A TECHNICAL REPORT ON

STUDENT INDUSTRIAL WORK EXPERIENCE

SCHEME [S.I.W.E.S]

HELD AT

SOLUTECHCITY SOFTWARE COMPANY

BY

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REPORT OVERVIEW

This report details the industrial training experience gained during the Student Industrial Work Experience Scheme (SIWES) conducted at Solutech-City Software Company. The report is divided into five chapters:

- Chapter One provides an introduction to SIWES, detailing its background and objectives.
- Chapter Two describes the establishment of attachment, including its location, history, objectives, and organizational structure.
- Chapter Three focuses on the student's specific involvement in various sections and units within the organization.
- Chapter Four discusses the industrial experience, highlighting key lessons learned in HTML, CSS, and JavaScript.

Chapter Five presents a summary of attachment activities, problems encountered, and recommendations for improving the SIWES scheme.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The Student Industrial Work Experience Scheme (SIWES) was instituted by the Industrial Training Fund (ITF) in 1973 as a strategic response to address the challenge of inadequate practical skills among Nigerian graduates from tertiary institutions, hindering their preparedness for employment in various industries.

This initiative is designed to provide students with invaluable exposure to industry-based skills, facilitating a seamless transition from academic settings to the practical demands of the professional world. It serves as a platform for tertiary institution students to gain familiarity with and exposure to experiences crucial for handling machinery and equipment that may not be readily available within the confines of educational institutions.

Industrial Training, a well-established educational strategy, integrates classroom studies with hands-on work experiences aligned with the student's academic major and career objectives. Successful internships are integral to an experiential learning process, not only enhancing career readiness but also nurturing skills essential for leadership roles within chosen professions.

Within the SIWES framework, a primary objective is to incorporate leadership development into the experiential learning journey. This is achieved through a mentoring relationship with visionary non-profit leaders, allowing students to acquire basic leadership skills. The aim is to encourage active engagement in non-profit management as a viable and fulfilling professional career option.

However, recognizing the diverse outcomes of the SIWES experience, its effectiveness hinges on factors such as the individual student, the nature of the work assignment, and the specific requirements of the supervisor/mentor. To ensure the incorporation of leadership skill development, each internship position description is mandated to articulate explicit, written learning objectives.

Participation in SIWES has evolved into a mandatory prerequisite for the conferment of Diploma and Degree certificates in specific disciplines across most higher learning institutions in the country, aligning with the government's education policy.

This background underscores the multifaceted significance of SIWES in enhancing practical skills, fostering leadership development, and ultimately contributing to the holistic education and professional growth of students in tertiary institutions.

1.2 OBJECTIVES OF SIWES

The Student Industrial Work Experience Scheme (SIWES) is driven by a set of comprehensive objectives aimed at providing students with a well-rounded and practical learning experience. The following are some key objectives of SIWES:

i. Career Exploration:

SIWES offers students the valuable opportunity to test their interest in a specific career path before making permanent commitments. This firsthand exposure aids in informed decision-making regarding future career choices.

ii. Application of Theory to Practice:

SIWES endeavors to bridge the gap between theoretical knowledge acquired in the classroom and its practical application in real work situations. Students develop practical skills by applying theoretical concepts to hands-on work experiences.

iii. Aptitude Testing:

SIWES provides students with the chance to test their aptitude for a particular career. This exposure helps them assess their suitability for specific professions, allowing for informed career decisions.

iv. Skill Development:

Students engaged in SIWES are expected to develop skills and techniques directly applicable to their chosen careers. This practical training enhances their competence and readiness for professional roles.

v. Transition to Employment:

SIWES facilitates the transition from college to full-time employment by exposing students to the dynamics of the professional work environment. This experience aids in adjusting seamlessly to the expectations of the workforce.

vi. Interpersonal Relationship Building:

SIWES provides a platform for students to develop attitudes conducive to effective interpersonal relationships. The program emphasizes the importance of collaboration and communication within a professional setting.

