INTERNSHIP ON WEBSITE APPLICATION DESIGN AND DEVELOPMENT

 \mathbf{BY}

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project titled WEBSITE APPLICATION DESIGN AND DEVELOPMENT, submitted by Md Sagar Ali to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation will be held in December 2021.

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We hereby declare that this project has been done by us under the supervision of **Warda Ruheen Bristi, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree or diploma.

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We would like to thank our entire course mate in Daffodil International University, who took part in this discussion while completing the course work.

Finally, we must acknowledge with due respect the constant support and patients of our parents.

ABSTRACT

The purpose of this internship was to learn how to develop and design websites using programming language. Generally, we use several programming languages to develop web-based applications. Few of them are used for developing UI and the front-end of the application, few of them are used for the back-end design and database management of a software. As an example- HTML5, XML, Bootstrap and CSS etc. are some programming languages to design the front-end of a web-based application. Python, JavaScript, Java etc. are used to develop back-end. At present some Frameworks are widely used like Django, React, Kotlin, Odoo, Flask etc. A framework is a structure on which you can create software. It serves as a foundation, so you're not starting entirely from scratch. Frameworks are usually associated with a specific programming language and are suitable for a variety of tasks. A website is a powerful sales tool that allows you to address your customers' concerns, provide them with the information they need to make decisions, and create compelling calls for action and this is why I have chosen this career. Working in Skill Jobs developed my skills and intellectual brain which will help me to build my career as a web developer. I have solved real life problems while developing with skill jobs senior developers. This report will demonstrate the full process of web application development and experience I have gained during my internships.

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CHAPTER 1

Introduction

1.1 Objectives

An internship is a professional learning experience that offers meaningful, practical work related to a student's study or career interests. An internship allows a student to explore and develop a career and learn new skills. It allows employers to bring new ideas and energy to the workplace, develop talents and create a potential pipeline for future full-time employees.

A quality internship:

- Consists of a part-time or full-time work schedule that does not cover more than 25% of clerical or administrative responsibilities.
- Provides a clear work/project description for work experience.
- Guides the student towards the organization, its culture and the proposed work assignment.
- Helps to achieve student development and learning goals.
- Provide regular feedback on our developing work

While pursuing a bachelor's degree in computer science and engineering at Daffodil International University, I have learned some programming language courses over the last 4 years. But it wasn't enough to become a developer because of the competitive marketplace. So, I joined Skill Jobs as an intern to learn more about my skill development and the marketplace.

What I have learned and developed during my internship this internship report will cover. It will also describe how I improved during my internship at skilljobs.

- The concept uses HTML, CSS, Bootstrap, Python, Database and Server.
- Maintaining relationships with tech people and updating our development skills with current/ updated technology.
- To improve communication skills and connect with organizations.
- Habited with an official environment.

- Learning technical skills.
- Improving developing skills.
- Gathering official knowledge.
- How to be information seeker
- Job searching technique

1.2 Goals

Web developers create and design different types of client websites. They are responsible for their beauty and their work. Experts in this field need to be able to ensure that the sites are compatible with most media types. Here is a list of goals,

- Improving programming skills and development skills.
- Learning and improving knowledge in HTML, CSS, Bootstrap, Python, Database and Server
- Developing communication skills and maintaining relationships with tech people.
- Background knowledge of a company.
- Collaborative work skills development.
- Research skills development.
- Presentation skill development.
- Problem solving skill development.
- Increase the knowledge of journals and news.
- Gathering and understanding of key professionals.
- Professional ethics development.
- Developing technical skills.

1.3 Motivation

Internships are about building intelligent skills in technology and engineering. It is very important to know about fictional information and implement it reasonably to expand our potential in job creation.

The inspiration for this internship comes from the intention to learn more about the field of web development and the work environment of IT firms.

There are thousands of job opportunities even if I don't get a job in a multinational company, I still have the opportunity to earn and support the family.

I love to design so I found developing a website is the perfect profession for me. Creating a website is an easy way to learn but an interactive way of web development is difficult to know without the working experience with the company. Before I started my internship at skill jobs, I knew I was in the early stages of learning web development so my first job was to learn how to develop interactively. The learning process of design and web development is fun and interesting. Creating a website is easy and fun with HTML5, CSS, Python and Framework if you are going through a developing process or follow the exact process of developing.

