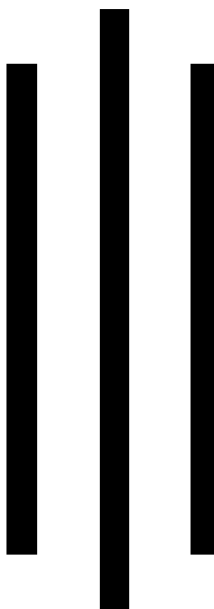


The Report of On the Job Training (OJT)
On
Web Design And Development



Submitted By

Name: Jhalak Dhami
Reg. No. :787710130010
Durgalaxmi Model Secondary School

Submitted To

Department of Computer Engineering
National Examination Board

In Partial Fulfillment of the Requirements for the Degree Of
Computer Engineering

Jestha, 2080

Letter of Approval

The industrial exposure of On the Job Training (OJT) Report submitted by "**Jhalak Dhami**" Registration No: **787710130010** entitled **Web Design and Development** has been accepted as a partial fulfillment of the requirements for the completion of Computer Engineering.

Internal Examiner

.....

Durgalaxmi Model Secondary School

2080/02/14

External Examiner

.....

National Examination Board

2080/02/14

DECLARATION

I, Mr. Jhalak Dhami, hereby declare that this report titled "Web Design and Development" is being submitted as a part of my on-the-job training at Mohrain Websoft Pvt. Ltd. in Dhangadhi, Kailali.

I affirm that this project report is a result of my own work and has been carried out under the guidance and supervision of Er. Ram Prasad Chaudhary, the Director of Mohrain Websoft Pvt. Ltd., and Mr. Santosh Kalukunda, the current Manager of the company. I further acknowledge the contributions and support received from Mr. Mukesh Dangaura, the former Ex-manager of Mohrain Websoft Pvt. Ltd., during the course of this project. To the best of my knowledge, the structure, content, and findings presented in this report are original and have not been submitted for any purpose elsewhere. Any external sources utilized in this project report have been appropriately referenced and cited.

I take full responsibility for the accuracy, integrity, and authenticity of the information presented in this project report.

Date: 2080-02-14 Day

Name: Jhalak Dhami

Signature:

ACKNOWLEDGEMENT

I would like to take this opportunity to express my heartfelt gratitude and appreciation to all those who have contributed to the successful completion of the "Web Design and Development" project. Their unwavering support, guidance, and assistance have been instrumental in making this project a reality.

First and foremost, I would like to extend my sincere thanks to Er. Ram Prasad Chaudhary, the Director of Mohrain Websoft Pvt. Ltd., for his visionary leadership and continuous encouragement. His expertise, guidance, and unwavering belief in this project have been invaluable throughout the entire journey.

I am also deeply grateful to Mr. Mukesh Dangaura and Mr. Santosh Kalukunda, the managers of Mohrain Websoft Pvt. Ltd., for their exceptional management skills and constant support. Their guidance, feedback, and valuable insights have played a vital role in shaping the direction of this project and ensuring its success.

In conclusion, I extend my heartfelt thanks to Er. Ram Prasad Chaudhary, Mr. Mukesh Dangaura, Mr. Santosh Kalukunda, the team at Mohrain Websoft Pvt. Ltd., and all those who have supported me throughout this project. Your contributions have been indispensable, and I am truly grateful for the opportunity to work with such talented and dedicated individuals.

Sincerely,

Jhalak Dhami

Recommendation of Supervisor

It is certified that the work contained in the On The Job Training (OJT) titled “**Web Design and Development**” by “**Jhalak Dhami**” has been carried out under my/our supervision.

.....

Santosh Kalukunda

Manager

Mohrian Websoft Pvt. Ltd.

Jestha, 2080

ABBREVIATIONS

S.N.	Term	Full Form
1.	HTML	Hyper Text Markup Language
2.	CSS	Cascading Style Sheet
3.	JS	Javascript
4.	CMS	Content Management System
5.	SQL	Structured Query Language
6.	RDBMS	Relational Database Management System
7.	AI	Artificial Intelligence
8.	PWA	Progressive Web App
9.	SPA	Single Page Application
10.	VUI	Voice User Interface
11.	UI	User Interface
12.	UX	User Experience
13.	IoT	Internet of Things
14.	SEO	Search Engine Optimization
15.	PHP	HyperText Preprocessor
16.	ORM	Object-Relational Mapping
17.	MVC	Model View Controller
18.	HTTPS	Hyper Text Transfer Protocol Secure
19.	HTTP	Hyper Text Transfer Protocol
20.	WWW	World Wide Web