vii. Sense of Responsibility:

Through practical involvement, SIWES contributes to the development of a student's sense of responsibility. This includes accountability for tasks, adherence to timelines, and overall professionalism in the workplace.

viii. Preparation for Full-Time Employment:

SIWES aims to prepare students for full-time employment in their respective areas of specialization upon graduation. The practical experiences gained during the program serve as a solid foundation for professional entry into the workforce.

ix. Cultivation of Good Work Habits:

SIWES instills in students the importance of cultivating good work habits. This includes punctuality, diligence, and a commitment to quality work—attributes crucial for success in any professional setting.

x. Development of Employment Records/References:

SIWES provides students with the opportunity to develop employment records and references that significantly enhance their employment opportunities post-graduation. These records serve as a testament to their practical experiences and capabilities.

CHAPTER TWO

DESCRIPTION OF THE ESTABLISHMENT OF ATTACHMENT

2.1 LOCATION AND BRIEF HISTORY OF ESTABLISHMENT

Solutechcity Software Company is located at Century plaza, Plot 2, Kayode Sadiku Street, Near Former Panat Feed Mill, Sango Area, Ilorin, Kwara State. Established by a group of visionary computer scientists, the company's foundation is rooted in the mission to innovate, educate, and reshape the world of technology. Embodying the spirit of collaboration, the company operates under the motto, “Together, we recreate the world.”

The company commenced its operations in November 2019, marking the inception of a journey dedicated to technological advancement and skill development. Since its establishment, Solutechcity Software Company has witnessed remarkable growth, expanding its operations and influence in the tech industry.

As of the present, the organization boasts a diverse range of departments, each contributing to the company's multifaceted objectives. The growth is not merely limited to infrastructure; it is reflected in the team as well. Currently, Solutechcity Software Company comprises a dedicated staff of 15 or more individuals, each playing a crucial role in the realization of the company's goals.

The impact of Solutechcity Software Company extends beyond its immediate team. The institution actively engages and contributes to the community by providing employment opportunities, thereby supporting the livelihoods of those associated with the organization. This economic contribution underscores the company's commitment to not only technological advancement but also to societal development.

Solutechcity Software Company stands as a testament to the vision and dedication of its founders, evolving into a dynamic entity that not only shapes the technological landscape but also fosters growth and development within the community it serves.

2.2 OBJECTIVES OF THE ESTABLISHMENT

i. Research and Development Hub:

Solutechcity Software Company aims to establish itself as a hub for continuous research and development in the field of technology. This involves staying abreast of emerging trends, conducting innovative projects, and contributing to the evolution of the tech industry.

ii. Incubation for Tech Startups:

To foster innovation and entrepreneurship, the company seeks to provide an incubation space for tech startups. This initiative supports aspiring entrepreneurs by offering resources, mentorship, and a conducive environment for the development of their technological ventures.

iii. Industry Collaboration and Partnerships:

Solutechcity Software Company strives to build strategic collaborations and partnerships with industry leaders, institutions, and organizations. By creating a network of alliances, the company aims to enhance its offerings, share knowledge, and contribute to the growth of the larger technological ecosystem.

iv. Professional Certification Programs:

The company is committed to offering professional certification programs for individuals seeking to enhance their skills and credentials in the field of technology. These programs provide a structured pathway for continuous learning and career advancement.

v. Tech Community Outreach Programs:

Solutechcity Software Company envisions actively engaging with the local and global tech community through outreach programs. This includes organizing workshops, seminars, and events that promote knowledge sharing, skill development, and community building.

vi. Innovation in Educational Pedagogy:

To revolutionize the approach to technology education, the company aims to explore innovative pedagogical methods. This involves integrating cutting-edge teaching techniques, educational

technologies, and hands-on learning experiences to ensure a dynamic and effective learning environment.

vii. Environmental Sustainability Initiatives:

Recognizing the environmental impact of technology, Solutechcity Software Company is dedicated to implementing sustainability initiatives. This includes adopting eco-friendly practices, reducing carbon footprint, and promoting responsible technology use within the organization and its community.

viii. Continuous Professional Development (CPD):

The company is committed to the continuous professional development of its team members and the larger tech community. This includes facilitating training programs, workshops, and resources to ensure that individuals remain at the forefront of technological advancements.