1.4 The Layout of Report:

This layout shows the chapter information and key points of this report such as chapter detail and brief information of each content described in the chapter.

- **Chapter 1** Introduction of web development will be described in this chapter.
 - Objective: Objective of this report will be described in this section and the purpose of this report.
 - Goals: The main goal of my internship will be described in this section. It will also contain my future improvement procedure I learned from this internship
 - Report layout: This is an overview of all the chapter included in this report
- Chapter 2 In this chapter describes the company I have completed my internship.
- **Chapter 3** In this chapter I have described my responsibilities during my internship at skill jobs and knowledge I have gathered during my internship.
- **Chapter 4** This is the chapter where I have included my outcome of this internship. I have also described each of the pages that I have developed during the internship.
- **Chapter 5** In this chapter simply describe the conclusion of all the chapter I have included in this report

CHAPTER 2

Enterprise of the Internship

2.1 Company Information

Skill jobs is built on our past 20+ experiences in the global job market, in particular,

focusing on the latest career trends, skill measurements, technological advances and the

needs and expectations of modern organizations. The company originated from

Jobsbd.com, the first job site in Bangladesh and later named Skill jobs to reflect the focus

of the organization and its focus on such services. The idea was to make our position more

unique and accurate as we worked! Skill jobs has started working simultaneously in

Bangladesh and Malaysia and will soon be launched simultaneously in Australia, UK and

UAE.

Skill Jobs will act as a job seeker who will prepare the relevant industry for the

development and growth of job seekers skills, bring job seekers and represent in HR World.

Skill jobs, on the other hand, will make the job of HRD easier and simpler by helping job

seekers find the right candidate with the required skills instead of providing additional

information.

We have named Skill Jobs as a service provider that builds a bridge between skilled

candidates and employers. Skills Jobs will monitor trends and provide hands-on training

and online training to prepare students, graduates and job seekers of all levels for future

jobs and careers. Skill Job will provide much needed training for the employees of different

organizations and companies.

a. Head Office

102/1, Sukrabad, Mirpur Road, Dhanmondi Dhaka-1207

Phone: +88-02-9138234-5

E-mail: contact@skill.jobs

Web: www.skill.jobs

b. Programming Languages

Python, JavaScript, Java, Ruby, HTML, CSS, XML etc

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c. Databases Systems

PostgreSQL, SQLite, MySQL, DynamoDB

d. Server Platforms

Windows, Ubuntu, Linux, MacOS

e. Frameworks

Django, Flask, Odoo, Spring Boot, Hibernate, Blade etc

CHAPTER 3

Roles and Responsibility of an Internship

3.1 Introduction

It is important to follow the rules, regulations of the company. Complete the responsibility they have given you. In this chapter I will describe my responsibility during my internship

3.2 Training Attended

We know that creating a project requires a lot of language and skills, I've used Python, JavaScript, C ++, C # and many more. The server aggregates the results and executes Python codes with a variety of data, such as images, text, etc. Python code can be applied using a command-line interface (CLI) to run independent applications for graphical use. The training I received at Skill jobs is shown below:

- J Query
- HTML
- Typescript
- JavaScript
- CSS
- PostgreSQL,
- SQLite
- Bootstrap
- Python

3.3 Delegated Responsibilities

Taking responsibility for any development is challenging. To be a leader and developer we have to take responsibility. During internship time we have taken lots of responsibilities.

• UI/UX design.

It's very basic to design a webpage using photoshop or other tools to make a prototype before developing

• Web design

HTML, CSS, Bootstrap are normally used for developing a web page

• Front-end development.

HTML, CSS, Bootstrap are normally used for developing a web page

• Database Design.

Designing Database is a difficult part of development because we have to understand the full development process to design a database.

Back-end Development

Communication with the database through programming is called backend development. We used python for this.

• Enhancing Code Structure

While developing sometimes developers write some extra or unwanted code.

Design Upgrading

It's important to upgrade the design as clients want this is the process of development

• Time Management

3.4 The Environment of Work

Front-end Developer The primary job of a web application developer is to design all the web pages using HTML, CSS, BOOTSTRAP which will be accessible from the user.

Back-end Developer The primary responsibility of a back-end developer is to develop the api to connect the database with the front-end so that the user can read or write data in the server or interact with the webpage. Generally, back-end developers use high level programming languages like Python, Java, JavaScript, Rust and Ruby.

