to advance digital literacy (eSewa, F1Soft). Notably, the IT industry contributes approximately 1.5% to Nepal's GDP, reflecting its growing impact on the economy. (Industrial Policy, 2010)

The rising demand for IT professionals underscores the sector's expanding significance in Nepal. Tech hubs and incubators, such as the Kathmandu University School of Engineering and the Nepal Innovation Centre, are cultivating a new generation of skilled developers, engineers, and entrepreneurs. This expansion aligns with the global trend of digital transformation and highlights Nepal's burgeoning role in the global IT landscape (Kathmandu University, Nepal Innovation Centre).

CHAPTER 3: INTRODUCTION OF ORGANIZATION

Introduction of Organization

Bibhuti Solutions is a registered web development business in Australia founded with an aim to give complete IT solutions. As one of the web development company with a wider array of IT solutions, Bibhuti Solutions helps to solve big challenges that are technically complex and mission-critical. It specialize in software application development, interactive website design, and many other services with creative and affordable solutions for small & medium to large business concerns. The organization have skills and

experience to build functional, attractive websites at a reasonable cost.

Further, it offer high quality and cost effective web application development (Bibhuti n.d).

Vision and Mission Statement

Mission: To create and deploy affordable software applications that optimize business processes and elevate performance for small and medium enterprises throughout the dynamic Asian markets.

Vision: To be the global frontrunner in delivering ground-breaking, secure, and efficient IT solutions that empower small and medium-sized businesses worldwide to achieve operational excellence and drive digital transformation.

Our mission is to offer state-of-the-art technology and unparalleled customer-centric support that fosters growth, enhances efficiency, and ensures sustained success.

Goal/Objectives of the Organization

Here are some of the goals/objectives of the organization:

Design and deliver cutting-edge solutions tailored to meet the unique needs of clients around the globe.

⁷³ Designing and overseeing biometric-based time and attendance systems.

Design, consult, and develop online B2B systems.

⁷⁴ Providing IT services and Support for Digitization companies.

Develop intuitive software solutions for efficient VAT billing tailored to Nepalese regulations.

Organization Structure

Hierarchy of the management

The management hierarchy at Bibhuti Solutions includes various levels from top management to team leads, ensuring a structured and efficient workflow. The company's organizational structure promotes innovation and consistent performance by assigning clear roles and responsibilities to each team member.

At Bibhuti Solution, the management hierarchy consists of senior management, middle management, and junior management levels.

Hierarchy of Decision-making process

In the organization a top-down approach is applied while making final decisions. The hierarchy of the decision-making process in the organization is shown below:

Figure 3.1: Organization Hierarchy of Decision-Making process

Contact Details

Table 3.1: Organization Contact Details

Bibhuti Solution

Address

Siddhartha Marga, Kathmandu 44600

Phone

01-5913641

Website

www.bibhutisolutions.com.

Email

info@bibhutisolutions.com.np

CHAPTER 4: ANALYSIS OF ACTIVITIES DONE AND PROBLEMS SOLVED

Analysis of the Existing Information System/ Literature Review The transition from static HTML pages to dynamic and interactive web applications has been driven by the development of sophisticated frameworks and libraries. The introduction of HTML5 and CSS3 brought significant improvements in web standards, enabling more complex and visually appealing designs. HTML5 introduced features like semantic elements and multimedia support, which were crucial for enhancing user experiences (W3C, 2014).

The growth of JavaScript frameworks, such as Angular, Vue.js, and React, has transformed the way web applications are developed. Angular, developed by Google, offers a comprehensive solution for building dynamic single-page applications (SPAs) with its robust two-way data binding and dependency injection features (Brad Green, AngularJS: The Comprehensive Guide, 2015). Similarly, Vue.js, known for its ease of integration and progressive framework approach, has gained popularity for building high-performance applications with minimal setup (Evan You, Vue.js: The Progressive Framework, 2016).

The shift towards microservices architecture has influenced web application development by promoting a modular approach. This architecture allows applications to be broken down into smaller, independently deployable

services, improving scalability and maintainability. According to Newman (2015), microservices enhance the flexibility of development and deployment processes, enabling teams to iterate quickly and deploy updates independently. JavaScript applications perform HTTP requests to web APIs, relying on the request URL, HTTP method, and request data to be constructed correctly by string operations. Traditional compile-time error checking, such as calling a nonexistent method in Java, are not available for checking whether such requests comply with the requirements of a web API (E. Wittern, 2017).

Web performance remains a critical aspect of user experience, influencing load times and responsiveness. Techniques for performance optimization include lazy loading, content delivery networks (CDNs), and code splitting. Research by K. Souders (2007) emphasizes the importance of optimizing front-end performance to enhance user satisfaction and engagement.

Problem of Existing System

Before the advent of online VAT billing software in Nepal, businesses faced considerable difficulties with manual VAT management. The traditional process involved cumbersome paperwork, manual calculations, and extensive record-keeping, which often led to errors and inefficiencies. The lack of automation made it challenging to track and report VAT accurately, increasing the risk of compliance issues and delays. This outdated approach not only slowed down business operations but also hindered the ability to quickly adapt to changing tax regulations, impacting overall productivity and accuracy in VAT reporting.

Description of the System under Study

Heera is a sophisticated online VAT billing software developed by Bibhuti Solutions to simplify VAT management for businesses in Nepal. This system

automates VAT calculations, invoice generation, and tax reporting, significantly reducing manual errors and administrative burdens. Heera allows users to input transaction details, apply VAT rates, and generate accurate VAT returns effortlessly. With features such as real-time tax regulation updates, automated reconciliation of VAT transactions, and customizable reports, the software ensures compliance and enhances operational efficiency. Its intuitive interface and robust functionality make it suitable for businesses of all sizes, supporting both small enterprises and larger organizations in managing their VAT obligations effectively.

Data Collection Method

The author collected relevant and important data through following measures:

Interview and Questionnaire

The information necessary for the development of the system was gathered through structured interviews with pertinent authorities. A systematic two-way communication

was established with these authorities to obtain relevant project information.

To gain a thorough understanding of the system's operations, challenges, and potential improvements, a series of open-ended questions were posed to key stakeholders, including system administrators, project supervisors, and end users.

Functional Requirement of the Current System

Use Case Diagram

Figure 4.1: Use Case Diagram

The above figure is a use case diagram showing the users and complete functionality of the system. The users are able to create invoice but not issue it. It will be verified by admin and is transferred to purchase or sales book. User can filter transaction based on purchase and sales invoice. Admin can manage User role and permissions.

Feasibility Study

A feasibility study aims to ascertain the practicality, viability, and likelihood of the success of a proposed project, business activities, or initiative by conducting a thorough and systematic investigation and review (Maza, 2024).

Technical feasibility

Technical feasibility is an assessment of whether a proposed project, product, or service can be successfully implemented using current or available technology. (Resurgentindia, 2023). The system uses backend libraries and frameworks i.e. laravel, and its packages to ensure seamless operation and scalability.

Economic feasibility

Heera benefits lower cost and short time-to-market through the use of reusable components and streamlined frontend development. This increases the project's economic viability.

Operational feasibility

The project reduces complexity for development teams by automating testing¹¹¹ and deployment, and streamlining frontend configuration. Its dependable,¹¹¹ modular design makes updates and maintenance easier, enabling the e-commerce platform to run smoothly and sustainably.¹¹²

Legal Feasibility

The project guarantees adherence to data privacy, security, and licensing rules. It reduces legal risks and upholds compliance by utilizing open-source¹¹³ technologies and appropriately licensed components.

