**CHAPTER ONE**

**1.0 INTRODUCTION**

This chapter gives a brief history of SIWES, its aims and objectives, as well as a short narrative on my application. I also introduces software development training (SDT), where I had my SIWES training.

**1.1 ABOUT STUDENTS INDUSTRIAL WORK EXPERIENCE SCHEME**

The student work experience scheme (SIWES) is a worldwide program practiced in countries like Japan, Australia, USA, Europe, and in African countries too. It is popularly known as co-operative education and referred to as sandwich in Europe. It is a six (6) months students industrial work experience scheme (SIWES) taken in the third year of the degree program, where the students go to various establishments related to their course of study. The program was initially introduced in Nigeria by the Industrial Training Fund (I.T.F.) which was established under Decree 47 of 1972 by the Supreme Military Council, headed by General Yakubu Gowon.

The Decree was billed to take effect from 31st March, 1974 and had as its core objective, the gradual reduction of the percentage of foreign participation in most of Nigeria’s economic activities, accompanied by a systematic cooperation of locally oriented skilled manpower into the vast economic sector. One of the key functions of the ITF is to work as cooperative body 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. The students Industrial Work Experience Scheme (SIWES) is a skill Training program designed to expose and prepare students for the Industrial work situation which they are likely to meet after graduation. Participation in SIWES has become a necessary pre-condition for the award of diploma and degree certificate in specific disciplines in most institutions of higher learning in the country in accordance with the education policy of government.

**1.2 BRIEF HISTORY OF SIWES**

The word SIWES (Student Industrial Work Experience Scheme) was introduce by the federal government in the year 1973 to develop the technological, physical and social skill of our nation, through this, adequate and intelligent student are provide the department involved the actual challenge various discipline before they can be awarded as am National Diploma (ND) graduate.

**1.3 AIMS AND OBJECTIVES OF SIWES**

1. Provide an avenue for students in institutions of higher learning to acquire industrial skills and experience in their approved course of study and also by interacting with people with more experience in the field under consideration.
2. Prepare students for the industrial work situation which they are likely to meet after graduation.
3. Expose students to work methods and techniques in handling equipment and machinery that are mostly not available in their various institutions.
4. Provide students with an opportunity to apply their knowledge in real world situation thereby reducing the gap between theoretical knowledge and practical work.
5. Enlist and strengthen employers’ involvement in the entire educational process and prepare students for employment in Industry and Commerce.

**1.4 ROLES OF STUDENT**

1. Attend SIWES orientation program before going on attachment.
2. Comply with the establishment’s rule and regulation.
3. Arrange living accommodation during the period of attachment.
4. Record all training activity done and other assignment in the log book.
5. Complete SPEI from ITF, FORM 8 and get it endorsed by the employer for submission to the ITF.

**1.5 OBJECTIVES OF THE REPORT**

The objectives of the SIWES report are;

1. To make through explanation of the work done during my four month industrial training.
2. To fulfill the requirement for national diploma in computer science.
3. To contribute to the body of knowledge and to enhance the understanding of the writer about a similar or same job.

**1.6 THE LOGBOOK**

The logbook issued to student on attachment by the institution was used to record all daily activities that took place during the period of attachment, and it was checked and endorse by the industry based/institution based supervisors and ITF during supervision.

**CHAPTER ONE**

**1.1 IMPORTANT OF SIWES IN COMPUTER SCIENCE**

The Student Industrial Work Experience Scheme (SIWES) plays a vital role in the academic and professional development of Computer Science students. As technology continues to evolve, it is essential for students to bridge the gap between theoretical learning and practical application. Below are some of the key importance of SIWES in the field of Computer Science:

1. Practical Application of Classroom Knowledge

SIWES allows students to apply programming, software development, database management, and networking theories learned in the classroom to real-world projects. This reinforces learning and enhances understanding.

1. Exposure to Industry Tools and Technologies

During the program, students gain hands-on experience with modern tools and technologies such as:

* Programming languages (e.g., VB.NET Python, Java, JavaScript)
* Databases (e.g., MySQL, MongoDB)
* Development frameworks (e.g., Laravel, React)
* Software development practices (e.g., Agile, DevOps)

This exposure is essential for staying up-to-date with industry trends.

1. Skill Development

SIWES sharpens both technical and soft skills:

* Technical Skills: Coding, debugging, system analysis, UI/UX design, testing, and deployment.
* Soft Skills: Communication, teamwork, time management, adaptability, and problem-solving.

1. Enhances Employability

Employers often look for candidates with practical experience. SIWES gives students a competitive advantage in the job market by providing industry exposure and a better understanding of workplace expectations.

1. Builds Professional Network

Through SIWES, students have the opportunity to connect with industry professionals, mentors, and potential employers. This networking can be beneficial for future job placements and career guidance.

1. Encourages Career Direction

By working in different areas of Computer Science such as software development, cybersecurity, or network administration, students can discover their interests and career paths more clearly.