The profiles of a developer include:

- Front-end of an application.
- Back-end of an application.
- Developed of an application
- Analysing Data and Developing Layout.
- Senior application analyzer.
- Web Application Marketing Analyzer.

Performed Task

The name of the project I was assigned to design and implement the Software Company Website. Company Website means all websites owned, operated or hosted by the Company or through which the Company conducts business (including those operated using the domain names of the Company), and the underlying platforms for such websites. I have developed the full website with the help of my instructor Md Habibur Rahman Lead Software Engineer Daffodil Software Limited.

Web Pages Details

We have developed a webpage for Firmitas company. For one company we have to design several pages. Each page represents different types of information for representing the company to a client.

- Features
- About Us
- Services
- Gallery
- Testimonials
- Team
- Contact
- Payment

Each of the mentioned features is important for a company to describe their job and the efficiency of their company. Details of each feature will be described below,

Features Page

On this page, the features screen of the website is shown. All the service companies provide and develop for the user. Users can easily visit and order their projects. The overview of the website is also present on this page.

Figure 3.6.1 shows the features page

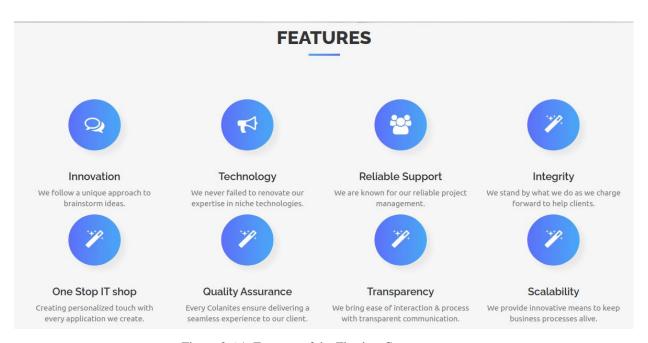


Figure 3.6.1: Features of the Firmitas Company

About Us Page

This page contains all the information about the company and its development project. It also shows why the company should be hired. Either registered or non-registered users can access this page.

Figure 3.6.2 shows the about us page.

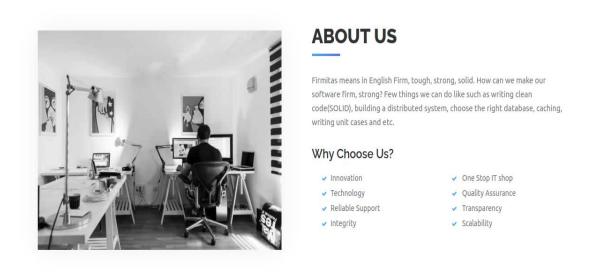


Figure 3.6.2: About us of the Firmitas Company

Our Services Page

This page describes their services. Users can easily read about the details of their service and take any of the services they want.

Figure 3.6.3 shows the Our Services page.

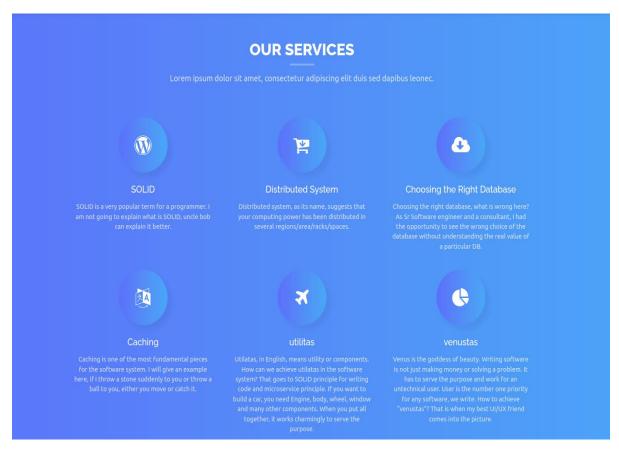


Figure 3.6.3: Our Services of the Firmitas Company

Gallery Page

This page is dedicated to all the info needed by the customer and consumers to know about their product. All the images of their work will be included here so consumers can easily judge.

Figure 3.6.4 shows the contact us page.

GALLERY

Lorem ipsum dolor sit amet, consectetur adipiscing elit duis sed dapibus leonec.



Figure 3.6.4: Gallery of the Firmitas Company

Testimonial Page

This page is showing their success history and comments of their previous client. The purpose of this page is to attract users by providing a success history.

