A REPORT OF THE STUDENTS INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES), CARRIED OUT

AT

OLASTIG TECHNOLOGIES

NO 3, IKOKORO STREET, OFF NIGER ROAD, ILORIN KWARA STATE

PERIOD OF ATTACHMENT: AUGUST 2024 – NOVEMBER 2024

BY

ABDULKADIR ISIAQ

ND/23/COM/FT/0020

SUBMITTED TO

DEPARTMENT OF COMPUTER SCIENCE,

INSTITUTE OF INFORMATION, COMMUNICATION AND TECHNOLOGY (IICT),

KWARA STATE POLYTECHNIC, ILORIN KWARA STATE.

IN PARTIAL FULFILMENT FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN COMPUTER SCIENCE.

NOVEMBER 2024.

ABSTRACT

This SIWES report gives details about all the work carried out and the relevant experience gained at OLASTIG TECHNOLOGIES which commenced on the 16th of May 2016 and ended on 28th of October 2016. During my six months attachment at Olastig, I was involved in several activities. Firstly, I gained more knowledge in web design) using the appropriate HTML.

This report gives concise and clear information on all the courses afore mentioned, and defines the experience gained. It also highlights some problems I encountered during the process of acquiring this experience, and few recommendations.

TABLE OF CONTENTS

CHAPTER ONE

1.1 INTRODUCTION

In the earlier stage of science and technology education in Nigeria, students were graduating from their respective institution without any technical knowledge or working experience. It was in this view that students undergoing science and technology related courses were mandated for students in different institution in the view of widening their horizons so as to enable them have technical knowledge or working experience before graduating from their various institutions.

The student industrial Work Experience Scheme (SIWES) was established by the industrial Training Fund in (ITF) 1973 to enable students of tertiary institution have basic technical knowledge of industrial works base on their course of study before the completion of their program in their respective institutions. It was established to solve the problem of lack of adequate practical skills preparatory for employment in industries by Nigerian graduates of tertiary institutions.

The scheme exposes students to industry based skills necessary for a smooth transition from classroom to the world of work. It affords students of tertiary institutions the opportunity of being familiarized and exposed to the needed experience in handling machinery and equipment which are usually not available in the educational institutions

One of the primary goals of the SIWES is to help students integrate leadership development into experiential learning process. Students are expected to learn and develop basic non-profit leadership skills through a mentoring relationship with innovative non-profit leaders.

The major benefit accruing to students who participate conscientiously in Students Industrial Work Experience Scheme (SIWES) are the skills and competencies they acquire. The relevant production skills remain a part of the recipients of industrial training as life-long assets which cannot be taken away from them. This is because the knowledge and skills acquired through training are internalized and become relevant when required to perform jobs or functions.

Participation in SIWES has become a necessary pre-condition for the award of Diploma and Degree certificates in specific disciplines in most institutions of higher learning in the country, in accordance with the education policy of government.

Operators – The ITF, the coordinating agencies (NUC, NCCE, NBTE), employers of labour and the institutions.

Funding – The Federal Government of Nigeria.

1.2 OBJECTIVES

The Industrial Training Fund's policy Document No. 1 of 1973 which established SIWES outlined the objectives of the scheme. The objectives are as follows:

- Provide an avenue for students in higher institutions of higher learning to acquire industrial skills and experiences during their courses of study.
- Prepare students for industrial work situations that they are likely to meet after graduation.
- Expose students to industrial work methods and techniques in handling equipment and machinery that may not be available in their institutions.
- Make the transition from school to the world of work easier and enhance students' contact for later job placements.
- Provide students with the opportunities to apply their educational knowledge in real work situations, thereby bridging the gap between theory and practice.
- Enlist and strengthen employers' involvement in the entire educational process through SIWES.
- To expose students to latest developments and technological innovations in their chosen professions.