TABLE OF CONTENTS

Letter of Approval.....	i
DECLARATION.....	ii
ACKNOWLEDGEMENT	iii
Recommendation of Supervisor.....	iv
ABBREVIATIONS.....	v
Chapter 1: Web Design and Development	1
1.1.Introduction.....	1
1.2.Web Designing:.....	1
1.3.Aspects of Web Design:	2
1.3.1.User Interface (UI):.....	2
1.3.2.User Experience (UX):.....	2
1.4.Web Development.....	2
1.5.Aspects of Web Development.....	3
1.5.1.Frontend Development:.....	3
1.5.2.Backend Development:	3
1.5.3.Full-Stack Development:	4
1.6.Web Development Process.....	4
1.6.1.Planning:	4
1.6.2.Design:	4
1.6.3.Development:	4
1.6.4.Testing:.....	5
1.6.1.Deployment and maintenance:.....	5
1.7. Future Scope of Web Development	5
1.8. Learning Outcomes.....	5
1.8.1. Proficiency in Web Technologies:.....	5
1.8.2. Website Design and Layout:	5
1.8.3. Front-End Development:.....	6
1.8.4. Content Management Systems:.....	6
1.8.5. Back-End Development with Laravel:.....	6
1.8.6. Responsive Web Design:.....	6
1.8.7. Website Optimization and Performance:.....	6
1.8.9. Collaboration and Version Control:	6
1.8.10. Problem Solving and Troubleshooting:.....	6

Chapter 2: Company Profile	7
2.1. Introduction.....	7
2.2. Mission.....	7
2.3. Vision	7
2.4. Contact Details.....	7
Chapter 3: Projects.....	8
3.1.Introduction.....	8
3.2.Objective	8
3.3.List of Projects	9
3.4. Objective of Technologies.....	10
3.4.1. HTML (Hypertext Markup Language)	10
3.4.2. CSS (Cascading Style Sheets).....	10
3.4.3. Bootstrap.....	10
3.4.4. WordPress	10
3.4.5. Laravel	10
3.4.6. MySQL	10
SUMMARY	11
CONCLUSION.....	12

Chapter 1: Web Design and Development

1.1. Introduction

Web design and development involve creating visually appealing and functional websites using HTML, CSS, and JavaScript for frontend design, and backend languages like PHP, Python, Ruby, or JavaScript (Node.js) for server-side programming. Additional technologies, such as databases, frameworks, and content management systems, enhance the development process. This combination of languages and technologies enables the creation of engaging, responsive, and user-friendly websites that deliver a seamless online experience.

1.2. Web Designing:

Web design is the process of creating visually appealing and engaging websites. It involves the use of various design elements, such as layout, colors, typography, and imagery, to craft a website's aesthetic appearance. Web designers aim to create a user-friendly and intuitive interface that effectively communicates the brand's message and engages visitors. They consider factors like user experience, responsiveness, and accessibility to ensure that the website functions seamlessly across different devices and browsers. Effective web design enhances user engagement, improves brand perception, and encourages visitors to explore the website further.



1.3.Aspects of Web Design:

1.3.1. User Interface (UI):

UI focuses on the design of the interface through which users interact with a digital product, such as a website, mobile app, or software application. It involves creating visually appealing and user-friendly elements that enable users to navigate, interact with, and understand the product. UI design includes components like buttons, menus, icons, typography, color schemes, and other visual elements. The goal of UI design is to create an interface that is intuitive, visually appealing, and enhances the overall user experience.

1.3.2. User Experience (UX):

UX design encompasses the overall experience and satisfaction a user has when interacting with a digital product. It involves understanding the user's needs, goals, and behaviors to create a seamless and enjoyable experience. UX designers focus on various aspects, such as information architecture, user research, usability testing, interaction design, and content strategy. They aim to ensure that the product is useful, efficient, easy to navigate, and provides value to the user.

1.4. Web Development

Web development refers to the process of building and maintaining websites and web applications. It involves the use of programming languages, frameworks, and tools to create functional and interactive websites that meet specific requirements. Web developers work on the backend and frontend aspects of a website, handling tasks such as server-side scripting, database management, and client-side scripting. They ensure that websites are responsive, secure, and optimized for performance. Web development encompasses various technologies, including HTML, CSS, JavaScript, and backend languages like PHP, Python, or Ruby. It plays a crucial role in bringing designs to life and creating dynamic online experiences that enable businesses to showcase their products, services, and information to a global audience.

