**A TECHNICAL REPORT**

**ON**

**STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)**

**UNDERTAKEN AT OYOL COMPUTER CONSULT, INC.**

**BY**

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**SUBMITTED**

**TO**

**THE DEPARTMENT OF COMPUTER SCIENCE**

**FACULTY OF COMPUTING**

**UNIVERSITY OF PORT HARCOURT RIVERS STATE**

**SUPERVISOR:**

**COURSE CODE: CSC 300.2**

**JANUARY 2025.**

# **DEDICATION**

This report is dedicated most importantly to almighty God, who has been so faithful to me on this academic journey, and to my lovely parents Mrs. Ugwube Pauline, for their love, care and support to my academic journey on this campus. I am also dedicating this work to my industry-based supervisor Prof. Eke Bartholomew who in one way or the other supported me in all ramifications to see to the success of this industrial training scheme.

# **ACKNOWLEDGEMENTS**

I am very glad to make mention of my profound gratitude to God almighty for his infinite love, provision, grace and care from Him that I have received throughout my life training session at Oyol Computer Consult, Inc.

Also, it is noteworthy to make mention of the relentless effort of my industry-based supervisor, Prof. Eke Bartholomew, who has been helpful in every aspect to seeing to the success of my training and every other person that supported me in one way or the other.

More so, it is obligatory to be thankful to my wonderful and skillful supervisor, Dr. Otokiri George, who in one way or the other saw to the success of my training through his guidance, advice and supervision during my training.

I will not also forget the profound effort of my departmental H.O.D Dr. Ugochi A. Okengwu, for the role she played and has been playing to seeing to the success of students in general, during this industrial training, and also to all my amazing lecturers in the department of Computer Science, including all the non-academic Staff that saw to the success of the training. The last but not the least, I am very grateful and must express my profound appreciations to my lovely parents, for their moral, financial and spiritual support in this academic journey so far, all I have to say is that the good Lord will grant you perfect health and long life. Amen.

# **ABSTRACT**

# The student industrial work experience scheme (SIWES) was established by Federal Government of Nigeria, which was aimed at providing sufficient industrial work experience at their undergraduate level in high institution, to enable them to acquire practical skills in their various course of studies, and to prepare them for industrial experience which they are likely to meet after graduation. This report is all about the practical knowledge in Web Development which I acquired during my 6 Months Industrial Training at Oyol Computer Consult, Inc., and specifically a project I did creating a To-Do List with Local Storage with the use of HTML, CSS and JavaScript.

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# **CHAPTER ONE**

### **1.1 STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME**

The Industrial Training Fund is an agency of the Federal Government of Nigeria that has been vested with the responsibility to meditate between the tertiary institutions and industries in order to encourage students to participating in industrial activities prior to their graduation. This participation to prepare students to fit well into the industrial system, if they secure employment in any industry after graduation, in order to bridge the gap between the theory which they have acquired in school and the real industrial work after school.

The Students’ Industrial Work Experience Scheme (SIWES) is aim at offering veritable means to redressing between the skills that an average Nigerian graduate ought to possess and the important production skill require by the employers. Another critical aspect of SIWES process is the use of Job Specification Documents to guide the practical skills training process of students.

### **1.2 CHALLENGES OF SIWES**

From the inception of this Scheme in 1973 to date, a lot of problems/challenges have revolted against the success of the Scheme over the years. One of these challenges is the rapid expansion in the number of institution and trainees of the scheme, more so, another challenge that is also experienced is the inadequate funding of the Scheme by the Federal Government and the facets of the training scheme, which includes the duration of the training program, supervision of trainees, documentation and the assessment of performance, etc.

**1.3 THE ROLE OF INDUSTRIAL TRAINING FUND**

The Industrial Training Fund has a lot of important role it plays to the success of the scheme, and it was established by decree 47 of 1971 constitution and charged with the responsibility of encouragement and promotion of industrial skills, in order to generating a collection of indigenous training manpower, which is capable enough to meet the need of the economy for rapid development. Some of the roles that are usually play by I.T.F are:

* Formulation of policies and guidelines on SIWES for distribution to all the SIWES participating bodies, institutions and companies involved in the scheme.
* Supervision of students in Industrial Attachment.
* Disburses supervisory and students' allowances.
* Provides insurance cover for students in attachment.
* Provides information on companies for attachment and assists in the industrial training of students.
* Vet and process student’s logbook and ITF form 8.
* Regularly organize orientation programme for students prior to their attachment.