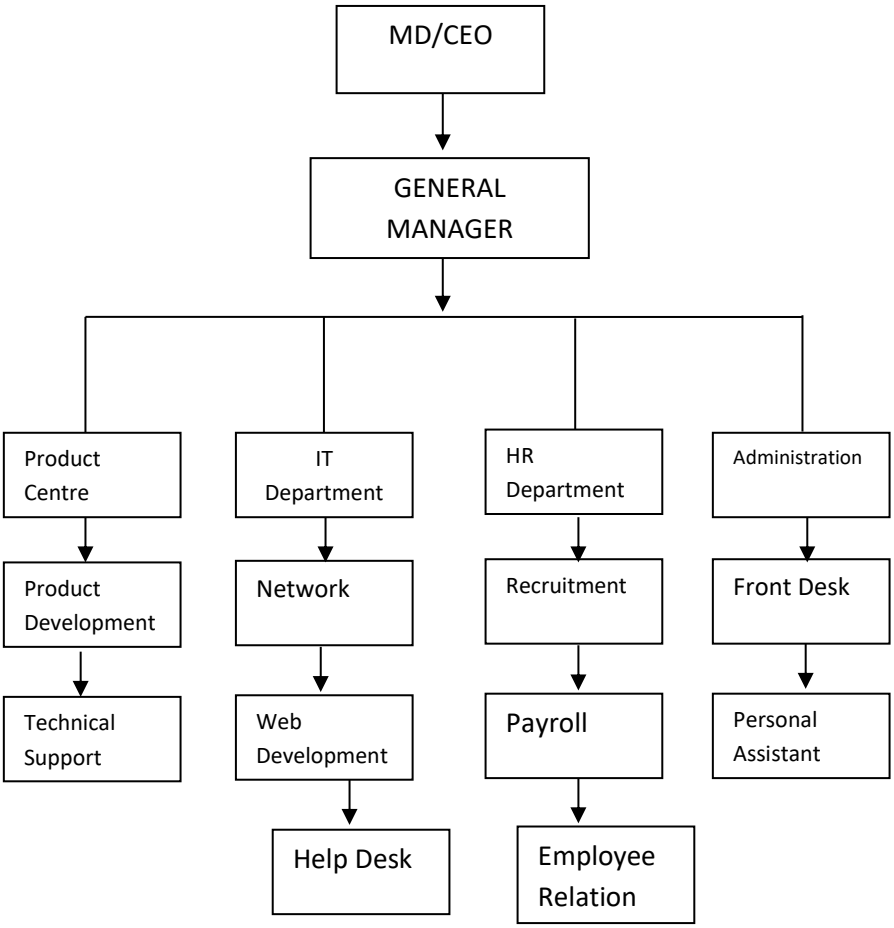
CHAPTER TWO

2.1 DESCRIPTION OF THE ESTABLISHMENT OF ATTACHMENT

OLASTIG TECHNOLOGIES is a team of qualified experts with ample knowledge and experience in ICT and related services. It is located at no 3, Ikokoro Street, off Niger road, Ilorin, Kwara State. It is a reputable computer based training institution with international standard. Olastig technologies was established in 2015 in Ilorin as Information Technology training center duly registered with CAC (Corporate Affairs Commission). It has been developing in-house application software since 2009. It has also offered training to some university officials and bank staffs e.g. union bank plc, guarantee trust bank etc.

Olastig technologies offers training programs in major professional courses offered in the Information Technology niche. Some of the courses include Database Management, Networking (LAN, MAN & PAN), CISCO trainings (Cisco Certified Network Associate), Web Design and Development, System Administration (Window Server), Computer Engineering (A+), Visual Studio (C#,C++ & Visual Basic) and Java Programming.

2.2 ORGANIZATIONAL STRUCTURE



2.3 VARIOUS DEPARTMENTS AND THEIR FUNCTIONS

ADMINISTRATION

An organizational unit that performs management activities benefiting the entire organization; includes top management personnel and organization headquarters. This department is directly linked with head office the basic function of this department is to provide the required material to their staff and working labor for example to purchase computer to keep the record of their accounts. This department gives the report to head office time to time.

HUMAN RESOURCE DEPARTMENT

The main function of this department is to make relations between high management and working labor. It is a motivated department and create co-operate climate between departments and give the chance to show skills.

INFORMATION TECHNOLOGY DEPARTMENT

The IT Department manages the company's technology 'backbone', data centers and networks. They plan, design, implement and maintain server configurations, routing protocols, network configurations, storage environments, Information architecture and user interface design and Graphic design for web application to facilitate the needs of the organization. They provide Interactive designer (Flash, JavaScript, Ajax) for the web application. I.e. developing and designing web applications. This department also offer training for the IT students.