1.5. Aspects of Web Development

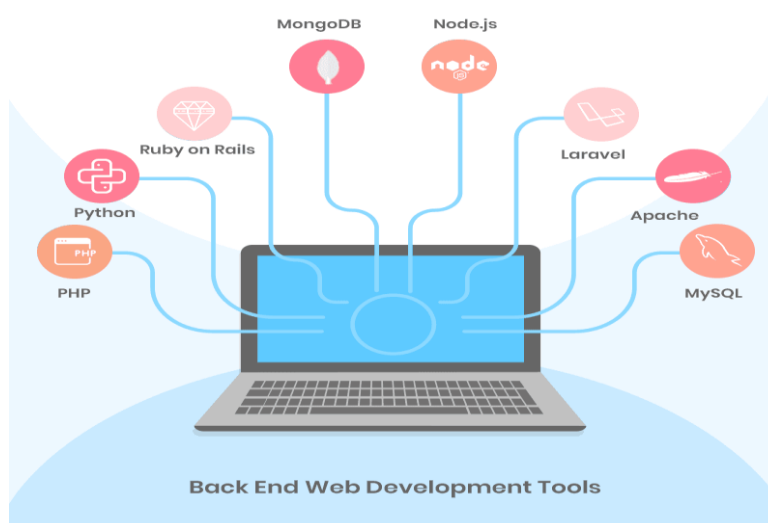
1.5.1. Frontend Development:

Frontend development focuses on the client-side of a website, which is what users see and interact with. It involves using languages like HTML, CSS, and JavaScript to create the visual elements, layout, and interactivity of a website. Frontend developers ensure that the website is visually appealing, responsive, and provides an intuitive user experience.



1.5.2. Backend Development:

Backend development involves server-side programming and database management. Backend developers use languages like PHP, Python, Ruby, or JavaScript (Node.js) to handle data processing, server communication, and business logic. They create the server-side infrastructure that powers the website, manages databases, and handles user authentication and other functionalities that occur behind the scenes.



1.5.3. Full-Stack Development:

Full-stack development combines both frontend and backend development. Full-stack developers have expertise in both client-side and server-side technologies, allowing them to handle all aspects of web development. They can develop the entire website, from designing the user interface to implementing server-side functionalities and database management. Full-stack developers are versatile and can work on both frontend and backend technologies.

1.6. Web Development Process



1.6.1. Planning:

Gather requirements, define project goals, and create a development roadmap.

1.6.2. Design:

Create wireframes and visual designs for the website's layout and user interface.

1.6.3. Development:

Convert the design into functional code, including frontend (HTML, CSS, JavaScript) and backend (server-side programming, database integration).

1.6.4. Testing:

Conduct thorough testing to identify and fix any issues, ensuring the website is functional, responsive, and compatible.

1.6.1. Deployment and maintenance:

Upload the website to a web server, configure the domain and hosting, and regularly update and maintain the website for optimal performance.

1.7. Future Scope of Web Development

The future scope of web development is promising, with several key areas expected to shape the industry. These include responsive design to accommodate the increasing use of mobile devices, the rise of Progressive Web Apps (PWAs) that offer app-like experiences through web browsers, the growth of Single-Page Applications (SPAs) for seamless user interactions, the integration of Artificial Intelligence (AI) for enhanced user experiences, and the optimization of websites for Voice User Interface (VUI) and voice search. Additionally, web developers will play a crucial role in creating interfaces for Internet of Things (IoT) devices, ensuring web accessibility and inclusive design, implementing robust security measures, exploring blockchain integration, and staying updated with emerging technologies.

1.8. Learning Outcomes

1.8.1. Proficiency in Web Technologies:

Successfully attained proficiency in web development technologies, including HTML, CSS, and JavaScript, and demonstrated the ability to utilize them effectively in creating dynamic and interactive web pages.

1.8.2. Website Design and Layout:

Acquired the skills to design visually appealing and user-friendly website layouts using HTML and CSS. Demonstrated the ability to create well-structured and responsive web designs that adapt seamlessly across different devices and screen sizes.

1.8.3. Front-End Development:

Developed proficiency in JavaScript to enhance website interactivity and user experience. Implemented various JavaScript libraries and frameworks to create dynamic features such as form validations, sliders, carousels, and interactive elements.

1.8.4. Content Management Systems:

Gained hands-on experience with WordPress, learning to build websites and manage content using its intuitive interface. Acquired knowledge in customizing themes, creating templates, and extending functionality through plugins.

