



**Tribhuvan University**  
**Faculty of Humanities and Social Science**

**AN INTERNSHIP REPORT ON  
EMPLOYEES INFORMATION SYSTEM  
AT NEPAL TELECOM**

**Submitted To**  
**Department of Computer Application**  
**Pascal National College**

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

**Submitted By**  
**Kshitij Rai (6-2-1226-12-2020) March**  
**2025**

**Under the Supervision of**  
**Jagdish Bhatta**



Tribhuvan University

Faculty of Humanities and Social Science

Pascal National College

### SUPERVISORS RECOMMENDATION

I hereby recommend that this project is prepared under my supervision by Kshitij Rai, entitled "**Employee Information Service**" in the partial fulfillment for the degree of Bachelor of Computer Application. This report is recommended for the final evaluation.

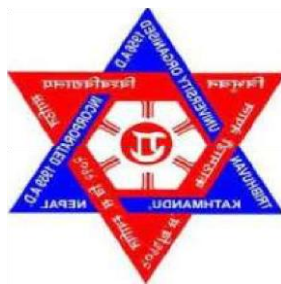
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SIGNATURE

Jagdish Bhatta

SUPERVISOR

Pascal National College



Tribhuvan University

Faculty of Humanities and Social Science

Pascal National College

### LETTER OF APPROVAL

This is to certify that Kshitij Rai has prepared this project entitled "**Employee Information Service**" in the partial fulfillment for the degree of Bachelor of Computer Application. In our opinion, it is satisfactory in the scope and quality as a project for the required degree.

Signature of Supervisor	Signature of Administration Head
Mr. Jagdish Bhatta Supervisor Pascal National College Satdobato, Lalitpur	Nabaraj Dawadi Administration Head Pascal National College Satdobato, Lalitpur
Signature of Internal Examiner	Signature of External Examiner

## ACKNOWLEDGEMENT

I would like to express my deepest gratitude to everyone who contributed to making my internship at Nepal Telecom an invaluable and enriching learning experience.

First and foremost, I extend my sincere appreciation to Mr. Rabi Raj Yadav, my supervisor, for his exceptional mentorship and unwavering support throughout the duration of my internship. His insightful guidance and constructive feedback were instrumental in honing my skills in website development and UI/UX design. Mr. Yadav's patience and willingness to share his extensive knowledge created a nurturing environment that fostered my professional growth.

I am also profoundly thankful to my colleagues at Nepal Telecom. Their collaborative spirit and willingness to share their expertise significantly enhanced my understanding of real-world project development and the intricacies of the telecommunications industry. The supportive and friendly atmosphere they cultivated made my learning journey both seamless and enjoyable.

Furthermore, I would like to acknowledge the invaluable foundation provided by my professors and mentors at Pascal National College. Their consistent encouragement and academic guidance have been pivotal in preparing me for this practical experience. This internship at Nepal Telecom has not only broadened my technical skills but also provided me with a deeper understanding of the professional work environment and the importance of teamwork. The experience has been truly transformative, and I am immensely grateful for the opportunity to have learned and grown in such a dynamic setting.

Finally, I want to thank Nepal Telecom for providing me with this incredible opportunity. I am confident that the skills and knowledge I have gained will serve me well in my future endeavors.

Sincerely,

Kshitij Rai

6-2-1226-29-2020

## ABSTRACT

This internship report details my practical experience at Nepal Telecom, focusing on the development and implementation of a comprehensive internal website designed to streamline employee access to company events, announcements, and essential information. The project aimed to modernize internal communication channels by creating an interactive and visually engaging platform.

Leveraging a robust technology stack, including HTML5, CSS3, JavaScript (ES6+), Bootstrap 5, and Figma, I focused on both front-end and back-end web development. My responsibilities encompassed the entire project lifecycle, from initial UI/UX design and prototyping to the final deployment and testing phases. I implemented user-centered design principles to ensure the platform was intuitive and accessible, while also focusing on responsive design to guarantee seamless functionality across various devices.

A key aspect of this project was the integration of OTP (One-Time Password) authentication to enhance security and protect sensitive company information. This involved developing secure authentication workflows and integrating them with the existing system architecture.

The primary objective of this project was to establish a centralized portal for Nepal Telecom employees, fostering improved internal communication and collaboration. By successfully implementing this platform, I contributed to enhancing the efficiency and effectiveness of information dissemination within the organization.