I was posted to the IT department of Olastig technologies. Being in the department also helped me make researches more on Networking (CCNA), web applications development, graphics etc. The department helps in designing and developing web applications for client which I benefitted from a lot from it. I was also introduced to most of the Cisco equipment used for networking. Diagnosing a computer with problem was also part of my duties.

CHAPTER THREE

ACTUAL WORK DONE

This chapter covers the actual work done during my SIWES training and also specifies the relevant experience gained.

- Web Design

3.1 WEB DESIGN AND DEVELOPMENT

A **website** is a collection of web pages, images, videos or other digital assets that is hosted on one or several web server(s) usually accessible via the internet, cell phone or a LAN through an internet address known as URL (Uniform Resource Locator). A publicly accessible websites collectively constitute the World Wide Web.

A **web page** is a document typically written in HTML, which is almost always accessible via HTTP, a protocol that transfers information from the web server to display in the user's web browser.

There are two types of website

1. Static website
2. Dynamic website

A **Static Website** contains web pages with fixed content. Each page is coded in html and displays the same information to every visitor, they do not require any web programming or database design. The content of each page does not change unless it is manually updated by the webmaster or developer.

A **Dynamic Website** contain web pages that are generated in real-time. These pages include web scripting code such as PHP or ASP. When a dynamic page is accessed, the code within the page is parsed on the web server and the resulting html is sent to the client's web browser. Dynamic pages access information from a database and such sites are referred to as database-driven websites.

During my siwes training I was exposed to both static and dynamic websites. I was taught the difference between the two types.

HTML Introduction

HTML is the standard markup language for creating Web pages.

What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

HTML Editors

A simple text editor is all you need to learn HTML.

Learn HTML Using Notepad or TextEdit

Web pages can be created and modified by using professional HTML editors.

However, for learning HTML we recommend a simple text editor like Notepad (PC) or TextEdit (Mac).

We believe that using a simple text editor is a good way to learn HTML.

Follow the steps below to create your first web page with Notepad or TextEdit.

HTML Documents

All HTML documents must start with a document type declaration: <!DOCTYPE html>.

The HTML document itself begins with <html> and ends with </html>.

The visible part of the HTML document is between <body> and </body>.

Structure of HTML

HTML documents are essentially a series of nested elements, each marked by a pair of opening and closing tags. These elements can contain other elements, forming a hierarchical structure. Below is a typical structure of an HTML document:

```
<!DOCTYPE html>
        <html>
                <head>
                        <title>Web Page Title</title>
                </head>
                 <body>
                        <h1>Welcome to My Website</h1>
                        <p>This is a sample paragraph of text</p>
                        <a href="https://example.com">Visit Example</a>
                </body>
</html>
```

Key Elements:

- **<!DOCTYPE html>**: Defines the document type and version of HTML.
- **<html>**: The root element that wraps the entire document.
- **<head>**: Contains meta-information such as the document's title, character encoding, links to CSS files, and scripts.
- **<title>**: Defines the title of the webpage, which appears in the browser's title bar or tab.
- **<body>**: Contains the content of the webpage that is visible to the user.
- **<h1>**: A heading element used to display titles or major sections of the webpage.
- **<p>**: A paragraph element used for blocks of text.
- **<a>**: A hyperlink element used to create clickable links.

HTML5 Features

HTML5 represents a major shift in web development, offering more functionality and flexibility compared to previous versions. It provides numerous improvements to how webpages are structured and presented, especially for multimedia content and mobile-friendly designs. Some of the key features of HTML5 include:

1. New Semantic Elements:

HTML5 introduced a series of semantic elements that improve the structure and accessibility of web pages. These elements describe the type of content contained within them:

- <header>: Defines the header section of a page or a section.
- <footer>: Defines the footer section of a page or a section.
- <article>: Represents a piece of self-contained content that could stand on its own.
- <section>: Defines a section within the document.
- <nav>: Defines a navigation section containing links.

2. Multimedia Support:

HTML5 includes native support for audio and video without relying on plugins like Flash. This allows for seamless multimedia embedding:

- <audio>: Embeds audio content, supporting multiple file formats like MP3 and OGG.
- <video>: Embeds video content, supporting formats like MP4, WebM, and OGG.