Schedule Feasibility

The system is developed by proper planning and adhering to the schedule for development¹¹⁴ of each component.

User's Needs Assessment of Information

The Online VAT Billing System 'Heera' is designed to improve VAT billing efficiency and compliance. To ensure it meets these goals, it's essential to¹¹⁵ evaluate its performance, capacity, and user experience.¹¹⁶ This includes assessing how well the system handles a high volume of concurrent users and transactions, the speed of VAT calculations and report generation, and overall system availability. Additionally, the user interface should

¹¹⁷ be examined for its ease of use and intuitive design, ensuring users can navigate and complete tasks with minimal training.

Equally important is evaluating Heera's ability to provide accurate and relevant¹¹⁸ information. This involves verifying the correctness of VAT calculations and keeping the system updated with current tax regulations. Assessing the availability of support resources, like help documents and FAQs, is crucial to

ensure users can access necessary information. Furthermore, the system's integration with other financial tools should be reviewed to facilitate seamless data exchange. This assessment aims to provide actionable insights to enhance user experience, ensure scalability, and strengthen security measures to protect sensitive data.

Technical Requirement Analysis

Software Requirement

Table 4.1: Software Requirements

Name

Purpose

HTML

Markup language used to structure the content on the web.

JavaScript

Primary programming language used for frontend development.

CSS

Styling language used to style the website content.

Laravel

PHP framework used for building web application.

Laravel Packages

External Packages for reliable security and authentication.

Hardware Requirements

Table 4.2: Hardware Requirements

Hardware

Purpose

Processor (Minimum 2.5 Ghz core 2 Duo Processor

To process the data at a high speed

RAM (minimum 4 GB)

To process data such that there is no lag

Laptop / PC

To assess web application¹²⁴

Cross Platform Compatibility

Designed for cross-platform use, web browsers like Google Chrome provide exceptional stability and make efficient use of screen space¹²⁵. The application was tested across various platforms to ensure a consistent user experience for all users¹²⁶. The system was evaluated for compatibility with different hardware setups and operating systems, including Windows and macOS.¹²⁷¹²⁸

Overall System Design

System Flowchart

Figure 4.2: System Flow Diagram

The above diagram represents the flow of Heera system, which is developed by the author to make user experience and flow easier to understand. This shows the login aspects and all other functionalities that the user can access in the system.¹²⁹¹²⁹

Flow of Information in The New System

Sequence Diagram

Figure 4.3: Sequence Diagram

The sequence diagram shows an Admin creating Customer and Supplier accounts via a User Management system. Customers login, create estimates, and convert them to invoices, which are then recorded. The admin reviews and verifies invoices before transferring them to the Purchase and Sales Books. Customers can view and print their transaction records. Admins have exclusive permissions to manage users, while other actors do not.

Database Design

Class Diagram

Figure 4.4: Class Diagram

The diagram shows an Admin who creates Customer and Supplier records, manages users, and verifies invoices. Customers create Estimates, which are converted to Invoices. Invoices generate Transaction Records and are transferred to Purchase Book and Sales Book by the Admin. Customers can view their transaction records, while Admins have login and user management capabilities.

System Implementation

System Implementation Overview

System implementation is the phase in the software development lifecycle where the designed system is deployed, integrated, and made operational

within its intended environment, including all necessary configuration and user training (Sommerville, 2016).

The steps in the system implementation overview of online billing system included requirement gathering, planning, prototyping, designing and developing, testing, and debugging the website. The system offers an intuitive user interface, a beautiful design, and straightforward navigation

Tools Used

JavaScript: The author used the JavaScript a primary programming language for the development of the system. Various libraries and frameworks in JS helped the author to add interactivity and responsiveness to it. The author created dynamic and easy flow system with it.

Laravel: The author utilized the Laravel framework to develop robust and scalable backend solutions, leveraging its elegant syntax and powerful features to build efficient and maintainable server-side components. Laravel's built-in tools for routing, authentication, and database management facilitated the creation of a streamlined and secure application architecture.

Velzon Templates: The author employed the Velzon template to design and implement a visually appealing and user-friendly backend interface. By leveraging Velzon's pre-built components and customizable features, the author was able to create a cohesive and responsive UI that enhances the user experience and streamlines backend management tasks.

Google Sheets: The author used Google Sheets to create content plans for websites. The author also uses this tool to create to-do lists and list any disturbances.

Testing Strategy

Test Suite Plan

Test suites are designed¹⁴² to assess an application by verifying that it meets¹⁴³ specified criteria and performs as expected. They typically include detailed instructions or

objectives¹⁴⁴ for each test case, along with information about the system configuration required for testing. Additionally, test suites may outline^{145,146} necessary states, metrics, and descriptive elements to ensure comprehensive¹⁴⁷ evaluation of the application's functionality (Myers, 2004).

Module Testing

Module testing, also known as unit testing¹⁴⁸, involves evaluating individual subprograms, subroutines, classes, or procedures in isolation from the rest of the software. This approach focuses on testing smaller components of the application separately rather than the entire system at once. By allowing the testing of multiple modules simultaneously, module testing facilitates parallel testing and enhances the detection and resolution of bugs. Each component is examined in detail to ensure its correctness and functionality, thereby¹⁴⁹ improving overall software quality (Hamilton, 2024).

System Testing

System testing is a comprehensive evaluation of a fully integrated software solution¹⁵⁰, assessing its overall functionality and performance to ensure it meets the specified requirements and is ready for end users. Conducted after integration testing and before acceptance testing¹⁵¹, system testing verifies that the complete system operates correctly and fulfills all necessary criteria (pp_pankaj, 2024).

User Testing

User testing involves having real users interact with a product, service, app, or website by performing specific tasks in realistic scenarios. This process is designed to evaluate the usability of the interface and functionalities, ensuring the system is ready for a live launch. Testers are given minimal guidance to allow for natural interaction, which helps determine if the system is intuitive and user-friendly for individuals who are not familiar with it (OMNICONVERT, 2023).

Requirements of the User's Training

Although the author has completed the backend development for the online billing system, additional integration and work on other system components are still needed. When the system is ready for use, effective user training will be crucial for ensuring optimal performance. The training program should be customized to address the specific needs and roles of the clients, with well-defined objectives and a clear structure. It is advisable to provide thorough training materials and documentation, and to offer various

delivery methods such as instructor-led sessions, hands-on practice, and online modules. Users should be guided on the backend functionalities, including transaction processing, billing management, and system integration. Furthermore, the training should cover troubleshooting support, customer service, and effective communication to ensure users can navigate and utilize the system efficiently.

System Maintenance

Software maintenance for online billing system is essential to ensure its continued functionality, performance, and usability. Here are some key aspects of software maintenance:

Continuous Updates: Regularly update the online VAT billing system with the latest versions of software components, libraries, and frameworks to boost security and functionality. Include features to display current tax and VAT rates, ensuring the system reflects the latest regulatory changes while maintaining optimal performance and compatibility.

Performance Monitoring: Continuously track and improve the efficiency of the online VAT billing system. Identify and address performance issues, such as memory leaks,¹⁶⁶ that may impact system responsiveness or scalability, ensuring smooth and reliable operation.

Bug fixes: Regularly identify and resolve systemic issues or flaws. Continuously detect, analyze, and address software bugs that could compromise user experience, data integrity, or system usability.