2.3 ORGANISATIONAL STRUCTURE

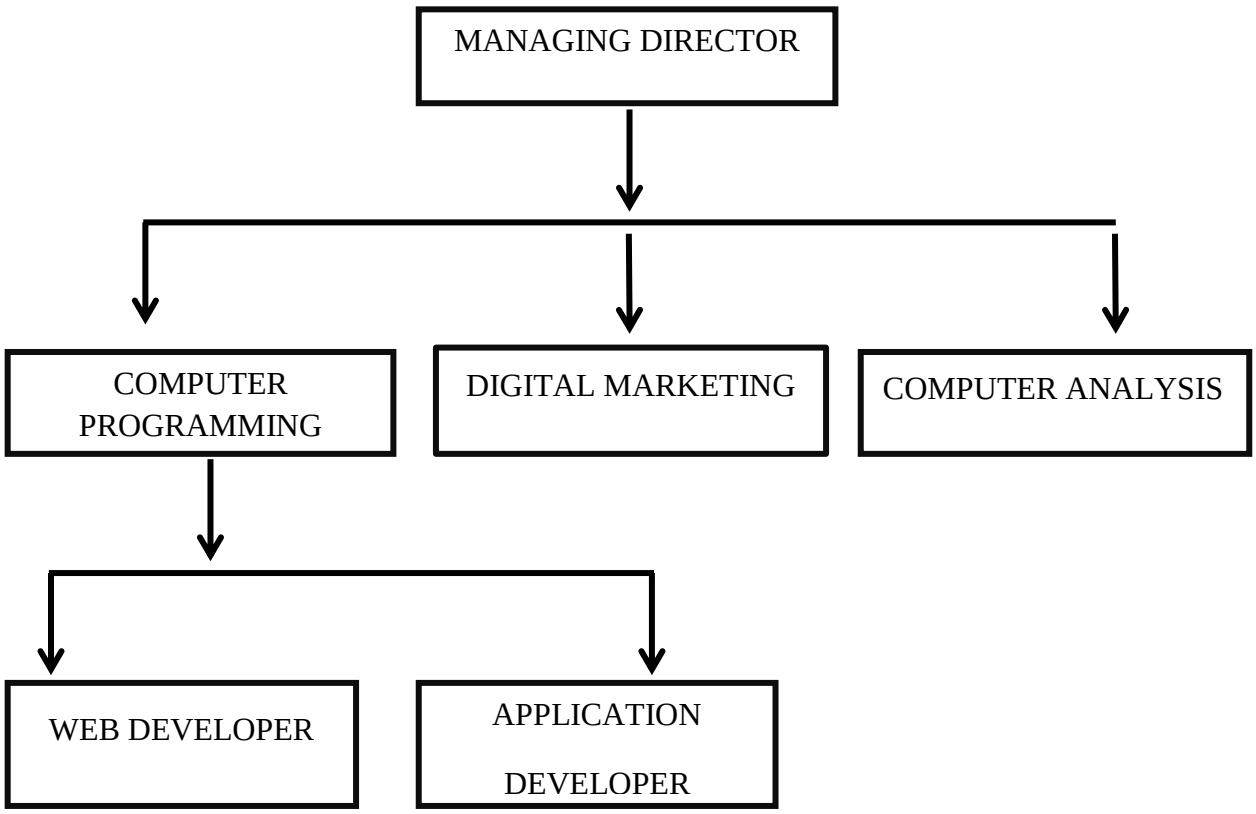

Figure 1. Organizational structure of the company

2.4 MAJOR ACTIVITIES OF SOLUTECHCITY SOFTWARE COMPANY

Solutechcity Software Company, situated at Century plaza, Plot 2, Kayode Sadiku Street, Near Former Panat Feed Mill, Sango Area, Ilorin, Kwara State, was founded to address specific technical needs in the center and its vicinity. The organization engages in a variety of major activities aimed at providing comprehensive technology solutions. Here's a breakdown of each activity:

i. **Software Development:** Software development involves the creation, design, coding, and maintenance of software applications. It encompasses the entire process of developing software from conceptualization to implementation.