This internship provided invaluable hands-on experience in full-stack web development, UI/UX design, and security implementation within a professional environment. It also allowed me to refine my problem-solving, teamwork, and project management skills. The practical challenges encountered during the project significantly enhanced my understanding of real-world software development practices.

**Keywords:** Nepal Telecom, Internal Website Development, Employee Portal, UI/UX Design, OTP Authentication, Bootstrap 5, HTML5, CSS3, JavaScript (ES6+), Front-End Development, Back-End Development, Security Implementation, Project Management, Software Development.

## TABLE OF CONTENTS

SUPERVISOR’S RECOMMENDATION.....	i
LETTER OF APPROVAL.....	ii
ACKNOWLEDGMENT.....	iii
ABSTRACT.....	iv
TABLE OF CONTENT.....	v
ABBREVIATIONS.....	vii
LIST OF FIGURE.....	viii
LIST OF TABLE.....	ix
CHAPTER 1 INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Problem Statement.....	1
1.3 Objective.....	2
1.4 Scope and Limitation.....	2
1.5 Report Organization.....	3
CHAPTER 2 INTRODUCTION TO ORGANIZATION.....	5
2.1 Organization Details.....	5
2.2 Organizational Hierarchy.....	6
2.3 Working Domains of Organization.....	8
CHAPTER 3 BACKGROUND STUDY AND LITERATURE REVIEW.....	10
3.1 Background Study.....	10
3.2 Literature Review.....	10
CHAPTER 4 INTERNSHIP ACTIVITIES.....	12
4.1 Roles and Responsibility.....	12

4.2 Weekly Log.....	13
4.3 Description of the Project Involved During Internship.....	15
4.4 Tasks/ Activities Performed.....	16
CHAPTER 5 CONCLUSION AND LEARNING OUTCOMES.....	19
5.1 Conclusion.....	19
5.2 Learning Outcome.....	19
REFERENCES.....	20

## LIST OF ABBREVIATIONS

OPT	One-Time Password
NTC	Nepal Telecom
BCA	Bachelor of Computer Application
HR	Human Resource
IT	Information Technology
UI/UX	User Interface / User Experience



## LIST OF FIGURES

Figure 2.1 Organization Hierarchy.....	7
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## LIST OF TABLES

Table 4.1 Weekly Logs.....	13
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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Nepal Telecom is a leading telecommunications provider in Nepal, offering a wide range of services to customers across the country. With a strong presence in the industry, the company plays a vital role in connecting people through mobile, internet, and landline services.

During my internship at Nepal Telecom, I had the opportunity to contribute to the organization's internal digital infrastructure by developing an internal website for employees. This platform was designed to display company events, announcements, and essential information, ensuring better communication and engagement among employees. The primary objective of the project was to streamline internal communication, enhance accessibility to company updates, and create a centralized hub for important resources.

By working on this project, I gained hands-on experience in web development, user interface design, and database management while also understanding the importance of efficient internal communication in a large organization. The project not only improved internal engagement but also provided employees with a user-friendly and organized platform to stay informed about company activities.

### 1.2 Problem Statement

Nepal Telecom faced challenges in ensuring efficient and timely dissemination of critical internal information to its workforce. The absence of a centralized digital platform resulted in fragmented communication, leading to difficulties for employees in accessing essential updates, announcements, and event schedules. This lack of an organized information-sharing system contributed to communication gaps, reduced workplace efficiency, and potential delays in company-wide coordination. Specifically, the primary issue was the absence of a structured and secure medium that ensured accessibility, usability, and data security. Consequently, employees struggled to stay informed, impacting overall productivity and engagement.

### 1.3 Objective

- Centralized Information Access: Create a single, accessible platform for employees to retrieve all relevant internal information.
- Real-Time Updates: Provide employees with immediate access to important announcements and event schedules.
- User-Friendly Interface: Develop an intuitive and easy-to-navigate interface to ensure seamless user interaction.
- Secure Authentication: Implement a robust OTP-based authentication system to protect sensitive company information.