User Support and Training: Provide ongoing support and training to address user concerns and issues with the ticket processing system. Assist with system features, troubleshoot common problems, and answer user inquiries to ensure effective use and smooth operation.

Snapshots

Login Form

Figure 4.5: Login Form

The above image shows login form creating using Laravel Breeze for user login.¹⁶⁷

Dashboard

Figure 4.6: System Dashboard

Various backend components like Laravel Package Module (NwiDart) are used¹⁶⁸ for developing various components and attractive interface.¹⁷¹¹⁶⁹^{170,171}

Estimate Draft

Figure 4.7: Estimate Draft

The screenshot shows the creation of Estimate or in Draft Phase.¹⁷²¹⁷²

Sales Invoice Report

Figure 4.8: Sales Invoice Report

The screenshot shows the Sales Invoice based on Nepal Government Vouching¹⁷³¹⁷³
Pattern.

CHAPTER 5: CONCLUSION AND LESSONS LEARNT

Conclusions

During my internship at Bibhuti Solutions as a Laravel Developer Intern, I gained invaluable hands-on experience with Laravel's powerful features and packages. I effectively utilized various Laravel packages to streamline development processes and enhance functionality. By integrating JavaScript and AJAX, I created dynamic, responsive user interfaces that ensured a seamless user experience. Additionally, I developed proficiency in using Git and GitHub for version control, which facilitated efficient code management and collaborative development.

Throughout my internship, I worked on a diverse range of software applications, including an online billing system (Heera), HRMS, Nepal food licensing software (NeFFILS), LMS, and CCMS. This exposure provided me with a well-rounded understanding of different systems and their unique requirements. Overall, the combination of working with these technologies and tools has significantly advanced my technical skills and prepared me for future challenges in web development.

Lesson Learnt

Over the course of my three-month internship at Bibhuti Solutions, I gained a profound understanding of integrating backend and frontend technologies to deliver cohesive and efficient software systems. Working extensively with Laravel, I utilized various packages to streamline development and enhance functionality. Integrating JavaScript and AJAX allowed me to build responsive and interactive user interfaces, underscoring the importance of aligning robust backend processes with dynamic frontend features to optimize the user experience.

Additionally, my internship provided valuable experience with version control using Git and GitHub, which was essential for effective code management and

team collaboration. I also contributed to diverse projects, including an online billing system, HRMS, Nepal food licensing software, LMS, and CCMS, which broadened my understanding of different software requirements and complexities. This experience highlighted the importance of adaptability, problem-solving, and continuous learning in software development while reinforcing the significance of effective teamwork in achieving project goals.

Recommendation

Bibhuti Solutions has proven to be an exceptional company with a supportive and positive working environment, for which I am genuinely appreciative.¹⁷⁹ The mentorship I received was invaluable, and the overall experience significantly contributed to my professional growth. However, there are areas where the organization could enhance its approach, such as placing greater emphasis on¹⁸ team motivation and collaboration. Ensuring that essential tools and resources are readily accessible to interns would also greatly benefit their productivity and learning experience.

I encourage Bibhuti Solutions to continue fostering its strong work culture and to maintain its commitment to a collaborative and learning-oriented¹⁸¹ environment. The dedication to providing meaningful opportunities for growth and development is commendable, and I hope the company continues to¹⁸¹ uphold these values while expanding its support for future interns. By focusing on these areas of improvement, Bibhuti Solutions can further strengthen its reputation as a nurturing and dynamic workplace for emerging talents.

1.	offers → provides, gives	Word choice	Engagement
2.	<i>This experience not only offers interns an accurate job preview but also functions as a selection tool for companies to identify and recruit the most promising candidates.</i>	Unclear sentences	Clarity
3.	professionally	Wordy sentences	Clarity
4.	extensively developed	Wordy sentences	Clarity
5.	<i>Key system features included user management, an Estimates & Invoice Generator with status-changing capabilities, customer transaction viewing, and management of cash, sales, and purchase receipts.</i>	Unclear sentences	Clarity
6.	<i>Rapid evolution of the IT sector, the demand for skilled professionals has surged significantly.</i>	Paragraph can be perfected	Clarity
7.	<i>This approach not only enriches the technical skills of interns but also provides them with essential domain-specific knowledge.</i>	Unclear sentences	Clarity
8.	major → significant	Word choice	Engagement
9.	largely driven → primarily driven, driven mainly	Word choice	Engagement
10.	<i>This surge highlights the necessity for robust backend systems capable of managing large data volumes, ensuring secure transactions, and delivering seamless user experiences.</i>	Unclear sentences	Clarity

11.	<i>This</i>	Intricate text	Clarity
12.	<i>This</i>	Intricate text	Clarity
13.	billing → Billing	Improper formatting	Correctness
14.	<i>Core Functionality Development: Design and implement essential features such as user management, invoice generation, managing customer transactions, and account management.</i>	Paragraph can be perfected	Clarity
15.	frontend → front-end	Confused words	Correctness
16.	<i>The scope of the billing software project encompassed developing essential backend functionalities such as user authentication, estimates and invoice generation, adding billing components, customer transactions, managing purchase & sales receipt following Nepal Government Vat Billing Standards.</i>	Ungrammatical sentence	Correctness
17.	<i>were primarily focused</i>	Passive voice misuse	Clarity
18.	project scope	Wordy sentences	Clarity
19.	right → proper	Word choice	Engagement
20.	aimed to find → sought	Wordy sentences	Clarity
21.	stood out as → was	Wordy sentences	Clarity
22.	effored → offers	Incorrect verb forms	Correctness
23.	Laravel-based → Laravel-based	Misspelled words	Correctness
24.	served as → was	Wordy sentences	Clarity

25.	<i>This three-month internship provided an in- depth exploration of backend development practices and a comprehensive understanding of the role backend systems play in ecommerce applications.</i>	Ungrammatical sentence	Correctness
26.	<i>This three-month internship provided an in- depth exploration of backend development practices and a comprehensive understanding of the role backend systems play in ecommerce applications.</i>	Unclear sentences	Clarity
27.	management,	Punctuation in compound/complex sentences	Correctness
28.	the field of	Wordy sentences	Clarity
29.	3 → Three	Improper formatting	Correctness
30.	major → primary	Word choice	Engagement
31.	<i>The major goals of the "Backend Intern" Bibhuti Solution were to acquire a solid foundation of frontend development with particular focus on user interface, component creation, and working with frontend frameworks.</i>	Ungrammatical sentence	Correctness
32.	are → is	Faulty subject-verb agreement	Correctness
33.	We are collaborating, or - They are collaborating	Incomplete sentences	Delivery
34.	We are designing, or I am designing	Incomplete sentences	Delivery
35.	migratio-ne → migrations	Confused words	Correctness

36.	<i>We are integrating, or I am integrating</i>	Incomplete sentences	Delivery
37.	effectively	Wordy sentences	Clarity
38.	<i>These tasks underwent thorough review and rigorous testing before deployment to ensure quality and functionality.</i>	Unclear sentences	Clarity
39.	<i>The core development framework for this project was Laravel, chosen for its advanced MVC architecture, ORM capabilities, and routing features.</i>	Paragraph can be perfected	Clarity
40.	<i>online resources and tutorials were frequently consulted</i>	Passive voice misuse	Clarity
41.	Key → Essential	Word choice	Engagement
42.	<i>PHP: The primary server-side scripting language used for implementing backend logic and dynamic functionality (Duckett, 2011).</i>	Unclear sentences	Clarity
43.	application data management	Wordy sentences	Clarity
44.	utilized	Wordy sentences	Clarity
45.	<i>Visual Studio Code (VS Code): The Integrated Development Environment (IDE) used for coding, debugging, and testing to enhance development efficiency and productivity (Duckett, 2011).</i>	Paragraph can be perfected	Clarity
46.	<i>To address these challenges</i>	Misplaced words or phrases	Correctness