### **1.4 AIMS, SCOPES AND OBJECTIVES OF SIWES**

The Industrial Training Funds Policy Document No. 1 of 1973 which established SIWES outlined the objectives of the scheme. The objectives are to:

* Expose students to work methods and techniques in handling equipment and machinery that may not be available in their institutions.
* Provide an avenue for students in higher institutions of learning to acquire industrial skills and experiences during their course of study.
* Make the transition from school to the world of work easier and enhance students’ contacts 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 and prepare students for employment in Industry and Commerce.
* Prepare students for industrial work situations that they are likely to meet after graduation.

**1.5 HISTORY AND BACKGROUND OF OYOL COMPUTER CONSULT, INC.**

Oyol Computer Consult, Inc (OCC) is a leading Nigerian information and communication technology Consultancy and Web database-driven Development Company located in Port Harcourt Nigeria. Oyol Computer Consult, Inc started in 1995 as a mere dream to help students and newly established computing centers in the University of Port Harcourt find their footing in challenging computing tasks like programming, networking and maintenance. In 1998 the dream was translated to action in United Nations Development Project (UNDP) computing center project Katsina-ala Benue State Nigeria, GKC computing center and other private centers by the arrowhead of the consultancy, Dr. Eke Bartholomew, during his National Youth Service Corp (NYSC). In the same year, the logo of the Company was developed by Mr. Godwin Uka in Makurdi, Benue state, Nigeria.

Oyol Computer Consult was established in 1999 and has been in the business of developing both web and standalone applications for different organizations. The organization has a team of well experienced C#, PHP programmers, ASP. Net and JAVA developers, MySQL database Enterprise administrator and Web Designers. We are specifically trained and dedicated to development of Java applications, Web site Design, Dynamic Website development, Web database–driven application, E-commerce, shopping Cart Development, Chart room, Forum, offshore and outsourcing software development in Nigeria. Oyol Computer Consult laboratory known as OYOLAB focused on low-cost website development, shopping cart in creating development in OS-Commerce and other electronic commerce systems that easily integrated into third party web sites.

**1.6 OTHER SERVICES**

Oyol Computer Consult provides in-house training for our clients. These are those who want to learn modern software development technologies, both IT students, interns and company staff. These include knowledge of communication between customers and analysis of marketing and research data, we have the tools and the expertise to make company staff more efficient. We offer complete packaging, from the design and development of web site through to web hosting, graphic design of Logo, brochures, business cards, email stationery and just about everything else in-between. Our aim is to develop a manpower base that can support the environment within our operations.

We are passionate about what we do and our full commitment to all our clients. We promise our students and clients personal attention and professional business ethics. It is essential to maintain our clients’ technological base. We teach our clients’ staffs the following:

* How to make changes and develop their systems by themselves.
* How long they need to stay in order to update.

Where no in-house staff will do maintenance. Oyol Computer Consult will maintain clients, systems for a reasonable monthly fee. We provide free hosting for all the first twelve months (year) of hosting.

**1.7 ORGANIZATION CHART OF OYOL COMPUTER CONSULT, INC.**

The organization chart illustrates the area of responsibility of team members in Oyol computer consult. Each team member has their own business area and activity specification.

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**Fig.1.0 Organizational Chart Of OCC, Inc.**

# **CHAPTER TWO**

## **2.1 ACTIVITIES DURING MY INDUSTRIAL ATTACHMENT**

## **INTRODUCTION TO COMPUTING AND COMPUTER**

## **PROGRAMMING LANGUAGES**

I started my training on 1st of July, 2024, and my training days were fixed from Mondays-Fridays, with training hours between 9am-12noon. It was an intense training because according to our instructor we need to have a very strong foundation on what computing was all about and the programming language to be fully equipped as to really do well in Web Development.