### 1.4 Scope and Limitations

Scope:

The primary scope of the website developed during this internship was to create a comprehensive internal communication platform for Nepal Telecom employees. This platform was designed to provide:

- Real-Time Event Updates: Employees receive immediate notifications and detailed information regarding upcoming company events, training sessions, and social gatherings.
- Company-Wide Announcements: Critical announcements, policy updates, and official communications are disseminated through the platform, ensuring all employees are informed promptly.
- Internal News and Updates: A dedicated section for internal news, achievements, project updates, and employee spotlights, fostering a sense of community and transparency.
- User Profiles: Individual employee profiles to facilitate internal networking and communication.
- OTP authentication: secure access to the platform.

## Limitations:

The scope of this project was deliberately limited to address internal communication needs within Nepal Telecom. Consequently, the platform has the following limitations:

- **Internal Access Only:** The website is exclusively accessible to authorized Nepal Telecom employees through secure login credentials and OTP authentication. This restriction ensures the confidentiality and security of internal information.
- **No Public Access:** The platform does not provide public access to external users, partners, or customers. This limitation is intentional, as the content is intended for internal consumption only.
- **Limited External System Integration:** Integration with external systems, such as social media platforms or external databases, was not within the scope of this project.

## 1.5 Report Organization

This report is structured into several chapters that cover various aspects of the internship:

- Chapter 1 introduces the project, its objectives, and the problem it aims to solve.
  - Chapter 2 provides an overview of Nepal Telecom and its organizational structure.
  - Chapter 3 discusses background research and relevant literature that informed the project.
  - Chapter 4 details internship activities, including weekly logs and tasks performed.
  - Chapter 5 summarizes key learnings and the impact of the project.
  - References section includes sources that support the report.
- This report is structured into several chapters that cover various aspects of the internship, including the organization details, background study, internship activities, and conclusions.

## CHAPTER 2

### INTRODUCTION TO ORGANIZATION

#### 2.1 Organization Details

Nepal Telecom's foundational journey commenced with the establishment of the Nepal Telecommunications Corporation in B.S. 2032, a pivotal moment born from the necessity to consolidate and expand telecommunication services across the nation, as mandated by the Communications Corporation Act 2028. This marked a significant stride in Nepal's communication infrastructure, evolving from earlier departmental structures that laid the groundwork for modern telecommunications. In B.S. 2061, recognizing the need to adapt to an increasingly competitive market and prioritize customer-centricity, the corporation underwent a transformative phase, rebranding as Nepal Doorsanchar Company Limited. This transition signified a shift from a government-owned monopoly towards a business-oriented entity, dedicated to innovation and service excellence. Throughout its evolution, from its early roots in Mohan Akashwani and the subsequent departmental and board formations to its modern corporate structure, Nepal Telecom has remained steadfast in its commitment to providing reliable and cost-effective telecommunication services. This commitment extends to every corner of Nepal, from urban centers to the most remote regions, striving to bridge the digital divide and contribute significantly to the country's social, political, and economic progress. By embracing technological advancements and placing the customer at the forefront, Nepal Telecom continues to play a crucial role in nation-building, inviting stakeholders to join in its vision of a connected and prosperous Nepal."

## 2.2 Organizational Hierarchy

Nepal Telecom operates under a structured hierarchy, with different departments managing various services such as mobile communication, broadband internet, and enterprise solutions.