47.	<i>To address these challenges, strategies such as code performance optimization, implementation of caching mechanisms, and periodic infrastructure scaling were employed.</i>	Unclear sentences	Clarity
48.	<i>strategies such as code performance optimization, implementation of caching mechanisms, and periodic infrastructure scaling were employed</i>	Passive voice misuse	Clarity
49.	of → to	Wrong or missing prepositions	Correctness
50.	the Industry	Determiner use (a/an/the/this, etc.)	Correctness
51.	<i>Encompassing a broad spectrum of services and products, the software industry spans application software, system software, and various web programming solutions.</i>	Paragraph can be perfected	Clarity
52.	fields such as	Wordy sentences	Clarity
53.	<i>As a crucial segment of the software industry, web programming is dedicated to the creation of applications and services that function over the Internet. This field covers everything from straightforward websites to sophisticated web-based systems for e-commerce, social networking, online educatio...</i>	Paragraph can be perfected	Clarity
54.	both	Wordy sentences	Clarity
55.	progressively depend	Wordy sentences	Clarity

56.	<i>The Information Technology (IT) industry in Nepal has experienced substantial growth and development in recent years, emerging as a critical driver of the nation's economic advancement.</i>	Unclear sentences	Clarity
57.	<i>Local tech companies and start-ups are playing a crucial role in enhancing IT infrastructure and services, addressing both domestic and international market demands (Nepal Telecommunications Authority, Nepal Software Association).</i>	Unclear sentences	Clarity
58.	e-governance → e-governance	Misspelled words	Correctness
59.	are spearheading → spearhead	Wordy sentences	Clarity
60.	economic impact	Wordy sentences	Clarity
61.	global → worldwide	Word choice	Engagement
62.	<i>Bibhuti Solutions is a registered web development business in Australia founded with an aim to give complete IT solutions.</i>	Ungrammatical sentence	Correctness
63.	with an aim to → to, intending to	Wordy sentences	Clarity
64.	company → companies	Incorrect noun number	Correctness
65.	wider → broader	Word choice	Engagement
66.	big → significant	Word choice	Engagement

67.	<i>As one of the web development company with a wider array of IT solutions, Bibhuti Solutions helps to solve big challenges that are technically complex and mission-critical.</i>	Unclear sentences	Clarity
68.	specialize → specializes	Faulty subject-verb agreement	Correctness
69.	large → significant	Word choice	Engagement
70.	<i>The organization have skills and experience to build functional, attractive websites at a reasonable cost.</i>	Ungrammatical sentence	Correctness
71.	<i>Further, it offer high quality and cost effective web application development (Bibhuti n.d).</i>	Ungrammatical sentence	Correctness
72.	<i>Further, it offer high quality and cost effective web application development (Bibhuti n.d).</i>	Unclear sentences	Clarity
73.	I am designing, or We are designing	Incomplete sentences	Delivery
74.	We are providing, or They are providing	Incomplete sentences	Delivery
75.	, from	Punctuation in compound/complex sentences	Correctness
76.	<i>At Bibhuti Solution, the management hierarchy consists of senior management, middle management, and junior management levels.</i>	Unclear sentences	Clarity
77.	<i>In the organization a top-down approach is applied while making final decisions.</i>	Incorrect phrasing	Correctness

78.	<i>is shown</i>	Passive voice misuse	Clarity
79.	process → Process	Confused words	Correctness
80.	<i>been driven</i>	Passive voice misuse	Clarity
81.	the development of → developing	Wordy sentences	Clarity
82.	significantly improved	Wordy sentences	Clarity
83.	which were	Wordy sentences	Clarity
84.	the way → how	Wordy sentences	Clarity
85.	<i>are developed</i>	Passive voice misuse	Clarity
86.	its	Wordy sentences	Clarity
87.	smaller → more minor	Word choice	Engagement
88.	<i>JavaScript applications perform HTTP requests to web APIs, relying on the request URL, HTTP method, and request data to be constructed correctly by string operations. Traditional compile-time error checking, such as calling a nonexistent method in Java, are not available for checking whether such r...</i>	Paragraph can be perfected	Clarity
89.	the importance of	Wordy sentences	Clarity
90.	which often led → often leading	Wordy sentences	Clarity
91.	<i>The lack of automation made it challenging to track and report VAT accurately, increasing the risk of compliance issues and delays.</i>	Unclear sentences	Clarity

92.	<i>This outdated approach not only slowed down business operations but also hindered the ability to quickly adapt to changing tax regulations, impacting overall productivity and accuracy in VAT reporting.</i>	Unclear sentences	Clarity
93.	both small enterprises → small	Wordy sentences	Clarity
94.	important → essential, vital	Word choice	Engagement
95.	the following	Determiner use (a/an/the/this, etc.)	Correctness
96.	<i>The information necessary for the development of the system was gathered</i>	Passive voice misuse	Clarity
97.	was → Was	Improper formatting	Correctness
98.	<i>To gain a thorough understanding of the system's operations, challenges, and potential improvements</i>	Misplaced words or phrases	Correctness
99.	<i>To gain a thorough understanding of the system's operations, challenges, and potential improvements, a series of open-ended questions were posed to key stakeholders, including system administrators, project supervisors, and end users.</i>	Unclear sentences	Clarity
100.	<i>a series of open-ended questions were posed</i>	Passive voice misuse	Clarity
101.	key → critical	Word choice	Engagement
102.	admin; Admin	Text inconsistencies	Correctness

103.	<i>The users are able to create invoice but not issue it. It will be verified by admin and is transferred to purchase or sales book. User can filter transaction based on purchase and sales invoice. Admin can manage User role and permissions.</i>	Paragraph can be perfected	Clarity
104.	activities → activity	Incorrect noun number	Correctness
105.	an assessment of → assessing	Wordy sentences	Clarity
106.	<i>be successfully implemented</i>	Passive voice misuse	Clarity
107.	<i>The system uses backend libraries and frameworks i.e. laravel, and its packages to ensure seamless operation and scalability.</i>	Paragraph can be perfected	Clarity
108.	from lower	Wrong or missing prepositions	Correctness
109.	the use of	Wordy sentences	Clarity
110.	<i>This</i>	Intricate text	Clarity
111.	<i>The project reduces complexity for development teams by automating testing and deployment, and streamlining frontend configuration.</i>	Paragraph can be perfected	Clarity
112.	easier → more accessible	Word choice	Engagement
113.	<i>It reduces legal risks and upholds compliance by utilizing open-source technologies and appropriately licensed components.</i>	Paragraph can be perfected	Clarity
114.	the development	Determiner use (a/an/the/this, etc.)	Correctness