1.8.5. Back-End Development with Laravel:

Acquired proficiency in Laravel, a PHP framework, to build robust and scalable web applications. Demonstrated the ability to develop back-end functionalities, handle data storage and retrieval, and implement secure user authentication and authorization.

1.8.6. Responsive Web Design:

Acquired knowledge and skills in developing responsive websites that adapt seamlessly to different devices and screen sizes. Demonstrated the ability to use CSS frameworks like Bootstrap to create mobile-friendly and flexible layouts.

1.8.7. Website Optimization and Performance:

Gained expertise in optimizing websites for speed and performance. Acquired knowledge in techniques such as minification, caching, image optimization, and code optimization to ensure fast loading times and improved user experience.

1.8.9. Collaboration and Version Control:

Developed effective collaboration skills by working as part of a team, utilizing version control systems like Git to track changes and collaborate with other developers. Demonstrated the ability to resolve conflicts and merge code seamlessly.

1.8.10. Problem Solving and Troubleshooting:

Acquired strong problem-solving skills specific to web development. Demonstrated the ability to debug code, identify and resolve technical issues, and troubleshoot errors encountered during the development process.

Chapter 2: Company Profile

2.1. Introduction

Mohrain Websoft Pvt. Ltd., established in 2071 BS in Kailali, Nepal, is a pioneering software company in the far-western province of Nepal. It specializes in a wide range of services including web designing, web development, custom software development, domain name registration, SEO, web hosting, and IT consulting.

With years of experience, this company has successfully catered to the needs of clients across various industries. Our team of experts is dedicated to delivering high-quality solutions that meet the unique requirements of each project.

2.2. Mission

Main mission of Mohrain Websoft Pvt. Ltd. is to deliver web and software development services, empowering businesses with innovative solutions, user-friendly websites, and robust applications to drive growth and customer satisfaction.

2.3. Vision

- i. To be a leading provider of innovative and reliable web applications, websites, and custom software solutions in the industry.
- ii. To empower businesses and organizations by delivering cutting-edge technology that enhances their operations and drives their success.
- iii. To continually evolve and adapt to the dynamic digital landscape, ensuring our clients stay at the forefront of technological advancements.

2.4. Contact Details

Address: Kailali pool , Dhangadhi Kailali

Contact Number: 091-524243

Website: info@mohrain.com

Director: Er. Ram Chaudhary

Manager: Santosh Kalukunda

Chapter 3: Projects

3.1. Introduction

During my on-the-job training at Mohrain Websoft Pvt. Ltd., I worked on diverse projects including a portfolio website for Dr. Tara Joshi (www.tarajoshi.com.np) and news portals like Hirgar Media, E-ghodaghodi Khabar, Majheri Khabar, KDN Media, and Paschim Darpan. Utilizing HTML, CSS, JavaScript, Bootstrap, WordPress and Laravel, I created visually appealing and responsive websites. These technologies allowed me to structure and style web pages, incorporate interactive elements, and manage dynamic content. Through these projects, I gained valuable experience in web design and development, enhancing my skills while adhering to industry standards. Collaborating with a professional team, I successfully delivered websites that met the clients' specific requirements, showcasing my abilities in a practical work environment.

3.2. Objective

During my on-the-job training at Mohrain Websoft Pvt. Ltd., I successfully completed a project titled "Web Design and Development." The objective of the project was to enhance my skills and knowledge in HTML, CSS, JavaScript, Bootstrap, and WordPress.

Throughout the project, I actively utilized these technologies to create visually appealing and functional websites. I focused on designing user-friendly interfaces, optimizing the performance of the websites, and ensuring responsiveness across different devices and screen sizes.

By employing HTML, CSS, and JavaScript, I developed the front-end components and implemented interactive features to enhance user engagement. Additionally, I utilized Bootstrap to leverage its responsive grid system and pre-designed components, enabling me to create responsive and mobile-friendly web pages efficiently.

Furthermore, I gained hands-on experience with WordPress, a popular content management system, to create dynamic websites with customizable themes and plugins. I integrated various functionalities such as contact forms, social media integration, and multimedia content management through the WordPress platform.

