

STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)

Held At

ROBUST TECHNOLOGIES INTEGRATED HUB AND ALLIED SERVICE LTD.

Located At: ARA VILLAGE AREA ILORIN KWARA STATE.

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SUBMITTED TO THE

DEPARTMENT OF COMPUTER SCIENCE,
INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY,
KWARA STATE POLYTECHNIC, ILORIN.

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF
NATIONAL DIPLOMA IN COMPUTER SCIENCE

Mach, 2025.

DEDICATION

This report is dedicated to God Almighty for his mercies and to my dear parents Mr. and Mrs. AFOLABI for their support financially, morally, and also to all my friends you are the best.

ACKNOWLEDGEMENT

I give my unreserved and profound gratitude to the Almighty Allah for his ever abiding presence right from the time I was conceived to this present moment.

To my wonderful and chivalrous mother I say a big thank you for your care and support and also my father. I also appreciate the effort of my siblings: you guys are wonderful.

I render my sincere thanks to all lecturer in the department of computer science, kwara state polytechnic, for all ways they have gone to impart knowledge onto the student of the department (H.O.D), and other departmental staffs including my supervisor for his support during and after the training

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CHAPTER ONE

1.1 INTRODUCTION

The government's decree No. 47 of 8th Oct; 1971 as amended in 1990, highlighted the capacity building of human resources in industry, commerce and government through training and retraining of workers in order to effectively provide the much needed high quality goods and services in a dynamic economy as ours (Jemerigbo, 2003). This decree led to the establishment of Industrial Training Fund (ITF) in 1973/1974.

The growing concern among our industrialists that graduates of our institutions of Higher learning, lack adequate practical background studies preparatory for employment in industries, led to the formation of students Industrial Work Experience Scheme (SIWES) by ITF in 1993/1994(Information and Guideline for SIWES, 2002). ITF has as one of its key functions; to work as cooperative entity with industry and commerce where students in institutions of higher learning can undertake mid-career work experience attachment in industries which are compatible with student's area of study (Okorie 2002, in Asikadi 2003).

The students Industrial Work Experience Scheme (SIWES) is a skill Training programme designed to expose and prepare students of Agriculture, Engineering, Technology, Environmental, Science, Medical Sciences and pure and applied sciences for the Industrial work situation which they likely to meet after graduation. Duration of SIWES is four months in Polytechnics at the end of NDI, four months in College of Education at the end of NCE II and six months in the Universities at the end of 300 or 400 or 500 levels depending on the discipline (Information and Guideline for SIWES, 2002).

1.2 Aim and Objectives of SIWES

The objectives of SIWES among others includes to:-

- Provide an avenue for students in institutions of higher learning to acquire industrial skills and experience in their approved course of study.
- Prepare students for the industrial works situation which they are likely to meet after graduation.
 - Expose students to work methods and techniques in handling equipment and machinery not available in their institutions.
- Provide students with an opportunity to apply their knowledge in real work situation thereby bridging the gap between theories and practices.

 Enlist and strengthen employers' involvement in the entire educational process and prepare students for employment in Industry and Commerce (Information and Guideline for SIWES, 2002).

1.3 Bodies Involved in the Management of SIWES

The bodies involved are: Federal Government, Industrial Training Fund (ITF), Other Supervising Agencies are: National University Commission (NUC), National Board for Technical Education (NBTE), & National Council for Colleges of Education (NCCE).

The functions of these agencies above include among others to:

- Ensure adequate funding of the scheme;
- Establish SIWES and accredit SIWES unit in the approved institutions;
- Formulate policies ad guideline for participating bodies and institutions as well as appointing SIWES coordinators and supporting staff;
- Supervise students at their places of attachment and sign their log-book and ITF Forms;
- Vet and process student's log-books and forward same to ITF Area office;
- Ensure payment of Allowances for the students and supervisors.