115.	<i>To ensure it meets these goals</i>	Misplaced words or phrases	Correctness
116.	<i>This</i>	Intricate text	Clarity
117.	be → Be	Improper formatting	Correctness
118.	<i>This</i>	Intricate text	Clarity
119.	<i>the system's integration with other financial tools should be reviewed</i>	Passive voice misuse	Clarity
120.	is used	Incorrect verb forms	Correctness
121.	<i>Primary programming language used for frontend development.</i>	Ungrammatical sentence	Correctness
122.	is used	Incorrect verb forms	Correctness
123.	application → applications	Incorrect noun number	Correctness
124.	a web	Determiner use (a/an/the/this, etc.)	Correctness
125.	efficiently use	Wordy sentences	Clarity
126.	<i>The application was tested</i>	Passive voice misuse	Clarity
127.	for all users	Wordy sentences	Clarity
128.	<i>The system was evaluated</i>	Passive voice misuse	Clarity
129.	<i>The above diagram represents the flow of Heera system, which is developed by the author to make user experience and flow easier to understand. This shows the login aspects and all other functionalities that the user can access in the system.</i>	Paragraph can be perfected	Clarity
130.	login → log in	Confused words	Correctness

131.	<i>are then recorded</i>	Passive voice misuse	Clarity
132.	<i>users,</i>	Comma misuse within clauses	Correctness
133.	<i>are converted</i>	Passive voice misuse	Clarity
134.	<i>Invoices generate Transaction Records and are transferred to Purchase Book and Sales Book by the Admin.</i>	Paragraph can be perfected	Clarity
135.	<i>is deployed</i>	Passive voice misuse	Clarity
136.	<i>the online</i>	Determiner use (a/an/the/this, etc.)	Correctness
137.	<i>navigation.</i>	Closing punctuation	Correctness
138.	<i>JavaScript: The author used the JavaScript a primary programming language for the development of the system. Various libraries and frameworks in JS helped the author to add interactivity and responsiveness to it. The author created dynamic and easy flow system with it.</i>	Paragraph can be perfected	Clarity
139.	<i>Velzon Templates: The author employed the Velzon template to design and implement a visually appealing and user-friendly backend interface.</i>	Unclear sentences	Clarity
140.	<i>was able to create</i> → <i>created</i>	Wordy sentences	Clarity
141.	<i>Google Sheets: The author used Google Sheets to create content plans for websites. The author also uses this tool to create to-do lists and list any disturbances.</i>	Paragraph can be perfected	Clarity
142.	<i>are designed</i>	Passive voice misuse	Clarity

143.	are designed to	Wordy sentences	Clarity
144.	objectives → Objectives	Improper formatting	Correctness
145.	<i>objectives for each test case, along with information about the system configuration required for testing.</i>	Unclear sentences	Clarity
146.	<i>objectives for each test case, along with information about the system configuration required for testing.</i>	Incomplete sentences	Delivery
147.	a comprehensive	Determiner use (a/an/the/this, etc.)	Correctness
148.	also known as → or	Wordy sentences	Clarity
149.	thereby	Wordy sentences	Clarity
150.	, assessing → . It assesses	Hard-to-read text	Clarity
151.	<i>Conducted after integration testing and before acceptance testing</i>	Misplaced words or phrases	Correctness
152.	real users interacting	Wordy sentences	Clarity
153.	is designed	Passive voice misuse	Clarity
154.	interface's usability	Wordy sentences	Clarity
155.	are given	Passive voice misuse	Clarity
156.	<i>When the system is ready for use, effective user training will be crucial for ensuring optimal performance.</i>	Unclear sentences	Clarity
157.	effective → practical	Word choice	Engagement

158.	<i>The training program should be customized</i>	Passive voice misuse	Clarity
159.	documentation,	Comma misuse within clauses	Correctness
160.	various.	Closing punctuation	Correctness
161.	delivery → Delivery	Improper formatting	Correctness
162.	<i>delivery methods such as instructor-led sessions, hands-on practice, and online modules.</i>	Incomplete sentences	Delivery
163.	<i>Users should be guided</i>	Passive voice misuse	Clarity
164.	<i>Software maintenance for online billing system is essential to ensure its continued functionality, performance, and usability.</i>	Ungrammatical sentence	Correctness
165.	key → critical	Word choice	Engagement
166.	leaks,	Punctuation in compound/complex sentences	Correctness
167.	<i>The above image shows login form creating using Laravel Breeze for user login.</i>	Ungrammatical sentence	Correctness
168.	<i>are used</i>	Passive voice misuse	Clarity
169.	various → multiple	Word choice	Engagement
170.	interface → interfaces	Incorrect noun number	Correctness
171.	<i>Various backend components like Laravel Package Module (NwiDart) are used for developing various components and attractive interface.</i>	Unclear sentences	Clarity

172.	<i>The screenshot shows the creation of Estimate or in Draft Phase.</i>	Ungrammatical sentence	Correctness
173.	<i>The screenshot shows the Sales Invoice based on Nepal Government Vouching Pattern.</i>	Ungrammatical sentence	Correctness
174.	a diverse range of → various	Wordy sentences	Clarity
175.	provided me with → gave me	Wordy sentences	Clarity
176.	<i>Over the course of my three-month internship at Bibhuti Solutions, I gained a profound understanding of integrating backend and frontend technologies to deliver cohesive and efficient software systems.</i>	Paragraph can be perfected	Clarity
177.	frontend → front-end	Confused words	Correctness
178.	which was	Wordy sentences	Clarity
179.	<i>Bibhuti Solutions has proven to be an exceptional company with a supportive and positive working environment, for which I am genuinely appreciative.</i>	Unclear sentences	Clarity
180.	emphasizing	Wordy sentences	Clarity

181.	<i>I encourage Bibhuti Solutions to continue fostering its strong work culture and to maintain its commitment to a collaborative and learning-oriented environment. The dedication to providing meaningful opportunities for growth and development is commendable, and I hope the company continues to uphold...</i>	Paragraph can be perfected	Clarity
182.	<i>10 CHAPTER 1: INTRODUCTION Background Internships have become a vital link between academia and industry, offering students practical work experience while enabling organizations to evaluate and cultivate potential employees. This experience not only offers interns an accurate job preview but also...</i>		Originality
183.	<i>has experienced substantial growth due to technological advancements and the</i>	Digital Load Monitor Market Analysis, Key Trends, Growth 2032 https://sdnewswire.com/digital-load-monitor-market/	Originality
184.	<i>rising demand for digital solutions across various industries.</i>	Plant Asset Management (PAM) Market Share, Growth, Size 2030 https://www.fairfieldmarketresearch.com/report/plant-asset-management-pam-market	Originality
185.	<i>to gain real-world experience and apply theoretical knowledge in</i>	Meeting Demand: Exploring Online Courses for Alcohol & Other Drugs Studies – Hader Institute of Education https://www.haderinstitute.edu.au/news/meeting-demand-exploring-online-courses-for-alcohol-other-drugs-studies	Originality

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| 186. | <i>This work encompassed designing and implementing various components to ensure the seamless operation of the applications. Key system features included user management, an Estimates & Invoice Generator with status-changing capabilities, customer transaction viewing, and management of cash, sales, an...</i> | Originality |
| <hr/> | | |
| 187. | <i>Globally, there has been a noticeable trend towards enhanced collaboration between industry and academia through internships. Rapid evolution of the IT sector, the demand for skilled professionals has surged significantly. Internships have emerged as an effective strategy to meet this demand, allow...</i> | Originality |
| <hr/> | | |
| 188. | <i>This approach not only enriches the technical skills of interns but also provides them with essential domain-specific knowledge. The software development industry is experiencing a major shift towards more robust, scalable, and efficient solutions.</i> | Originality |
| <hr/> | | |
| 189. | <i>Frameworks like Laravel have risen in prominence for their ability to streamline development workflows, enhance code maintainability, and support rapid web application prototyping. As organizations increasingly focus on digital transformation, the need for proficient Laravel developers with experi...</i> | Originality |
| <hr/> | | |