3.3. List of Projects

S.N.	Project Name	URL	Used Technologies
1.	Portfolio Website of Dr. Tara Joshi	www.tarajoshi.com.np	i. HTML ii. CSS iii. Bootstrap iv. WordPress
2.	Majheri Khabar News Portal	www.majherikhabar.com	i. HTML ii. CSS iii. Bootstrap iv. WordPress
3.	Ghodaghodi Khabar News Portal	www.eghodaghodikhabar.com or www.radioghodaghodi.com.np	i. HTML ii. CSS iii. Bootstrap iv. WordPress
4.	Hirgar Media News Portal	www.hirgar.com	i. HTML ii. CSS iii. Bootstrap iv. WordPress
5.	Paschim Darpan News Portal	[not hosted now] - Project completed and submitted to company	i. HTML ii. CSS iii. Bootstrap iv. WordPress
6.	KDN Media News Portal	[not hosted now] - Project completed and submitted to company	i. HTML ii. CSS iii. Bootstrap iv. WordPress
7.	Mohrain Website	[not hosted now] - Project completed and submitted to company	i. HTML ii. CSS iii. Bootstrap
8.	School Website	Not hosted	i. HTML ii. CSS iii. Bootstrap iv. Laravel
9.	Ecommerce Website	Not hosted	i. HTML ii. CSS iii. Bootstrap iv. Laravel
10.	Portfolio Website	Not Hosted	i. HTML ii. CSS iii. Bootstrap

3.4. Objective of Technologies

3.4.1. HTML (Hypertext Markup Language)

HTML creates the structure and content of web pages. It defines elements like headings, paragraphs, images, and links. In a website, HTML structures the different sections, such as the header, about, projects, and contact.

3.4.2. CSS (Cascading Style Sheets)

CSS controls the visual appearance and layout of web pages. It defines colors, fonts, spacing, and styles. In a website, CSS designs the overall look, including colors, fonts and alignment.

3.4.3. Bootstrap

Bootstrap provides pre-designed elements for websites. It offers grids, navigation bars, buttons, and forms. In a website, Bootstrap helps create a responsive and visually pleasing layout.

3.4.4. WordPress

WordPress simplifies website creation and management. It has customizable themes, plugins, and an easy-to-use interface. In a website, WordPress serves as the platform for building and updating the website, allowing customization and additional features.

3.4.5. Laravel

Laravel, a PHP framework, as the backend for my projects is to leverage its robust features and capabilities to build efficient and scalable web applications. By employing Laravel, I aim to enhance the development process and streamline tasks such as routing, database management, authentication, and caching. The objective is to take advantage of Laravel's MVC (Model-View-Controller) architecture, extensive libraries, and expressive syntax to develop clean, maintainable, and feature-rich web applications.

3.4.6. MySQL

MySQL as the database management system is to ensure efficient and reliable data storage and retrieval. This involves maintaining data integrity, optimizing performance, ensuring scalability, implementing robust security measures, managing data effectively, integrating with backend applications.

SUMMARY

The on-the-job training report focuses on web design and development projects that were undertaken during the period of Asar 16, 2079, to Baisakh 16, 2080. The projects included a portfolio website, news portals, a school website, an agency website, and static landing pages. The programming technologies used for the development of these projects were HTML, CSS, JavaScript, Bootstrap, WordPress, Laravel, and MySQL.

The portfolio website was designed to showcase the skills and achievements of an individual or a company. News portals were developed to display up-to-date news and information on various topics. The school website was created to provide information about the school, its facilities, and courses. The agency website was designed for advertising and promoting services provided by an agency. Lastly, static landing pages were created to provide a concise summary of the website's content and to encourage users to take action.

The programming technologies used for the development of these projects were chosen based on their appropriateness for each project. HTML, CSS, and JavaScript were the core technologies used for designing and developing the websites. Bootstrap was used for responsive web design, while WordPress and Laravel were used for content management systems and web application development. MySQL was used for database management.

Overall, the on-the-job training report highlights the importance of using appropriate programming technologies for web design and development. The report demonstrates the practical application of these technologies in various web projects.

CONCLUSION

The on-the-job training in web design and development, conducted from Ashar 16, 2079, to Baisakh 16, 2080, encompassed projects involving portfolio websites, news portals, school websites, agency websites, and static landing pages. Programming technologies like HTML, CSS, JavaScript, Bootstrap, WordPress, Laravel, and MySQL were employed to create visually appealing and functional websites.

The training provided practical experience in web development, emphasizing the importance of project management, communication, and collaboration. It encompassed the entire web development lifecycle, from planning to maintenance. The acquired skills and knowledge form a strong foundation for future endeavors in the field.

Looking ahead, the future of web development holds promise with trends like responsive design, progressive web apps, AI integration, and voice user interface. Continuous learning and adaptation are essential to stay competitive in this ever-evolving field.

Overall, the on-the-job training in web design and development was a valuable experience that equipped the trainee with practical skills and knowledge for a successful career in the dynamic world of web development.

*** The End ***