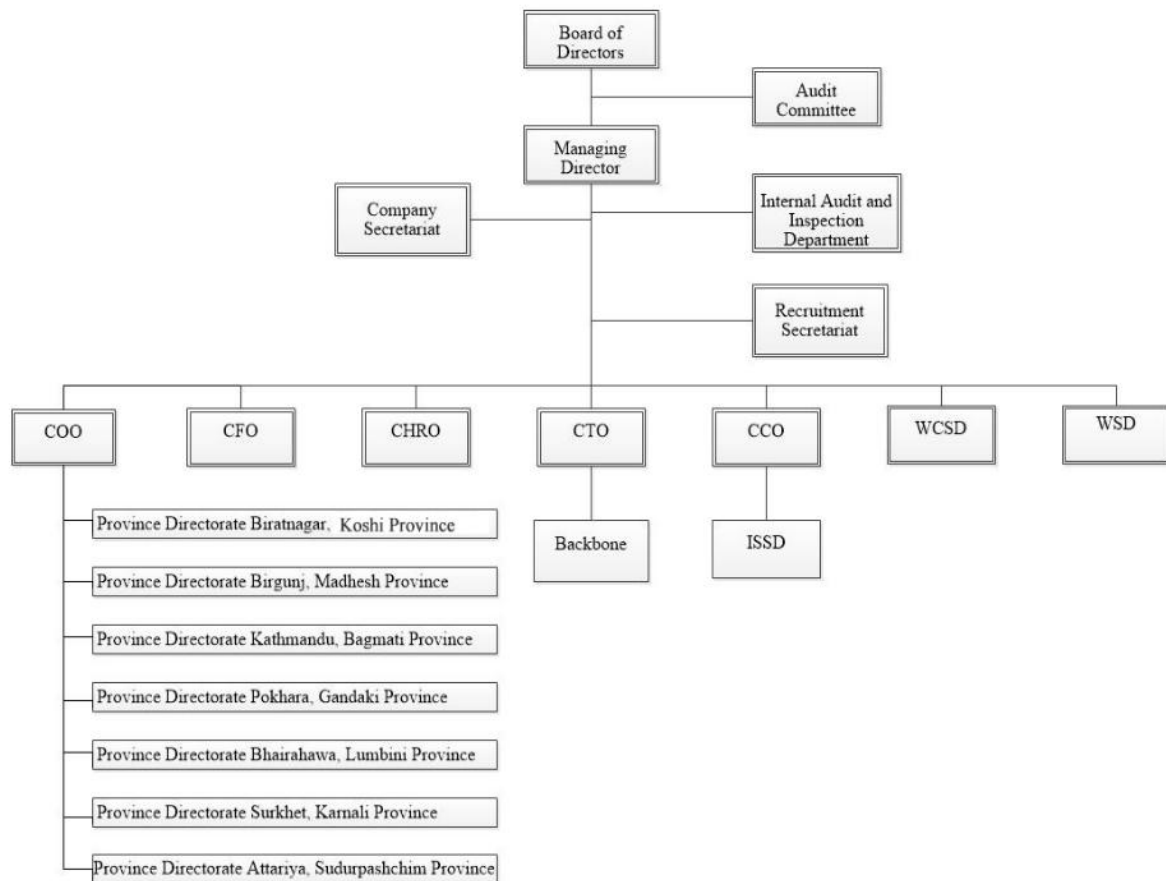


Figure 2.1: Organization Hierarchy

## 2.3 Working Domains of organization

Nepal Telecom's journey began as the Nepal Telecommunications Corporation in B.S. 2032, established to expand national telecommunication services. In B.S. 2061, it transitioned to Nepal Doorsanchar Company Limited, adapting to a competitive market. Throughout its evolution, Nepal Telecom has consistently provided reliable and cost-effective telecommunication services across Nepal. Today, it offers a diverse range of services, including internet and digital solutions, striving to bridge the digital divide and contribute to the nation's progress.

## CHAPTER 3

### BACKGROUND STUDY AND LITERATURE REVIEW

#### 3.1 Background Study

Efficient internal communication is vital for modern organizations. Nepal Telecom sought to modernize its communication by developing an intranet-based platform. This aimed to address fragmented information dissemination and the lack of a centralized employee portal. Many organizations use such systems to improve efficiency. Nepal Telecom needed a tailored solution to enhance information accessibility and employee engagement through a user-friendly internal website.

#### 3.2 Literature Review

Studies highlight the importance of intranet portals in enhancing organizational effectiveness. Well-structured employee portals increase productivity and efficiency. Intuitive design and relevant content are crucial for success. Secure authentication, like OTP verification, is essential for safeguarding company information. User-centered UI/UX design ensures functional and engaging interfaces. This project aimed to create a secure, efficient, and user-friendly internal communication platform by incorporating best practices.



## CHAPTER 4

### INTERNSHIP ACTIVITIES

#### 4.1 Roles and Responsibilities

The intern was employed by Nepal Telecom as a Website Development and UI/UX Intern, contributing to the development of an internal communication platform. Under the guidance of the Supervisor, the intern played a pivotal role in the design and implementation of the website's functionality and user interface. The intern demonstrated strong technical skills, a keen eye for design, and a dedication to improving internal communication, making substantial contributions to the project's success.