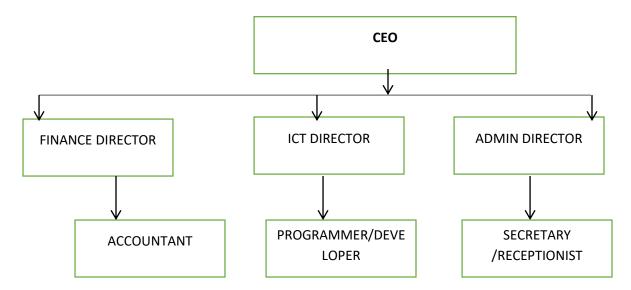
Therefore the success or otherwise of the SIWES depends on the efficiency of the Ministries, ITF, Institutions, Employers of labor and the general public involved in articulation and management of the program. Thus the evaluation of SIWES in tertiary institutions in meeting up with the needs for the establishment of the program is necessary.

CHAPTER TWO

2.1 HISTORICAL BACKGROUND OF THE ORGANIZATION

The corporate name of the organization is Robust Technologies Integrated Hub And Allied Service Ltd. The organization has been in existence some years back and it is located Ara Village Area Ilorin Kwara State. The pioneer is a very responsible person and the organization and is permanent staffs are also responsible as well. The organization is known for its diligence and efficiency in tutoring the computer literates in other for them to become professionals.

2.2 ORGANIZATIONAL STRUCTURE



2.3 MAJOR ACTIVITIES OF THE ORGANIZATION

The ORGANIZATION deals mainly with Web site Design and development, Graphic, Software etc. the organization sell system both coupled and in part, they also have engineering department that repair the faulty system both hardware and software.

2.4 SECTIONAL/UNIT OF THE ORGANIZATION WITH THEIR SPECIFIC FUNCTIONS.

These are the various units of the organization and their specific functions:

Director: is the head of the management and he is also in charge of the organization affairs.

Business Department: This section is in charge of troubleshooting, maintenances of PC.

Engineering Department: They deal with repairing of the system.

Training Centre: This is where student are being lectured.

CHAPTER THREE

3.1 SPECIFIC FUNCTION OF VARIOUS SECTION/UNIT

3.1.1 INTRODUCTION TO HTML

Web Development with HTML

HTML stands for **Hyper Text Markup Language**. An HTML file is a text file containing markup tags. The markup tags tell the Web browser how to display the page. An HTML file must have an 'htm' or 'html' file extension. An HTML file can be created using a simple text editor. The rule-making body of the Web is **World Wide Web Consortium** (**W3C**). W3C puts together specifications for Web standards. The most essential Web standards are **HTML**, CSS and XML. The latest HTML standard is XHTML 1.0.

Example: Creating a simple web page

Tag	Description	
	This tag defines the document type and HTML version.	
<html></html>	This tag encloses the complete HTML document and mainly comprises of document header which is represented by <head></head> and document body which is represented by <body></body> tags.	
<head></head>	This tag represents the document's header which can keep other HTML tags like <title>, keep other HTML tags like <title>, keep</td></tr><tr><td><title></td><td>The <title> tag is used inside the <head> tag to mention the document title.</td></tr><tr><td><body></td><td>This tag represents the document's body which keeps other HTML tags like <h1>, <div>, etc.</td></tr><tr><td><h1></td><td>This tag represents the heading.</td></tr></tbody></table></title>	

HTM or HTML EXTENSION?

When you save an HTML file, you can use either the .html or the .html extension. We have used .html in our example.

HTML TAGS

- 1. HTML tags are used to mark-up HTML elements
- 2. HTML tags are surrounded by the two characters < and >

- 3. The surrounding characters are called angle brackets
- 4. HTML tags normally come in pairs like and
- 5. The first tag in a pair is the start tag, the second tag is the end tag
- 6. The text between the start and end tags is the element content
- 7. HTML tags are not case sensitive, means the same as

Use Lowercase Tags?