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| 190. | <i>The digital industry has experienced substantial growth, largely driven by the rising consumer demand for online transactions. This surge highlights the necessity for robust backend systems capable of managing large data volumes, ensuring secure transactions, and delivering seamless user experience...</i> | Originality |
| <hr/> | | |
| 191. | <i>As businesses increasingly transition to digital platforms, the role of backend developers in crafting scalable and efficient systems becomes more crucial. This rapid expansion underscores the need for dependable and scalable backend development to maintain smooth platform operations.</i> | Originality |
| <hr/> | | |
| 192. | <i>Backend systems are essential for handling critical functions such as user authentication, product management, order processing, and secure payment transactions (Documentation, n.d.). Objective The primary goal of this internship was to gain hands-on experience in backend development within a prof...</i> | Originality |
| <hr/> | | |
| 193. | <i>This encompassed comprehending the lifecycle of software development projects, refining coding skills in PHP and Laravel, and learning about industry best practices in backend architecture and database management. Objective of Internship. Practical Experience: Develop hands-on expertise in creatin...</i> | Originality |
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|-------|--|-------------|
| 194. | <i>Industry Standards</i>
<i>Comprehension: Understand and implement industry best practices in software development and project management. Technical Skill Enhancement: Improve proficiency in PHP programming, MVC architecture, database management, and API integration.</i> | Originality |
| <hr/> | | |
| 195. | <i>Professional Development: Cultivate the ability to collaborate effectively in a team environment, meet project deadlines, and communicate professionally. Objective of the Project The objective of the billing software project was to develop a comprehensive system for managing billing operations, in...</i> | Originality |
| <hr/> | | |
| 196. | <i>This required implementing secure authentication mechanisms, designing efficient database schemas, and integrating various backend services to ensure accurate and reliable billing operations. The internship project aims to develop a robust billing software backend system using Laravel, focusing on...</i> | Originality |
| <hr/> | | |
| 197. | <i>Key objectives include: Core Functionality Development: Design and implement essential features such as user management, invoice generation, managing customer transactions, and account management. Operational Efficiency: Optimize backend processes for speed, reliability, and scalability to handle ...</i> | Originality |
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198.	<i>Security Measures: Implement secure authentication mechanisms, data encryption, and protection against common web vulnerabilities. Comprehensive Testing: Conduct thorough testing to ensure seamless integration with frontend technologies and third-party services. Scope of the Project</i>		Originality
199.	<i>project. The scope of the project includes the development of</i>	1303 Industrial Drive https://www.tibuilders.biz/in-design-1/1303-industrial-drive	Originality
200.	<i>Generating Estimate Invoice Records: Develop features for creating and managing estimate invoices, allowing users to generate preliminary billing records before finalization. Managing Customer Transactions: Design workflows for handling various payment methods, processing transactions, and managing...</i>		Originality
201.	<i>Managing Purchase & Sales Records: Implement systems for tracking and managing purchase orders and sales records, ensuring accurate and up-to-date financial data. Methodology Organization Selection Choosing the right organization for my internship was essential for gaining valuable practical exper...</i>		Originality

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|-------|---|-------------|
| 202. | <i>I aimed to find an organization that prioritizes innovation and offers a collaborative work environment conducive to learning and growth in backend technologies. Bibhuti Solutions stood out as the ideal choice due to its strong reputation for excellence in software development and its commitment to...</i> | Originality |
| <hr/> | | |
| 203. | <i>Bibhuti Solutions offered a supportive atmosphere and opportunities to work with cutting-edge technologies such as Laravel and WordPress. This environment allowed me to challenge myself, enhance my understanding of software architecture, and learn industry best practices in backend development.</i> | Originality |
| <hr/> | | |
| 204. | <i>The organization's focus on Laravel- based solutions made it a perfect fit for hands-on learning and professional development in backend technologies. Placement At Bibhuti Solutions, I served as a backend development intern with the Development Team from May 2, 2024, to August 4, 2024.</i> | Originality |
| <hr/> | | |
| 205. | <i>This three-month internship provided an in- depth exploration of backend development practices and a comprehensive understanding of the role backend systems play in ecommerce applications. Throughout the internship, I was guided by seasoned developers and actively engaged in projects involving user...</i> | Originality |
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206.	<i>This experience significantly advanced my technical skills in the Laravel framework, PHP programming, and database management, while also highlighting the critical importance of teamwork and collaborative problem-solving in the field of software development. Duration Table 1.1: Internship Duratio...</i>		Originality
207.	<i>Collaborating with the frontend team to ensure seamless integration</i>	LATIM RONNIE DAVID PORTFOLIO https://latrondav.github.io/lardfolio/	Originality
208.	<i>The development process utilized agile methodologies, including daily stand-up meetings and iterative development cycles, to effectively deliver incremental updates and meet project requirements. Requirements were systematically gathered, analyzed, and translated into actionable backend tasks.</i>		Originality
209.	<i>These tasks underwent thorough review and rigorous testing before deployment to ensure quality and functionality. Tools Used The core development framework for this project was Laravel, chosen for its advanced MVC architecture, ORM capabilities, and routing features. Git was used for version contr...</i>		Originality
210.	<i>Communication tools supported interactions with team members, while online resources and tutorials were frequently consulted to augment my understanding of Laravel's advanced features. Key tools and technologies utilized during the internship included:</i>		Originality

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|------|--|-------------|
| 211. | <i>Laravel Framework: Central to backend development, leveraging its MVC architecture, ORM, and routing capabilities to structure and manage the application (Laravel Documentation, n.d). PHP: The primary server-side scripting language used for implementing backend logic and dynamic functionality (Duc...</i> | Originality |
|------|--|-------------|
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|------|---|--|-------------|
| 212. | <i>Git: A version control system used to track changes,</i> | Skills A Frontend Developer Must Have In 2023
https://marketbusinessnews.com/skills-a-frontend-developer-must-have-in-2023/325869/ | Originality |
|------|---|--|-------------|
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|------|---|-------------|
| 213. | <i>Although Laravel and the associated tools provided comprehensive solutions for backend development, certain limitations were encountered, particularly concerning scalability under high traffic and resource-intensive operations. To address these challenges, strategies such as code performance optimi...</i> | Originality |
|------|---|-------------|
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|------|--|-------------|
| 214. | <i>The tools utilized during the internship exhibited several limitations: Learning Curve of Laravel: The initial learning curve for newcomers to the Laravel framework posed challenges, requiring significant time and effort to achieve proficiency (Inclin, 2019).</i> | Originality |
|------|--|-------------|
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215.	<i>Scalability of MySQL: Scaling MySQL databases for large-scale applications presented difficulties, impacting performance and efficiency as data volume and user load increased. Integration of Tools: Issues arose with integrating and maintaining consistency across various development tools, occasional...</i>		Originality
216.	<i>Encompassing a broad spectrum of services and products,</i>	Assessing the Value of Defensive Sector Funds as Investment Tools InvestWorld.net https://investworld.net/your-compass-during-market-storms-defensive-sector-funds-for-resilient-investments	Originality
217.	<i>A History of Modern Computing Paul E. Ceruzzi</i>	CSE P 590A: History of Computing, Autumn 2006 https://courses.cs.washington.edu/courses/csep590a/06au/	Originality
218.	<i>HTML, CSS, JavaScript, and server-side languages such as PHP, Python,</i>	Learning Our Web Stack - The Business Blocks https://thebusinessblocks.com/glossary/learning-our-web-stack/	Originality
219.	<i>The accelerated pace of technological innovation and the</i>	ZHAOQING MEILIANDA CO., Ltd 肇庆美联达有色金属有限公司 http://www.meiliandaalu.com/news_detail.php?id=25	Originality