The following roles and responsibilities were assigned during the internship:

- **Website Development Assistance:** Contributed to the development of an internal website for Nepal Telecom, actively participating in the creation and implementation of website features.
- **Interactive UI/UX Design and Prototyping:** Designed and developed interactive UI/UX prototypes, ensuring an intuitive and engaging user experience for employees.
- **Front-End and Back-End Integration Collaboration:** Worked closely with the development team to ensure seamless integration of front-end and back-end functionalities, enhancing the website's performance.
- **Performance and Responsiveness Optimization:** Optimized the website for performance and responsiveness across various devices, ensuring smooth user interaction.
- **Usability Testing and Feedback Collection:** Conducted usability testing and gathered feedback to improve website usability and user engagement, incorporating user insights into design and development.
- **Visual Consistency and Design Language Maintenance:** Maintained consistency in visual elements and design language throughout the website, ensuring a cohesive and professional appearance.
- **OTP authentication Implementation:** Implemented OTP authentication for secure user access.

## 4.2 Weekly Logs (Technical Details of Activities)

WEEKS	ACTIVITYS
Week 1	<p>Orientation at Nepal Telecom and understanding project objectives.</p> <ul style="list-style-type: none"><li>- Research on existing internal communication platforms.</li><li>- Planning website structure and initial UI wireframes in Figma.</li></ul>
Week 2	<ul style="list-style-type: none"><li>- Developing the homepage layout with responsive design principles.</li><li>- Implementing user authentication workflow, including OTP verification setup.</li></ul>
Week 3	<ul style="list-style-type: none"><li>- Developing an admin panel for managing events and news updates.</li><li>- Running usability tests to check for navigation ease.</li></ul>
Week 4	<p>-Finalizing all sections of the website, ensuring all functionalities work seamlessly.</p>
Week 5	<ul style="list-style-type: none"><li>- Preparing project documentation and guidelines for future enhancements.</li></ul>

Table 4.1: Weekly Logs

### 4.3 Description of the Project Involved During Internship

During my internship at Nepal Telecom, I was deeply involved in the development of a comprehensive internal communication website. This project was strategically designed to streamline and enhance the flow of information among Nepal Telecom employees. The core objective was to create a centralized digital platform that would provide employees with real-time access to crucial company updates, announcements, upcoming events, and departmental news.

My contributions spanned both front-end and back-end development. For the front-end, I utilized Bootstrap to create a responsive and user-friendly interface, ensuring that the website was accessible and visually appealing across various devices. This involved designing and implementing intuitive navigation, engaging layouts, and interactive elements to optimize the user experience.

On the back-end, a significant focus was placed on implementing robust security measures. This included the integration of a secure authentication system, featuring OTP (One-Time Password) verification, to protect sensitive company information and ensure that access was restricted to authorized personnel only. Furthermore, I worked on integrating the database with the front end, ensuring seamless and efficient data retrieval and display.

Beyond the core functionalities, the project also involved:

- **Content Management:** Developing an administrative panel that allowed authorized personnel to easily manage and update website content, including announcements, events, and news articles.
- **Usability Testing:** Conducting usability tests and gathering feedback from employees to identify areas for improvement and ensure that the website met their needs.
- **Performance Optimization:** Optimizing the website for performance and responsiveness, ensuring fast loading times and smooth user interactions.
- **Documentation:** Creating comprehensive documentation, including user manuals and technical specifications, to facilitate future maintenance and updates.
- **Database design and implementation:** Properly designing and implementing the database for the project.

## 4.4 Tasks/ Activities Performed

- **Designed and Developed a Responsive Web Interface:** Created a user-friendly and visually appealing web interface using HTML, CSS, JavaScript, and Bootstrap, ensuring seamless functionality across various devices and screen sizes.
- **Implemented OTP Authentication for Secure Login:** Integrated a robust OTP (One-Time Password) authentication system to enhance security and protect sensitive company information, ensuring only authorized personnel could access the platform.
- **Created an Admin Panel for Managing Content:** Developed an intuitive administrative panel, enabling authorized personnel to efficiently manage and update website content, including announcements, events, news articles, and user accounts.
- **Database Design and Implementation:** Designed and implemented a relational database to store and manage website data, ensuring data integrity and efficient retrieval.
- **Front-End and Back-End Integration:** Integrated the front-end interface with the back-end system, ensuring seamless data flow and functionality.
- **Debugging and Troubleshooting:** Identified and resolved bugs and technical issues, ensuring the website's stability and reliability.