ii. **Web Development:** Web development refers to the building and maintenance of websites and web applications. It includes tasks such as web design, content development, client-side/server-side scripting, and network security configuration.

iii. **Data Processing**: Data processing involves the collection, transformation, and manipulation of data to produce meaningful information. It includes activities such as data entry, data cleaning, data analysis, and data visualization.

iv. **Information Technology Consultancy (IT):** Information Technology Consultancy entails providing expert advice and solutions in the field of information technology. Consultants may offer guidance on system design, software selection, infrastructure optimization, and other IT-related matters.

v. **Computer Training in Both Certificate and Diploma (Advance) Courses:** Computer training involves imparting knowledge and skills related to computer usage. Certificate and diploma courses cover a range of topics from basic computer literacy to advanced skills in software development, networking, or other specialized areas.

vi. **Digital Marketing:** Digital marketing involves the use of digital channels, such as social media, search engines, email, and websites, to promote products or services. It includes activities like content creation, social media management, search engine optimization (SEO), and online advertising.

CHAPTER THREE

3.0 STUDENT SPECIFIC INVOLVEMENT IN VARIOUS SECTION/UNIT.

Solutechcity Software Company has a room that is used for tutoring, and another office that was partitioned into segments for some other activities.

All the departments are independent since they are of different courses but they all have a common department in which a student learns basic computing for his / her first two (2) weeks of training.

I carried out some activities in the web development department and some of these activities included designing web pages, putting media on web pages, creating web forms, and so on.

I also took some lessons with the software development department.

Lastly, I also learned some elementary designing. After all the lessons I learned from these departments, I then proceeded to the department where I wanted to study which is the web development department and that was where I gained all the experience I have in addition to the ones I have gained from other departments.

3.1 CHALLENGES AND PROBLEM ENCOUNTERED

It is not uncommon to hear students on their Student Industrial Work Experience Scheme (SIWES) or internship lament their unpleasant experiences, especially the challenges encountered in the process of finding a firm to accommodate and support them.

While it is expected of students to go out and acquire practical knowledge of their chosen fields, it seems also right for firms to make provisions to support their efforts.

Though internships are peculiar to polytechnics, most universities have followed suit depending on the course of study of the students. The major objective of an internship is to help students apply theoretical knowledge and school-based skills to practice before they enter the world of work.

The program came into existence following decree No. 47 of October 08, 1971, as amended in 1990. This decree gave birth to the founding of the Industrial Training Fund (ITF) in 1973/1974,

which in turn established the Students Industrial Work Experience Scheme (SIWES) to bridge the gap between school-based knowledge and workplace skills. Though industrial training provides students with work experience that prepares them for the workplace, the major advantage is that it helps students discover their areas of career interests which they are most likely to acquire.

But despite this advantage, internship isn't without its hiccups, as students face the challenges of getting firms that would not just absorb them in their core areas of competence, but pay them monthly allowances. Vanguard Learning investigation reveals that organizations such as banks request IT students because of cheap labor, others do not wish to accommodate students who beg for placements, while some organizations will ask the students to pay for the knowledge that will be acquired.

At Solutech City Software Company, the workers work harder and they are very good at their work. Some of the challenges faced are listed below:

- Too much money is been spent during the program due to transport fees (to and fro).
- Too much stress is been carried out during the SIWES program.
- The problems of getting attachment in an establishment to get the required knowledge.
- Non-availability of well-trained computer scientists.