Figure 3.6.5 shows the testimonials page.

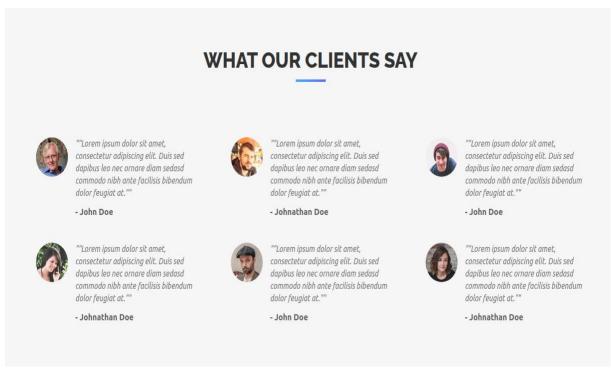


Figure 3.6.5: Testimonials of the Firmitas Company

Team Page

Each company has their employee to show the strength of a company. This is the best way. By opening employee personal profiles, clients can know their strengths. On this page companies will provide their top employee information or well-known employees so that users can understand their strengths and productivity.

Figure 3.6.6 shows the team page.

MEET THE TEAM

Lorem ipsum dolor sit amet, consectetur adipiscing elit duis sed dapibus leonec.



Figure 3.6.6: Testimonials of the Firmitas Company

Contact Page

On this page, users can easily contact the company for ordering products or know more about their company. If a user just puts their email here it will be saved in the database so that company can contact the visitor later.

Figure 3.6.7 shows the contact page.

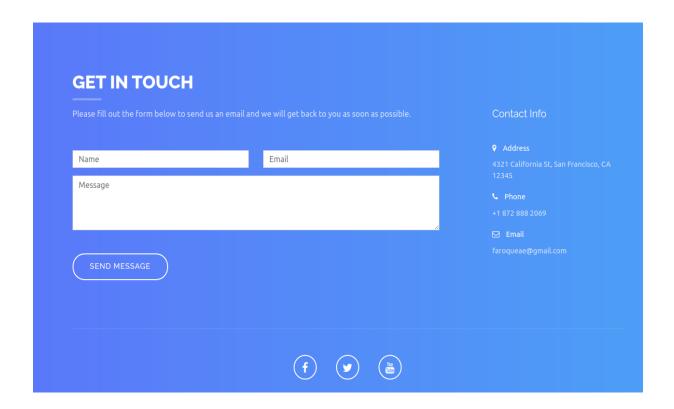


Figure 3.6.7: Contact of the Firmitas Company

Payment Page

Through this page a client can complete the payment process. The client will get benefit if they pay with this application like they can track their payment history and also get back their payment if work is not done. That's why normally all the users use this process. Figure 3.6.8 shows the payment page.

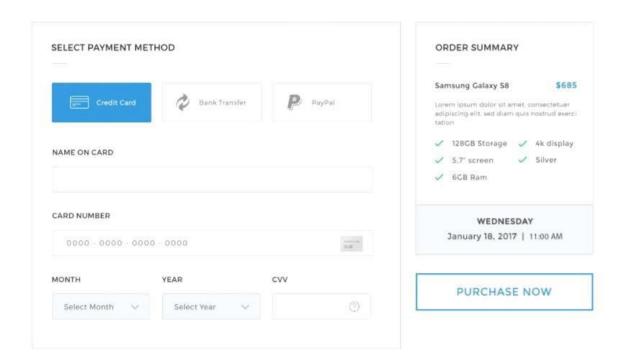


Figure 3.6.8: Payment page of the Firmitas Company

CHAPTER 4

Internship Outcomes

4.1 Problems and Their Solutions

Developing software is not an easy task, it takes time and skills. A developer normally writes thousands of lines of programming so it's very easy to make mistakes. More we develop, the less mistakes we will make and the developing process will be faster.

4.1.1 Problems

I encountered many problems while working with CSS. It's very simple, but sometimes it doesn't meet my expectations and can't be put in the right place. Web design is not an easy task. It takes a lot of ingenuity, imagination, teamwork and personality to deliver a unique web design. A web designer always overcomes many obstacles. Only sustainable development and web design based on repetitive thinking can satisfy the target market and customers. This creates a challenging field for website design.

Web designers, on the other hand, face additional hurdles. This type of activity involves keeping the website sensitive enough to be viewed and accessible on all phones. Websites sometimes take time to load, so loading websites quickly is one of the most difficult web design challenges to deliver a good user experience.