We have just said that HTML tags are not case sensitive: means the same as . It is recommended to always use because

If you want to prepare yourself for the next generations of HTML, you should start using lowercase tags. The World Wide Web Consortium recommends lowercase tags in their HTML 4 recommendation, and XHTML (the next generation HTML) demands lowercase tags.

Tags can have attributes. Attributes can provide additional information about the HTML elements on your page.

This tag defines the body element of your HTML page: <body>. With an added bgcolor attribute, you can tell the browser that the background color of your page should be red, like this: <body bgcolor="red">.

Attributes always come in name/value pairs like this: name="value".

Attributes are always added to the start tag of an HTML element.

Quote Styles, "red" or 'red'?

Attribute values should always be enclosed in quotes. Double style quotes are the most common, but single style quotes are also allowed. In some rare situations, like when the attribute value itself contains quotes, it is necessary to use single quotes:

HEADINGS

Headings are defined with the <h1> to <h6> tags. <h1> defines the largest heading. <h6> defines the smallest heading.

<h1>This is a heading</h1>

<h2>This is a heading</h2>

<h3>This is a heading</h3>

<h4>This is a heading</h4>

<h5>This is a heading</h5>

<h6>This is a heading</h6>

HTML automatically adds an extra blank line before and after a heading.

HTML PARAGRAPHS

Paragraphs are defined with the tag.

This is a paragraph

This is another paragraph

HTML automatically adds an extra blank line before and after a paragraph.

Line Breaks

The
 tag is used when you want to end a line, but don't want to start a new paragraph. The
 tag forces a line break wherever you place it.

This
is a para
frpgraph with line breaks

The
br> tag is an empty tag. It has no closing tag.

COMMENTS IN HTML

The comment tag is used to insert a comment in the HTML source code. A comment will be ignored by the browser. You can use comments to explain your code, which can help you when you edit the source code at a later date.

<!-- This is a comment -->

Note: that you need an exclamation point after the opening bracket, but not before the closing bracket.

Text Formatting Tags

Tag	Description
<u></u>	Defines bold text
 big>	Defines big text
	Defines emphasized text
<u><i>></i></u>	Defines italic text
<small></small>	Defines small text
	Defines strong text
<u></u>	Defines subscripted text
	Defines superscripted text

<ins></ins>	Defines inserted text
	Defines deleted text

CHARACTER ENTITIES

Some characters have a special meaning in HTML, like the less than sign (<) that defines the start of an HTML tag. If we want the browser to actually display these characters we must insert character entities in the HTML source.

A character entity has three parts: an ampersand (&), an entity name or a # and an entity number, and finally a semicolon (;).

To display a less than sign in an HTML document we must write: < or <

The advantage of using a name instead of a number is that a name is easier to remember. The disadvantage is that not all browsers support the newest entity names, while the support for entity numbers is very good in almost all browsers.

Note that the entities are case sensitive.

Non-breaking Space

The most common character entity in HTML is the non-breaking space.

Normally HTML will truncate spaces in your text. If you write 10 spaces in your text HTML will remove 9 of them. To add spaces to your text, use the character entity.

Tables

Tables are defined with the tag. A table is divided into rows (with the tag), and each row is divided into data cells (with the tag). The letters td stands for "table data," which is the content of a data cell. A data cell can contain text, images, lists, paragraphs, forms, horizontal rules, tables, etc.

```
row 1, cell 1
row 1, cell 2

row 1, cell 2

row 2, cell 1
row 2, cell 2
```

How it looks in a browser:

row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

TABLES AND THE BORDER ATTRIBUTE

If you do not specify a border attribute the table will be displayed without any borders. Sometimes this can be useful, but most of the time, you want the borders to show.