CHAPTER FOUR

INDUSTRIAL EXPERIENCE

4.0 WEB DESIGN

During my training at Solutechcity Software Company, I had the opportunity to delve into the realm of web development, specifically focusing on the creation of websites. The training encompassed the utilization of various tools, with a primary emphasis on HTML and CSS. The process of acquiring these skills was structured step by step, allowing for practical application at every stage.

4.1 HTML

HTML is a **markup** language for **describing** web documents (web pages).

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- A markup language is a set of **markup tags**
- HTML documents are described by **HTML tags**
- Each HTML tag **describes** the different document content

HTML TAGS:

HTML tags are **keywords** (tag names) surrounded by **angle brackets**:

<tagname>Content</tagname>

- HTML tags normally come **in pairs** like <h1> and </h1>
- The first tag in a pair is the **start tag,** and the second tag is the **end tag.**
- The end tag is written like the start tag but with a **slash** before the tag name

The following are the names of tags and their description.

Tag Description <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> This tag represents the document's header which can keep other HTML tags like <title>, <link>, <script language>, etc.

<title> The <title> tag is used inside the <head> tag to mention the document title. <body> This tag represents the document's body which keeps other HTML tags like <h1>, , <p>, <table>, etc.

4.1.2 CSS AND ITS PROPERTIES

Definition:

CSS (Cascading Style Sheets): CSS is an acronym for Cascading Style Sheets. It is a style sheet language used to define the presentation and layout of HTML documents. CSS allows for the separation of document content from its visual representation, enhancing flexibility and maintainability.

Display Of Html Elements:

Visual Styling: CSS defines how HTML elements are presented and displayed on web pages. It governs aspects such as fonts, colors, spacing, layout, and other visual attributes, providing a consistent and appealing appearance.

Evolution and Problem Solving:

Origin in HTML 4.0: Styles were introduced to HTML with the release of HTML 4.0 to address the limitations in formatting and presentation. CSS emerged as a solution to the challenges of styling within HTML documents.

Efficiency and Work Savings:

Streamlining Development: CSS significantly reduces the redundancy of styling information across multiple HTML pages. By centralizing styling rules, it saves developers a considerable amount of work and promotes consistency throughout a website.

Modularity: With CSS, modifications to the visual presentation can be made in one central location, affecting all elements governed by that style. This modular approach enhances ease of maintenance and updates.

External Style Sheets:

Storage in CSS Files: External Style Sheets in CSS are stored in separate files with a .css extension. These files contain sets of styling rules that can be linked to multiple HTML documents. This separation facilitates better organization and management of styles.

Linking to HTML Documents: External Style Sheets are linked to HTML documents using the <link> element, promoting a clean separation of content and presentation.

Additional Properties:

Selectors and Declarations: CSS employs selectors to target specific HTML elements and declarations to define the styling properties for those elements.

Box Model: CSS introduces the box model, which describes the structure of elements in terms of content, padding, border, and margin. This model is fundamental to the layout of web pages.

Responsive Design: CSS includes properties that enable the creation of responsive designs, allowing web pages to adapt to different screen sizes and devices.

Animations and Transitions: Advanced features in CSS include the ability to create animations and transitions, enhancing the interactivity and user experience of web pages.

THE FOLLOWING ARE REASONS WHY CSS IS BETTER

1. It saves time

2. It eradicates the idea of using repeating codes

3. It provides efficiency in design and updates: with CSS, we can create rules, and apply those rules to many elements within the website.

4. It creates an external file (server side) for managing HTML content

METHOD USED BY CSS IN FORMATTING HTML DOCUMENT

1. Inline Style: An inline style loses many of the advantages of a style sheet (by mixing content with presentation). Use this method sparingly! To use inline styles, add the style attribute to the relevant tag. The style attribute can contain any CSS property.

2. Embedded / Internal Style: An internal style sheet should be used when a single document has a unique style. You define internal styles in the head section of an HTML page, inside the <style> tag,

3. External Style: An external style sheet is ideal when the style is applied to many pages.

With an external style sheet, you can change the look of an entire Web site by changing just one file.