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|-------|---|-------------|
| 220. | <i>Organizations are progressively depending on web-based solutions to engage larger audiences, enhance customer experiences, and optimize their operations. This shift has resulted in a surge in demand for proficient web developers who can design, maintain, and refine these digital platforms (The Inno...</i> | Originality |
| <hr/> | | |
| 221. | <i>The Information Technology (IT) industry in Nepal has experienced substantial growth and development in recent years, emerging as a critical driver of the nation's economic advancement. With a focus on software development, IT services, and digital solutions, the sector has garnered increased inves...</i> | Originality |
| <hr/> | | |
| 222. | <i>Local tech companies and start-ups are playing a crucial role in enhancing IT infrastructure and services, addressing both domestic and international market demands (Nepal Telecommunications Authority, Nepal Software Association). The IT sector in Nepal is making significant contributions to vario...</i> | Originality |
| <hr/> | | |
| 223. | <i>Digital initiatives such as online payment systems, e- governance, and virtual learning platforms are transforming traditional practices and improving accessibility. For instance, companies like eSewa and F1Soft are spearheading digital financial solutions, while educational institutions are integr...</i> | Originality |
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224.	<i>Notably, the IT industry contributes approximately 1.5% to Nepal's GDP, reflecting its growing impact on the economy. (Industrial Policy, 2010) The rising demand for IT professionals underscores the sector's expanding significance in Nepal.</i>		Originality
225.	<i>Tech hubs and incubators, such as the Kathmandu University School of Engineering and the Nepal Innovation Centre, are cultivating a new generation of skilled developers, engineers, and entrepreneurs. This expansion aligns with the global trend of digital transformation and highlights Nepal's burgeo...</i>		Originality
226.	<i>Bibhuti Solutions is a registered web development business in Australia founded with an aim to give complete IT solutions. As one of the web development company with a wider array of IT solutions, Bibhuti Solutions helps to solve big challenges that are technically complex and mission-critical.</i>	Bibhuti Solutions - Creative Website Design http://bibhutisolutions.com.au/about/company-profile	Originality
227.	<i>specialize in software application development, interactive website design, and many other services with creative and affordable solutions for small & medium to large business concerns.</i>	Bibhuti Solutions - Creative Website Design http://bibhutisolutions.com.au/about/company-profile	Originality
228.	<i>Vision and Mission Statement Mission: To create and deploy affordable software applications that optimize business processes and elevate performance for small and medium enterprises throughout the dynamic Asian markets.</i>		Originality

229.	<i>Our mission is to offer state-of-the-art technology and</i>	NYC Premier Cosmetic Surgery Team - Clinique des Champs Elysees https://newyork.crpce.com/clinic/	Originality
230.	<i>the unique needs of clients around the globe.</i>	Technical Systems Engineering Lead CGI https://cgi.jobs/arlington-va/technical-systems-engineering-lead/77DDEFED1824ED6832612BA534A932F/job/?vs=28	Originality
231.	<i>Develop intuitive software solutions for efficient VAT billing tailored to Nepalese regulations. Organization Structure Hierarchy of the management The management hierarchy at Bibhuti Solutions includes various levels from top management to team leads, ensuring a structured and efficient workflow...</i>		Originality
232.	<i>senior management, middle management, and junior management levels.</i>	Banking on your talent: Financial Sector Charter and transformation in the workplace Global Workplace Insider https://www.globalworkplaceinsider.com/2018/02/banking-on-your-talent-financial-sector-charter-and-transformation-in-the-workplace/	Originality
233.	<i>The transition from static HTML pages to dynamic</i>	Exploring the Evolution of the Internet: From Web 2.0 to Web 3.0 - IHTREEK TECH OFFICIAL https://www.ihreekttech.com/2023/02/exploring-the-evolution-of-the-internet-from-web-2-0-to-web-3-0-ihreekttech.html	Originality

234.	<i>The introduction of HTML5 and CSS3 brought significant improvements in web standards, enabling more complex and visually appealing designs. HTML5 introduced features like semantic elements and multimedia support, which were crucial for enhancing user experiences (W3C, 2014).</i>		Originality
235.	<i>The growth of JavaScript frameworks, such as Angular, Vue.js, and React, has transformed the way web applications are developed. Angular, developed by Google, offers a comprehensive solution for building dynamic single-page applications (SPAs) with its robust two-way data binding and dependency inj...</i>		Originality
236.	<i>Similarly, Vue.js, known for its ease of integration and progressive framework approach, has gained popularity for building high-performance applications with minimal setup (Evan You, Vue.js: The Progressive Framework, 2016). The shift towards microservices architecture has influenced web applicat...</i>		Originality
237.	<i>JavaScript applications perform HTTP requests to web APIs, relying on the request URL, HTTP method, and request data to be constructed correctly by string operations. Traditional compile-time error checking, such as calling a</i>	<i>Statically Checking Web API Requests in JavaScript for ICSE 2017 - IBM Research</i> https://research.ibm.com/publications/statically-checking-web-api-requests-in-javascript	Originality

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| 238. | <i>method in Java, are not available for checking whether such requests comply with the requirements of a web API</i> | Statically Checking Web API Requests in JavaScript for ICSE 2017 - IBM Research
https://research.ibm.com/publications/statically-checking-web-api-requests-in-javascript | Originality |
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| 239. | <i>Web performance remains a critical aspect of user experience, influencing load times and responsiveness. Techniques for performance optimization include lazy loading, content delivery networks (CDNs), and code splitting. Research by K. Souders (2007) emphasizes the importance of optimizing front-en...</i> | | Originality |
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| 240. | <i>Before the advent of online VAT billing software in Nepal, businesses faced considerable difficulties with manual VAT management. The traditional process involved cumbersome paperwork, manual calculations, and extensive record-keeping, which often led to errors and inefficiencies.</i> | | Originality |
|------|--|--|-------------|
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| 241. | <i>The lack of automation made it challenging to track and report VAT accurately, increasing the risk of compliance issues and delays. This outdated approach not only slowed down business operations but also hindered the ability to quickly adapt to changing tax regulations, impacting overall productiv...</i> | | Originality |
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242.	<i>Heera is a sophisticated online VAT billing software developed by Bibhuti Solutions to simplify VAT management for businesses in Nepal. This system automates VAT calculations, invoice generation, and tax reporting, significantly reducing manual errors and administrative burdens. Heera allows users ...</i>		Originality
243.	<i>With features such as real-time tax regulation updates, automated reconciliation of VAT transactions, and customizable reports, the software ensures compliance and enhances operational efficiency. Its intuitive interface and robust functionality make it suitable for businesses of all sizes, support...</i>		Originality
244.	<i>To gain a thorough understanding of the system's</i>	The Dynamics of Electric Submersible Pump Populations and the Implication for Dual ESP Systems	Originality
245.	<i>Technical feasibility Technical feasibility is an assessment of whether a proposed project, product, or service can be successfully implemented using current or available technology.</i>	Technical Feasibility: Definition, (Process & Best Practices) https://www.resurgentindia.com/technical-feasibility-definition-process-best-practices	Originality
246.	<i>Heera benefits lower cost and short time-to-market through the use of reusable components and streamlined frontend development. This increases the project's economic viability. Operational feasibility The project reduces complexity for development teams by automating testing and deployment, and st...</i>		Originality