To display a table with borders, you will have to use the border attribute:

HEADINGS IN A TABLE

Headings in a table are defined with the tag.

```
Heading
Another Heading

Another Heading

row 1, cell 1

row 1, cell 2

row 2, cell 1

row 2, cell 2

row 2, cell 2
```

How it looks in a browser:

Heading	Another Heading
row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

Empty Cells in a Table

Table cells with no content are not displayed very well in most browsers.

row 1, cell 1
td>row 1, cell 2

row 1, cell 2

row 2, cell 1
td>row 2, cell 1

row 2, cell 1

row 2, cell 1

How it looks in a browser:

row 1, cell 1	row 1, cell 2
row 2, cell 1	

Note that the borders around the empty table cell are missing (NB! Mozilla Firefox displays the border).

To avoid this, add a non-breaking space () to empty data cells, to make the borders visible:

row 1, cell 1
row 1, cell 2

```
row 2, cell 1
4d>
```

How it looks in a browser:

row 1, cell	1	row 1, cell 2
row 2, cell	1	

Definition Lists

A definition list is **not** a list of items. This is a list of terms and explanation of the terms.

A definition list starts with the <dl> tag. Each definition-list term starts with the <dt> tag. Each definition-list definition starts with the <dd> tag.

< dl >

<dt>Coffee</dt>

<dd>Black hot drink</dd>

<dt>Milk</dt>

<dd>White cold drink</dd>

</dl>

Here is how it looks in a browser:

Coffee

Black hot drink

Milk

White cold drink

Inside a definition-list definition (the <dd> tag) you can put paragraphs, line breaks, images, links, other lists, etc.

List Tags

Tag	Description
<u></u>	Defines an ordered list
<u></u>	Defines an unordered list
<u></u>	Defines a list item

<u><dl></dl></u>	Defines a definition list
<u><dt></dt></u>	Defines a definition term
<u><dd></dd></u>	Defines a definition description

3.2 INTRODUCTION CSS

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

ADVANTAGES OF CSS

CSS Saves Time: You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want. Pages load faster: If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.

Easy Maintenance: To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.

Superior Styles to HTML: CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.

Multiple Device Compatibility: Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.

Global Web Standards: Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

Offline Browsing: CSS can store web applications locally with the help of an offline catche. Using of this, we can view offline websites. The cache also ensures faster loading and better overall performance of the website.

Platform Independence: The Script offer consistent platform independence and can support latest browsers as well.

METHOD USED BY CSS IN FORMATTING HTML DOCUMENT

A CSS comprises of style rules that are interpreted by the browser and then applied to the corresponding elements in your document. A style rule is made of three parts

- i. Selector A selector is an HTML tag at which a style will be applied. This could be any tag like <h1> or etc.
- ii. Property A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be color, border etc.
- iii. Value Values are assigned to properties. For example, color property can have value either red or #F1F1F1 etc.

```
You can put CSS Style Rule Syntax as follows – selector { property: value }Syntax

Example: You can define a table border as follows –
```

Here table is a selector and border is a property and given value 1px solid #C00 is the value of that property.

You can define selectors in various simple ways based on your comfort. Let me put these selectors one by one.

- The Class Selectors

table{ border :1px solid #C00; }

You can define style rules based on the class attribute of the elements. All the elements having that class will be formatted according to the defined rule.

```
.black {
    color: #000000;
}
```

This rule renders the content in black for every element with class attribute set to black in our document. You can make it a bit more particular. For example:

```
h1.black {
    color: #000000;
}
```

This rule renders the content in black for only <h1> elements with class attribute set to black.

You can apply more than one class selectors to given element. Consider the following example:

This para will be styled by the classes center and bold.

The ID Selectors

You can define style rules based on the id attribute of the elements. All the elements having that id will be formatted according to the defined rule.

```
#black {
    color: #000000;
}
```

This rule renders the content in black for every element with id attribute set to black in our document. You can make it a bit more particular. For example –

- Multiple Style Rules

You may need to define multiple style rules for a single element. You can define these rules to combine multiple properties and corresponding values into a single block as defined in the following example —

```
h1 {
  color: #36C;
  font-weight: normal;
  letter-spacing: .4em;
  margin-bottom: 1em;
  text-transform: lowercase;
}
```

Here all the property and value pairs are separated by a semi colon (;). You can keep them in a single line or multiple lines. For better readability we keep them into separate lines.