Each page must include a link to the style sheet with the <link> tag. The <link> tag goes inside the head section.

CSS SELECTORS AND HOW THEY CAN BE USED

CSS selectors are powerful tools used to target and style HTML elements based on various criteria. Here are different types of CSS selectors and how they can be utilized:

1. Element Selector:

Definition: The element selector targets HTML elements based on their element name.

Usage Example: Selecting all <p> elements on a page and applying styling.

p { text-align: center; color: red; }

2. ID Selector:

Definition: The ID selector targets a specific HTML element based on its unique id attribute.

Usage Example: Selecting an element with the id "hello" and applying it to style.

#hello { color: red; }

3. Class Selector:

Definition: The class selector targets elements with a specific class attribute.

Usage Example: Selecting elements with the class "center" and applying center alignment.

.center { text-align: center; }

4. Universal Selector:

Definition: The universal selector selects all elements on a page.

Usage Example: Applying styling to all elements on the page.

* { margin: 0; padding: 0; }

5. Attribute Selector:

Definition: The attribute selector targets elements with a specific attribute or attribute value.

Usage Example: Selecting all <a> elements with the "target" attribute and applying styling.

a[target="_blank"] { font-weight: bold; }

6. Descendant Selector:

Definition: The descendant selector targets an element that is a descendant of another specified element.

Usage Example: Selecting all elements within a and applying styling.

div span { font-style: italic; }

7. Child Selector:

Definition: The child selector targets an element that is a direct child of another specified element.

Usage Example: Selecting all <li> elements that are direct children of a <ul> and applying styling: ul > li { list-style-type: square;

BACKGROUND AND FONT OF VARIOUS HTML ELEMENTS

You can set the following background properties of an element.

1. The background color: Is a property used to set the color background of an element.

2. The background-image property: is used to set the background image of an element.

3. The background-repeat: Is used to control the repetition of an image in the background.

4. The background position: Is used to control the position of an image in the background.

5. The background attachment: Is used to control the scrolling of an image in the background.

6. The background property: Is used as a short hand to specify a number of other background properties.

FONT WHICH ARE;

1. The Font-family property: This is used to change the face of a font

2. The Font-style property: This is used to make a font italic or oblique.

3. The Font-weight property: This is used to increase or decrease how bold or light a font appears.

4. The Font-size property: This is used to increase or decrease the size of a font.

TEXT DECORATION

Text decoration in CSS allows for the enhancement of textual content by applying various decorative features. The text-decoration property is used to specify the decoration of text, and it can take on several values. Let's delve into the different values and their effects:

i. Underline: Add a line beneath the text. eg. {text-decoration: underline;}
ii. Overline: Adds a line above the. eg. {text. text-decoration: overline;}
iii. Line Through: Adds a line through the middle of the text.eg {text-decoration: line-through;}
iv. Combining Decorations: Multiple text decorations can be combined by separating values.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 CONCLUSION

In conclusion, this report has dealt with all I was taught both practical and theory during the SIWES program. The SIWES program is of great advantage which every student that participated will forever remember.

5.1 PERSONAL IMPRESSION ABOUT THE ORGANISATION

The Web Development Department of Solutechcity Software Company is a place to be and thank God that I went there for the industrial training. They have God-fearing staff and students have unlimited and unrestricted access to all their resources this makes it easier for students to learn fast.

5.2 SUGGESTIONS AND RECOMMENDATIONS

I will suggest that the ITF should keep the SIWES program going so that students in the higher institution can gain more practical experience which will prepare them ahead of the labor market demands.

I recommend the Web Development Department of Solutechcity Software Company, at Century plaza, Plot 2, Kayode Sadiku Street, Near Former Panat Feed Mill, Sango Area, Ilorin, Kwara State for any computer science student interested in web development, it is a place where one can never be the same after being trained, and also for any IT department the student might fall into.