3. **Form Enhancements:**

HTML5 introduces new input types for forms, including:

- **<input type="email">**: Automatically validates email addresses.
- **<input type="date">**: Provides a date picker.
- **<input type="number">**: Restricts input to numeric values.

Introduction in CSS (Cascading Style Sheets)

CSS (Cascading Style Sheets) is a stylesheet language used to define the presentation and layout of web pages. It controls the visual aspects of a web document, such as colors, fonts, spacing, positioning, and responsive design. CSS works alongside HTML to separate content (which is defined in HTML) from design (which is handled by CSS). By utilizing CSS, developers can create visually appealing websites and applications while maintaining consistency across different pages.

Structure and Syntax of CSS

CSS consists of a set of rules that define how elements within an HTML document should be styled. A CSS rule is composed of a selector and a declaration block. The basic syntax is as follows:

```
selector {
        property: value;
         }
```

Key Components:

- **Selector**: Specifies the HTML element(s) to which the style will be applied (e.g., body, p, .class-name, #id).
- **Property**: Defines the aspect of the element to be styled (e.g., color, font-size, margin, border).
- **Value**: Specifies the value assigned to the property (e.g., red, 16px, 10px).

Example:

```
h1 {
        color: blue;
        font-size: 24px;
   }
```

In this example, the h1 selector targets all <h1> elements in the HTML document, and the declaration block defines that the text color should be blue and the font size should be 24px.

Some K ey Features and Concepts of CSS

1. Selectors

Selectors in CSS allow you to target specific HTML elements for styling. There are different types of selectors, each used for different purposes:

- **Element Selector**: Targets all instances of a specific HTML element (e.g., p, div).
- **Class Selector**: Targets elements with a specific class (e.g., .container, .button).
- **ID Selector**: Targets an element with a specific id attribute (e.g., #header, #footer).
- **Universal Selector**: Targets all elements on the page (e.g., *).

2. Box Model

The CSS box model defines the rectangular boxes generated for elements, which consist of:

- **Content**: The actual content of the element (e.g., text or images).
- **Padding**: The space between the content and the element's border.
- **Border**: The boundary surrounding the element.
- **Margin**: The space between the element's border and adjacent elements.

Grand

BLOG

ART /LIFESTYLE

Beauty of Nature

Lorem ipsum dolor sit amet consectetur adipisicing elit. Quis magni, possimus aperiam provident voluptate, inventore impedit fuga corrupti minima ratione animi non nam iure unde ducimus quidem esse rem atque. Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi deserunt quod tempore aut nam corporis non eveniet molestiae labore accusamus delectus sapiente, consequatur explicabo, esse sunt suscipit repudiandae aperiam error.

ABOUT

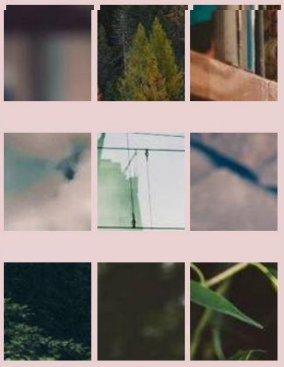
Lorem ipsum dolor sit amet consectetur, adipisicing elit. Rerum, odio alias culpa possimus dolorem impedit nostrum, praesentium temporibus reiciendis minima iste ducimus? Non deleniti alias facere facilis debitis. Ullam, repudiandae.