For a while, don't bother about the properties mentioned in the above block. These properties will be explained in the coming chapters and you can find complete detail about properties in

• Inline Style: It is used to apply a unique style to a single HTML element. An inline CSS uses the style attribute of an HTML element.

CODE VIEW:



Figure 1: CSS coding for inline CSS

• External Style: With an external style sheet, you can change the look of an entire website by changing just one file. Each page must include a reference to the external style sheet file inside the link> element. The link> element goes inside the <head> section. Also when using external css it is preferable to keep the css separate from your HTML. Placing CSS in a separate file allows the web designer to completely differentiate between content (HTML) and design (CSS). External CSS is a file that contains only CSS code and is saved with a ".css" file extension. This CSS is then referenced in your HTML using the link> instead of <style> as earlier stated.

CODE VIEW:

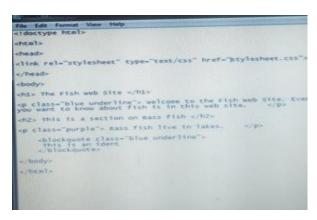


Figure 1: External CSS coding

DESIGN VIEW:



CSS SET THE BACKGROUND IMAGE

We can set the background image by calling local stored images as shown below

```
<html>
<head>
<style>
body {
background-image: url("/css/images/css.jpg");
background-color: #cccccc;
}
</style>
<body>
<h1>Hello World!</h1>
</body>
</head>
<html>
```

SET THE FONT FAMILY

Following is the example, which demonstrates how to set the font family of an element. Possible value could be any font family name.

depending on which font you have at your system.

```
</body>
</html>
```

SET THE TEXT COLOR

The following example demonstrates how to set the text color. Possible value could be any color name in any valid format.

```
<html>
<head>
</head>
<body>

This text will be written in red.

</body>
</html>
```

3.3 INTRODUCTION TO GRAPHICS

Graphics can refer to various visual elements, including images, illustrations, charts, and other visual representations. Graphics play a crucial role in communication, marketing, entertainment, and various other fields, providing a visually compelling way to convey information and express creativity.

TYPES OF GRAPHICS

Raster Graphics: Composed of pixels, commonly used for photographs and detailed images. Common raster formats include JPEG, PNG, and GIF.

Vector Graphics: Composed of paths and mathematical equations, allowing for scalability without loss of quality. Common vector formats include SVG, AI, and EPS.

GRAPHIC DESIGN

Software: Designers use graphic design software like Adobe Photoshop, Illustrator, or Corel DRAW for creating and editing graphics.

Typography: Involves the art and technique of arranging type to make written language legible and visually appealing.

3D GRAPHICS

Rendering: The process of creating a 2D image or animation from a 3D model. Used in video games, movies, simulations, and virtual reality.

3D Modeling: Creating three-dimensional models of objects or scenes, often using software like Blender, Maya, or 3ds Max.

COMPUTER GRAPHICS:

Computer Graphics API: Such as OpenGL and DirectX, enables software developers to interact with a computer's graphics hardware for rendering visuals.

Graphics Processing Unit (GPU): A specialized processor designed for rendering graphics and accelerating certain types of calculations.

WEB GRAPHICS

Web Design: Involves creating graphics and layouts for websites, considering user experience and aesthetics.

Responsive Design: Ensures that graphics adapt to different screen sizes and resolutions.

3.4 INTRODUCTION TO PHOTOSHOP

Photoshop is a raster graphics editor developed and published by Adobe Inc. for Windows and macOS. It was originally created in 1987 by Thomas and John Knoll. Since then, the software has become the most used tool for professional digital art, especially in raster graphics editing. Photoshop is a powerful and widely used graphics editing software that allows users to manipulate and enhance digital images.