1. Promotes Innovation and Problem Solving

In real-world projects, students are often faced with new challenges. Solving these problems encourages creativity and innovation, which are essential qualities in the tech industry.

1. Fosters Confidence and Independence

Completing real tasks and contributing to live projects helps students build confidence in their abilities and prepares them for the transition from school to the workplace.

**1.2 BACKGROUND OF ORGANIZATION**

4Real Global IT Solution is a dynamic and innovative Information and Communication Technology (ICT) firm based in Nigeria. The company was established to provide modern technology solutions that cater to the needs of individuals, businesses, educational institutions, and government bodies.

Since its inception, 4Real Global IT Solution has served a wide range of clients across different sectors, including education, finance, healthcare, and retail. The company’s core strength lies in its customer-centric approach, innovation-driven solutions, and commitment to quality service delivery.

The organization promotes a collaborative working environment that encourages learning, creativity, and continuous improvement. Interns and SIWES students are given the opportunity to work alongside experienced professionals, participate in real-life projects, and gain practical skills that complement their academic knowledge.

4Real Global IT Solution is dedicated to driving technological advancement in Nigeria and Africa at large, helping clients harness the power of IT to achieve their business goals.

**1.3 ORGANIZATION STRUCTURE IN 4REAL GLOBAL**

**CEO**

**SOFTWARE DEVELOPMENT MANAGER**

**IT MANAGER**

**SECURITY MANAGER**

**PRODUCT MANAGER**

**QUALITY ASSURANCE  
MANAGER**

**1.4 DEPARTMENT IN 4REAL GLOBAL**

4Real Global IT Solution has positioned itself as a trusted provider of end-to-end IT services. The company specializes in a wide range of areas, including but not limited to:

1.4.1 Software Development Manager

The Software Development Manager at 4Real Global IT Solution plays a central role in planning, managing, and overseeing all software development activities. This position ensures that projects are delivered on time, meet specified requirements, and align with the organization’s technical standards and goals.

Key Responsibilities:

* Leading and managing the software development team (developers, UI/UX designers, and testers).
* Planning and assigning development tasks based on project priorities.
* Collaborating with product managers to define system requirements and features.
* Reviewing code and ensuring adherence to coding standards and best practices.
* Monitoring project timelines, identifying roadblocks, and ensuring timely delivery.
* Ensuring software scalability, maintainability, and security in all projects.
* Conducting performance evaluations and mentoring junior developers.

1.4.2 IT Manager

The IT Manager at 4Real Global IT Solution is responsible for overseeing the company’s overall information technology infrastructure. This includes managing networks, hardware, software, and IT support staff to ensure the smooth operation of internal and client systems. Key responsibilities include:

* Planning and coordinating IT strategies in line with business goals.
* Managing the configuration, installation, and maintenance of IT systems.
* Ensuring system security, data backups, and disaster recovery protocols
* Providing technical support and resolving system-related issues.
* Supervising the IT team and ensuring optimal performance.

1.4.3 Security Manager

The Security Manager oversees the digital security posture of the organization. They ensure that data, networks, applications, and systems are secure from internal and external threats. Their key responsibilities include:

* Designing and implementing company-wide cybersecurity policies.
* Monitoring network traffic for suspicious activities.
* Conducting regular security audits and risk assessments.
* Educating employees about cybersecurity best practices.
* Ensuring compliance with data protection laws and industry standards.

1.4.4 Product Manager

The Product Manager is responsible for defining the vision and roadmap of a product, ensuring that it aligns with market needs and client requirements. This role bridges the gap between the technical team and business stakeholders. Key responsibilities include:

* Gathering and analyzing customer and market requirements.
* Defining product features and creating development plans.
* Coordinating with developers, designers, and marketers.
* Evaluating product performance and user feedback for continuous improvement.

1.4.5 Quality Assurance (QA) Manager

The QA Manager ensures that all software and systems meet required quality standards before they are released or deployed. This role is critical for maintaining the company’s reputation for delivering reliable products. Key responsibilities include:

* Creating and implementing quality assurance strategies.
* Supervising software testing and identifying bugs or issues.
* Maintaining documentation on testing processes and results.
* Ensuring that final deliverables meet client expectations and specifications.

**1.5 NAME AND DESIGNATION OF KEY OFFICER AT 4REAL GLOBAL IT SOLUTION**

4Real Global IT Solution is structured in a way that promotes efficient workflow, collaboration, and professional management. The company is led by a team of experienced and highly skilled professionals who oversee various departments and ensure smooth operations across all technical and administrative units.

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| S/N | Name | Designation |
| 1 | Mr. Fola Rilwan | Chief Executive Officer (CEO) |
| 2 | Mr. Michael Adeyemi | Software Development Manager |
| 3 | Mr. Tunde Babalola | IT Manager |
| 4 | Ms. Fatima Musa | Security Manager (Cybersecurity Lead) |
| 5 | Mr. David Olumide | Product Manager |
| 6 | Miss Sandra Edet | Quality Assurance Manager (QA) |