SUBSCRIBE

enter your email

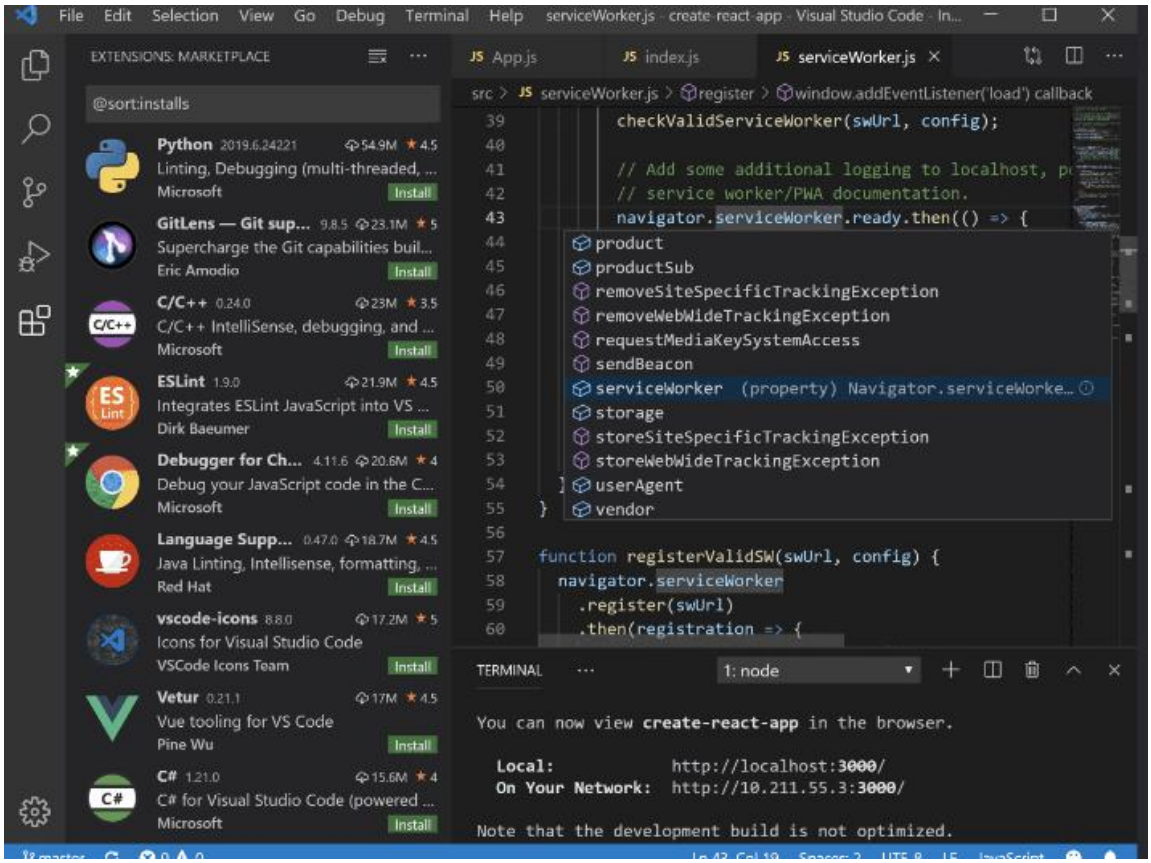
SIGN UP

INSTAGRAM



CHAPTER FOUR

APPLICATION/EQUIPMENT USED



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY

The six months industrial attachment was the one that captivated my attention and brought me out to see that which was taught in school as it is applied in the outside world practically. Working in the IT department of OLASTIG TECHNOLOGIES has helped me build some level of confidence such that I could easily carve a niche for myself and actually boast of things I know how to do, and also getting familiar with so many new techniques in the computing world.

I learnt how to design web applications (both static and dynamic) for any organization, school etc. I learnt how to analyze basic network problems by testing the connectivity with the "PING" tool. I also learnt how to crimp CAT 5 network cables and finally, I learnt how to design a network using a simulation software called "PACKET TRACER" while configuring the routers via command line client.

5.2 PROBLEM ENCOUNTERED

I encountered a little problem in funding because it was difficult for me to transport myself to and fro the place of attachment every day. This is because I wasn't paid officially.

5.3 RECOMMENDATION

Although SIWES undergone did achieve quite a lot of its stated objectives, nevertheless, the following recommendations are suggested to improve the qualitative context of the programme:

- Sending students specifically to establishment where the stipulated aims and objectives of SIWES would be achieved.
- Payment of befitting student allowance to assist in students finances during the period of training.
- To the University, they should help in securing placements for student as it will reduce difficulty in getting placements.
- And also, students should be given more practical work in schools, by developing and equipping the laboratories in our institutions so that the experience does not seem entirely new to them.

5.4 CONCLUSION

This industrial training has been a great privilege for me as a person because it made me to learn more on the practical of the courses been taught in school, it has also helped me to have an insight and knowledge on what the outside market and employers expect of a graduate which has then made me determined to be a success. The experience was also more of challenges to

seeing human beings like me build great software for different applications. It is indeed a privilege. The programme has been highly enlightening, beneficial, interesting and successful. The objective of which the scheme was undergone was however achieved.