FEATURES OF PHOTOSHOP

IMAGE EDITING

Layers: Photoshop uses a layered editing system, allowing users to work on different elements separately and combine them for the final image.

Adjustments: Various adjustment tools enable changes to color balance, brightness, contrast, and more.

Filters: Photoshop provides a wide range of filters for effects and enhancements.

SELECTION AND MASKING

Selection Tools: Tools like the Magic Wand, Lasso, and Marquee allow users to select specific areas of an image.

Masking: Layer masks and vector masks enable precise control over the visibility of elements.

Retouching and Restoration:

Healing Brush and Clone Stamp: Used for removing imperfections and duplicating parts of an image.

Content-Aware Fill: Automatically fills in selected areas with surrounding content.

TEXT AND TYPOGRAPHY

Text Tools: Adding and formatting text within an image.

Typography Features: Supports various fonts, styles, and effects.

Drawing and Painting

Brushes: Photoshop includes a variety of brushes for digital painting and drawing.

Pen Tool: Allows for precise path creation, useful for creating shapes and selections.

3D FEATURES

3D Editing: Photoshop has basic 3D capabilities for creating and manipulating 3D objects.

3D Text and Effects: Adding depth and dimension to text and graphics.

FILE FORMATS

Supported Formats: Photoshop supports various file formats, including PSD (Photoshop Document), JPEG, PNG, GIF, and more.

Smart Objects: Allows embedding of non-destructive, editable objects within a document.

AUTOMATION AND BATCH PROCESSING

Actions: Record and automate repetitive tasks with the Actions feature.

Batch Processing: Apply edits to multiple images simultaneously.

INTEGRATION WITH OTHER ADOBE PRODUCTS

Adobe Creative Cloud: Photoshop integrates seamlessly with other Adobe products like Illustrator, InDesign, and Lightroom.

USER COMMUNITY AND RESOURCES

Tutorials and Support: A large online community and numerous tutorials are available for learning and troubleshooting.

Plugins: Extend Photoshop's capabilities with third-party plugins.





CHAPTER FOUR

4.1 DISCUSSION

I gained a lot of things during my attachment in the organization. I was introduced to application software, visual studio code.

4.2 RELEVANCE OF EXPERIENCE GAINED TO STUDENT FIELD OF STUDY

- i. It enables me to practical zed the theoretical aspect of my course.
- ii. It enables me to know the important and usefulness of computer to man
- iii It enables me to expose to the activity involved in the system.

4.3 INTERPERSONAL RELATIONSHIP WITH THE ORGANIZATION

Robust Technologies Integrated Hub And Allied Service Ltd is a nice organization where I was able to interact with the director, instructors and students of the organization.

Even when I was about to round up my program, I felt like extending it but I have no option other than to leave.

CHAPTER FIVE

CONCLUSION

In conclusion, there were many things that I experienced and learnt during the 4 month of my Industrial Training Robust Technologies Integrated Hub And Allied Service Ltd. As a student majoring in computer science I was very much involve in computer related work and task, most of my training time were focused on how to make some webpages development including how to use html, css, javascript, php. The whole training period was very interesting, instructive and challenging. Through this training I was able to gain new insights and more comprehensive understanding about the real industry working condition and practice because it has afforded me the basic practical and theoretical knowledge that I would not have gotten from the lecture room going by my experience in the past three years in the institution. It also gave me the opportunity to have a feel of what it would be like after graduation when I start working. Going by the experience acquired during this programme, SIWES can be said to be the best way to prepare students to face the real working life after graduation. I also have been able to use this training to explore various avenues available at my disposal career-wise especially in preparing for ND2 project development

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:

- i. Participation of private corporate organization to minimize the problem of low funding as recently complained by the director of ITF and payment of befitting student allowance to assist in students finances during the period of training should be done on monthly basis and promptly.
- ii. Participation of various professional, regulatory and statutory bodies such as CPN, NCS in the supervision of students.
- iii. Sending students specifically to establishment where the stipulated aims and objectives of SIWES would be achieved.