## CHAPTER 5

### CONCLUSION AND LEARNING OUTCOMES

#### 5.1 Conclusion

The internship at Nepal Telecom was a transformative experience that provided me with valuable industry exposure and technical skills. The development of the internal website played a critical role in improving the company's internal communication system by offering a centralized and secure platform for employees to access important updates. Throughout the internship, I applied modern web development techniques and security protocols to build a functional and user-friendly website. This project not only enhanced my programming and UI/UX design skills but also gave me a deeper understanding of how digital platforms contribute to organizational efficiency. By overcoming challenges such as authentication security, data management, and responsiveness, I was able to gain hands-on experience in real-world problem-solving. This internship reinforced my ability to work in a structured corporate environment and further motivated me to pursue advanced web development projects in the future.

The internship at Nepal Telecom provided valuable industry experience. The internal website development successfully enhanced communication and provided employees with easy access to company updates.

#### 5.2 Learning / Outcome

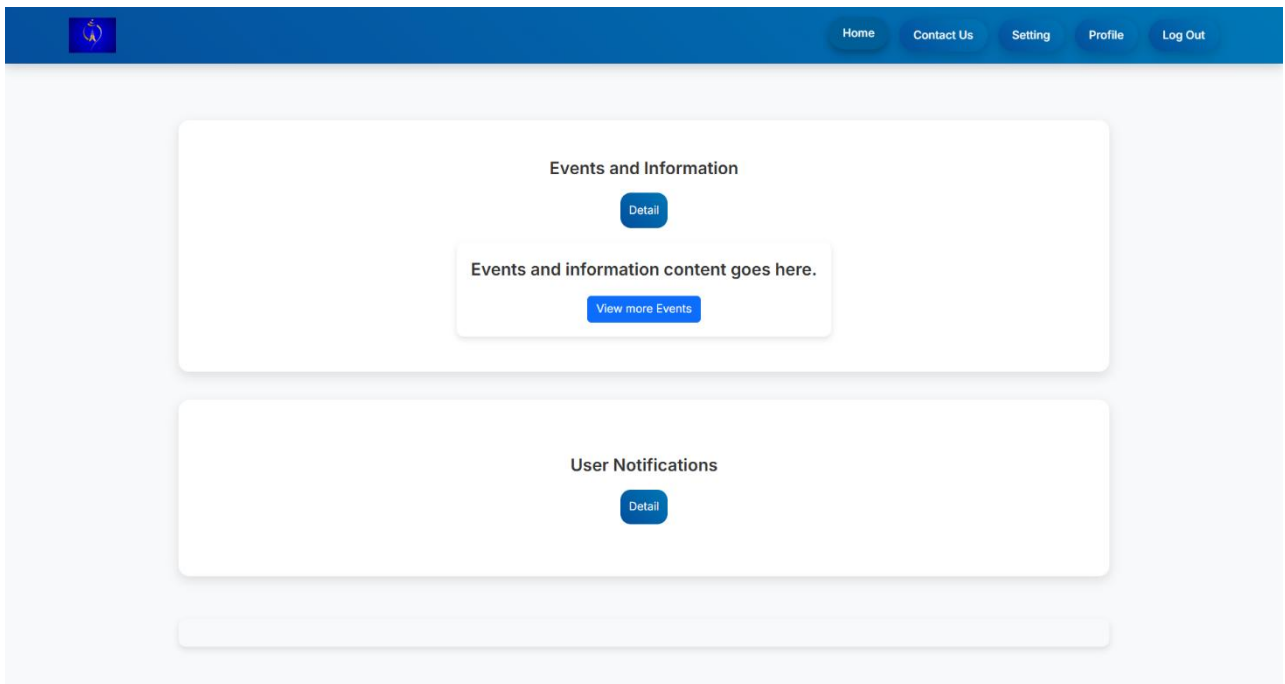
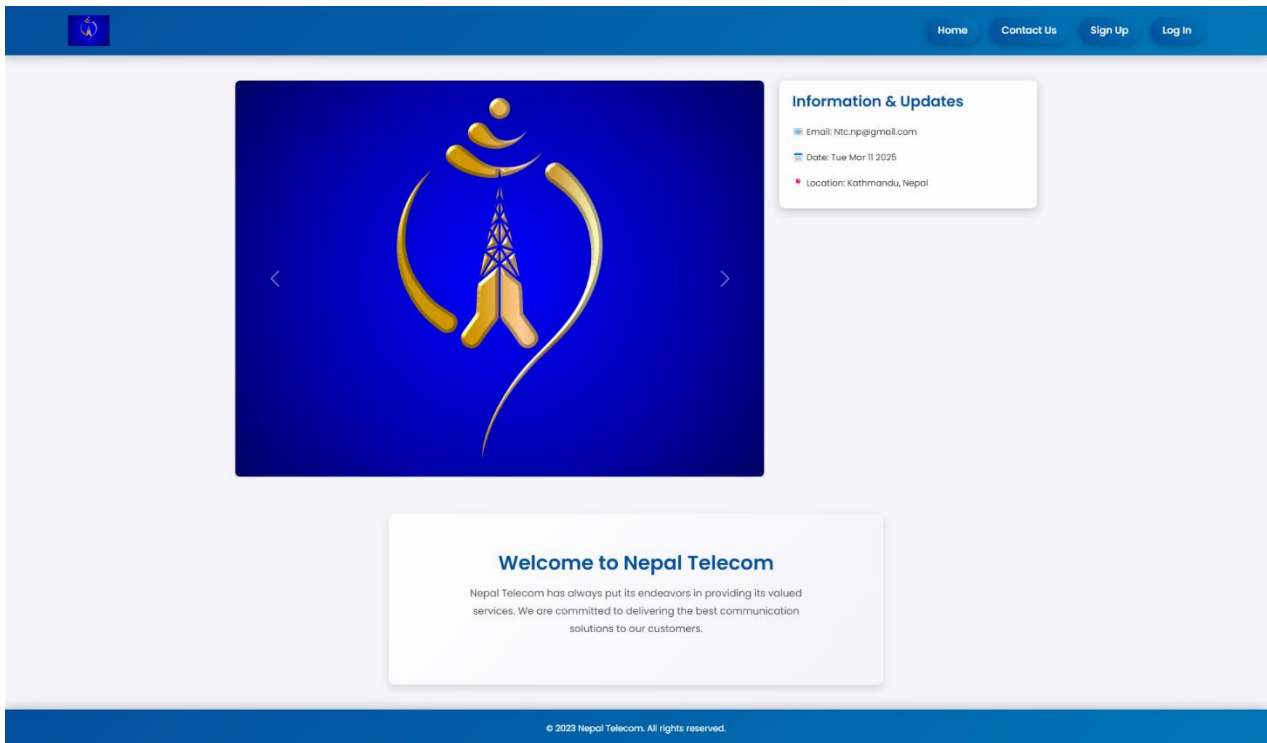
- Developed a strong understanding of web development technologies, including HTML, CSS, JavaScript, and Bootstrap.
- Improved problem-solving and debugging skills through hands-on experience in website creation and testing.
- Gained knowledge of secure authentication mechanisms, particularly OTP-based login systems, and their importance in cyber security.