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| 247. | <i>Its dependable, modular design makes updates and maintenance easier, enabling the e-commerce platform to run smoothly and sustainably. Legal Feasibility The project guarantees adherence to data privacy, security, and licensing rules. It reduces legal risks and upholds compliance by utilizing open-s...</i> | Originality |
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| 248. | <i>The system is developed by proper planning and adhering to the schedule for development of each component. User's Needs Assessment of Information The Online VAT Billing System 'Heera' is designed to improve VAT billing efficiency and compliance. To ensure it meets these goals, it's essential to ev...</i> | Originality |
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| 249. | <i>a high volume of concurrent users and transactions,</i> | what is ont
https://pacctax.co.za/what-is-ont/ | Originality |
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| 250. | <i>Equally important is evaluating Heera's ability to provide accurate and relevant information. This involves verifying the correctness of VAT calculations and keeping the system updated with current tax regulations. Assessing the availability of support resources, like help documents and FAQs, is cr...</i> | Originality |
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251.	<i>Furthermore, the system's integration with other financial tools should be reviewed to facilitate seamless data exchange. This assessment aims to provide actionable insights to enhance user experience, ensure scalability, and strengthen security measures to protect sensitive data. Technical Require...</i>		Originality
252.	<i>ensure a consistent user experience for all users.</i>	Navigating the Challenges of Responsive Graphic Design: Designing for Every Screen https://www.haysden.com/blog/navigating-the-challenges-of-responsive-graphic-design-designing-for-every-screen	Originality
253.	<i>Laravel: The author utilized the Laravel framework to develop robust and scalable backend solutions, leveraging its elegant syntax and powerful features to build efficient and maintainable server-side components. Laravel's built-in tools for routing, authentication, and database management facilita...</i>		Originality
254.	<i>to design and implement a visually appealing and user-friendly</i>	BLOCKCHAIN DEV for LOCAL TRADERS HiredChina - Jobs in China for Expats https://www.hiredchina.com/jobs/2b73e150-5117-40a6-bd61-c42ff8b1e889	Originality

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| 255. | <i>Google Sheets: The author used Google Sheets to create content plans for websites. The author also uses this tool to create to-do lists and list any disturbances. Testing Strategy Test Suite Plan Test suites are designed to assess an application by verifying that it meets specified criteria and pe...</i> | Originality |
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| 256. | <i>objectives for each test case, along with information about the system configuration required for testing. Additionally, test suites may outline necessary states, metrics, and descriptive elements to ensure comprehensive evaluation of the application's functionality (Myers, 2004). Module Testing</i> | Originality |
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| 257. | <i>Module testing, also known as unit testing, involves evaluating individual subprograms, subroutines, classes, or procedures in isolation from the rest of the software. This approach focuses on testing smaller components of the application separately rather than the entire system at once.</i> | Originality |
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| 258. | <i>By allowing the testing of multiple modules simultaneously, module testing facilitates parallel testing and enhances the detection and resolution of bugs. Each component is examined in detail to ensure its correctness and functionality, thereby improving overall software quality (Hamilton, 2024). ...</i> | Originality |
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259.	<i>System testing is a comprehensive evaluation of a fully integrated software solution, assessing its overall functionality and performance to ensure it meets the specified requirements and is ready for end users.</i>		Originality
260.	<i>Conducted after integration testing and before acceptance testing, system testing verifies that the complete system operates correctly and fulfills all necessary criteria (pp_pankaj, 2024). User Testing User testing involves having real users interact with a product, service, app, or website by pe...</i>		Originality
261.	<i>This process is designed to evaluate the usability of the interface and functionalities, ensuring the system is ready for a live launch. Testers are given minimal guidance to allow for natural interaction, which helps determine if the system is intuitive and user-friendly for individuals who are no...</i>		Originality
262.	<i>The training program should be customized to address the specific needs and roles of</i>	Unlocking Customer Loyalty With Casino Marketing Training https://casinomarketingbootcamp.com/customer-loyalty-through-casino-marketing-training/	Originality

263.	<i>Users should be guided on the backend functionalities, including transaction processing, billing management, and system integration. Furthermore, the training should cover troubleshooting support, customer service, and effective communication to ensure users can navigate and utilize the system effi...</i>		Originality
264.	<i>Software maintenance for online billing system is essential to ensure its continued functionality, performance, and usability. Here are some key aspects of software maintenance: Continuous Updates: Regularly update the online VAT billing system with the latest versions of software components, libra...</i>		Originality
265.	<i>Identify and address performance issues, such as memory leaks,</i>	Learn More Javascript: From Where to Begin to Javascript Framework Knowledge Hub Media https://knowledgehubmedia.com/learn-more-javascript-from-where-to-begin-to-javascript-framework/	Originality
266.	<i>User Support and Training: Provide ongoing support and training to address user concerns and issues with the ticket processing system. Assist with system features, troubleshoot common problems, and answer user inquiries to ensure effective use and smooth operation. Snapshots Login Form Figure 4...</i>		Originality

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| 267. | <i>The screenshot shows the Sales Invoice based on Nepal Government Vouching Pattern. CHAPTER 5: CONCLUSION AND LESSONS LEARNT Conclusions During my internship at Bibhuti Solutions as a Laravel Developer Intern, I gained invaluable hands-on experience with Laravel's powerful features and packages.</i> | Originality |
| <hr/> | | |
| 268. | <i>I effectively utilized various Laravel packages to streamline development processes and enhance functionality. By integrating JavaScript and AJAX, I created dynamic, responsive user interfaces that ensured a seamless user experience. Additionally, I developed proficiency in using Git and GitHub for...</i> | Originality |
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| 269. | <i>Throughout my internship, I worked on a diverse range of software applications, including an online billing system (Heera), HRMS, Nepal food licensing software (NeFFILS), LMS, and CCMS. This exposure provided me with a well-rounded understanding of different systems and their unique requirements.</i> | Originality |
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| 270. | <i>Overall, the combination of working with these technologies and tools has significantly advanced my technical skills and prepared me for future challenges in web development. Lesson Learnt Over the course of my three-month internship at Bibhuti Solutions, I gained a profound understanding of integr...</i> | Originality |
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271.	<i>Working extensively with Laravel, I utilized various packages to streamline development and enhance functionality. Integrating JavaScript and AJAX allowed me to build responsive and interactive user interfaces, underscoring the importance of aligning robust backend processes with dynamic frontend f...</i>		Originality
272.	<i>Additionally, my internship provided valuable experience with version control using Git and GitHub, which was essential for effective code management and team collaboration. I also contributed to diverse projects, including an online billing system, HRMS, Nepal food licensing software, LMS, and CCM...</i>		Originality
273.	<i>This experience highlighted the importance of adaptability, problem-solving, and continuous learning in software development while reinforcing the significance of effective teamwork in achieving project goals. Recommendation Bibhuti Solutions has proven to be an exceptional company with a supporti...</i>		Originality
274.	<i>Ensuring that essential tools and resources are readily accessible</i>	Maximize Productivity: The Impact of Clean Workspaces https://www.cleangroup.com.au/maximize-productivity-the-impact-of-clean-workspaces/	Originality

275. *The dedication to providing meaningful opportunities for growth and development is commendable, and I hope the company continues to uphold these values while expanding its support for future interns. By focusing on these areas of improvement, Bibhuti Solutions can further strengthen its reputation ...*

Originality