There is another problem that often occurs. Clients have problems with the website and complain to the developer. But when developers check out a website, it looks very subtle to them. These issues may be due to incorrect modifications to older web servers or clients. Finding the source of this problem can be time-consuming and the developer has to deal with it on a daily basis.

4.1.2 Solutions

Web development is interesting and at the same time difficult for me. I will learn and understand several terms with interest in internship training so that after studying I can understand web development and it is more interesting to me than any other language. During my training, I solved Python, JavaScript and other problems. Clean software eliminates unexpected errors that can affect site loads. Automated website monitoring solutions often allow developers to view their clients' websites in real-time and set up alerts for potential problems. This not only allows developers to point out a problem in front of a customer but also allows them to solve many problems before the problem affects the customer's business.

4.2 Outcomes of Learning

From this internship, we have learned several programming languages. Some of them are for designing, for example, HTML, CSS, Bootstrap etc and some of them are for developing and data-binding for example Python, Javascript etc.

a. HTML

- Basic HTML5 (HTML ta, CSS adding in HTML, Bootstrap Adding, External CSS, and Internal CSS)
- The basic understanding of HTTP and HTTPS protocol, Client-Server Communication
- HTML5 Forms (Input Field, Test Field, Button etc)
- HTML other properties

b. CSS

- Advance Level of CSS and Bootstrap (Internal CSS, External CSS) and How to add bootstrap and using their properties
- Advance CSS (border-radius, opacity, cursor, layers, position, display, float, gradient, and multiple-column)
- Understanding of Menus and Other Properties
- Template Designing using HTML Advanced CSS and Bootstrap including in the template.

c. Bootstrap

- Setup Process
- How add Grid System
- Adding Typography
- Button Forms and Table
- Bottom UP Dropdown
- Element Navigation and Element Setup
- Plugin Bootstrap

d. JavaScript

- JavaScript Programming Language
- JavaScript Variable, Syntax and Function
- String with JavaScript
- Json With JavaScript
- OOP in JavaScript
- JavaScript DOM and Some Advance Properties

e. Python

- Python Programming Language
- Python Variable, Syntax and Function
- String with Python
- Json With Python
- OOP in Python
- Array, List, Dictionary in python

4.3 Challenges

Developing is not an easy task. Facing problems while developing is very common for developers. We have faced lots of problems while developing. In the beginning, we made some silly mistakes like spelling mistakes, syntax errors, forgetting to add coma, colon etc. After a certain time, we did not make this type of silly mistake but we have faced some critical problems like database errors, string problems, design box correct place problems and so on.

Here I have added some common problems we faced

- Syntax error.
- Fatal error.
- Fix Design.
- String error
- Requirement Analysis
- Time Maintain

CHAPTER 5

Conclusion and Future Scope

5.1 Conclusion

We all know that we are living in a developing country and soon we will become a developed country as our prime minister said. Therefore, our government takes lots of initiative to digitize and improve the quality of development. There are thousands of job sectors that will be open during this digitization process. That will be the best opportunity for us who are working in the web developing and application developing sector.

Finally, I can claim that it was the internship that helped me gain experience. This project has helped me to gather theoretical and practical knowledge about HTML5, CSS, Python, PostgreSQL, SQLite and JavaScript programming languages. I used to be confident in designing and developing a website front end. Now I am also confident and proficient in the back-band.

There are huge opportunities for students who want to work in web development. To allow them to work online and to develop websites, most private and public companies hire web designers. With the rapid rise of the digital industry, the demand for web development professionals is increasing, and in the coming days, it has created many job opportunities for newcomers.

My internship company has given me a great opportunity to learn and discover my possibilities. I am very grateful to them. Now I can develop web applications. I am fortunate to have the opportunity to meet the environment of real-life software development.

5.2 Future Scopes

I have gained a lot of experience from this internship. If I didn't have this experience, it would be very difficult for me to find a suitable job. We know that finding work in this competitive world can be a challenge. In my challenging career, this internship will support me. These are my future scope opened for me after this internship:

- I can get a job at IT Firms.
- Get a job as a software Engineer.
- Pursue web designing career.
- Web Developing Job Title.
- Can pursue a front-end developer career.
- Can pursue a back-end developer career. and
- getting a job as a QA tester.

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