- Enhanced UI/UX design skills by creating an intuitive and user-friendly interface tailored to the needs of Nepal Telecom employees.
- Strengthened teamwork and collaboration skills by working closely with mentors, supervisors, and colleagues in a professional work environment.
- Learned how to integrate real-time updates into a website, ensuring employees have quick and easy access to important information.
- Acquired experience in structuring and documenting projects professionally, which will be valuable for future technical work and research.
- Hands-on experience in web development and UI/UX design.
- Improved problem-solving and debugging skills.
- Gained knowledge of secure authentication mechanisms.

## REFERENCES

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- Johnson, L. (2019). *Secure Authentication Techniques*. Cyber security Journal.
- Nepal Telecom Official Website: [www.ntc.net.np](http://www.ntc.net.np)

# APPENDIX



Admin Panel

Dashboard

Events

Settings

Logout

Settings

Security Settings

Admin Email

Enter Email to Change Password

Change Admin Password

Enter new password

Update

Ban or Un-Ban User (Enter Email)

Enter email to ban

Set Status

Ban

Update

Create Admin (Enter Email)

Enter email to Create Admin

Set Status

Admin

Update

Admin Panel

Dashboard

Events

Settings

Logout

User Management

Search users...

All Roles

ID	Name	Email	Role	Actions	
1	sushan khai2	sushan@gmail.com	user	Edit	Delete
3	admin	admin@gmail.com	admin	Edit	Delete
7	kshitij rai	xitizrai03@gmail.com	user	Edit	Delete
8	ram badur	ram@gmail.com	user	Edit	Delete
9	hari	hari@gmail.com	user	Edit	Delete