**2.2 PORJECT DOCUMENTATIONS**

Below is a break down how the to-do list with local storage functionality was implemented:

**HTML Structure**

- The HTML file sets up the basic structure of the to-do list.

- It includes a heading (`<h1>`) to indicate that it's a to-do list, an input field (`<input>`) for users to enter new tasks, a button (`<button>`) to add tasks to the list, and an unordered list (`<ul>`) to display the tasks.

- Each task is represented as a list item (`<li>`).

**CSS Styling**

- The CSS file styles the to-do list interface to make it visually appealing and user-friendly.

- It applies basic styling to elements such as the heading, input field, button, and list items, setting properties like padding, margins, and font sizes to ensure a consistent appearance.

- The background color and spacing are adjusted to improve readability and aesthetics.

**JavaScript Functionality**

- The JavaScript file adds interactivity and local storage functionality to the to-do list.

- It starts by selecting the necessary DOM elements using `document.getElementById()` and assigning them to variables for easy access.

- The tasks are stored in local storage using `localStorage.setItem()` and retrieved using `localStorage.getItem()`. JSON is used to serialize and deserialize the tasks array.

- A function (`displayTasks()`) is defined to display the tasks stored in local storage. It clears the existing task list (`<ul>`) and iterates over the tasks array, creating a list item for each task and appending it to the list.

- Another function (`addTask()`) handles adding new tasks to the list. It gets the task text from the input field, trims any leading or trailing whitespace, adds the task to the tasks array, updates local storage, and then calls `displayTasks()` to update the UI.

- Event listeners are added to the "Add Task" button to trigger the `addTask()` function when clicked.

- When the page loads, the initial display of tasks is loaded from local storage by calling `displayTasks()`.

**User Interaction**

- Users interact with the to-do list by entering new tasks into the input field and clicking the "Add Task" button to add them to the list.

- Tasks are stored in the browser's local storage, allowing them to persist across page reloads and browser sessions.

- The list of tasks is displayed dynamically on the page, with new tasks being added to the list in real-time as they are entered by the user.

**Testing and Debugging**

- The to-do list is tested thoroughly to ensure that all functionalities work as expected.

- Test cases include adding tasks, verifying that tasks are stored and displayed correctly, and ensuring that the list remains consistent across page reloads.

**Optimization and Performance**

- The code is optimized for performance, with efficient use of local storage and minimal DOM manipulation.

- Error handling is implemented to handle cases where local storage is unavailable or corrupted.

**Deployment**

- Once completed and tested, the to-do list can be deployed to a web server or hosting platform to make it accessible to users.

By following these steps, the to-do list with local storage functionality is implemented and ready for use, providing a simple and convenient way for users to manage their tasks.

Below is the HTML, CSS, and JavaScript code for a to-do list with local storage functionality:

**HTML:**

html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>To-Do List</title>

<link rel="stylesheet" href="styles.css">

</head>

<body>

<div class="container">

<h1>To-Do List</h1>

<input type="text" id="taskInput" placeholder="Add a new task...">

<button id="addButton">Add Task</button>

<ul id="taskList"></ul>

</div>

<script src="script.js"></script>

</body>

</html>

**CSS (styles.css):**

css

body {

font-family: Arial, sans-serif;

background-color: #f4f4f4;

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

}

.container {

text-align: center;

}

h1 {

margin-bottom: 20px;

}

input[type="text"] {

padding: 10px;

font-size: 16px;

}

button {

padding: 10px 20px;

font-size: 16px;

cursor: pointer;

}

ul {

list-style-type: none;

padding: 0;

}

li {

background-color: #fff;

padding: 10px;

margin-bottom: 5px;

}

**JavaScript (script.js):**

javascript

document.addEventListener("DOMContentLoaded", function() {

const taskInput = document.getElementById('taskInput');

const addButton = document.getElementById('addButton');

const taskList = document.getElementById('taskList');

// Load tasks from local storage

const tasks = JSON.parse(localStorage.getItem('tasks')) || [];

// Display tasks

function displayTasks() {

taskList.innerHTML = '';

tasks.forEach(task => {

const li = document.createElement('li');

li.textContent = task;

taskList.appendChild(li);

});

}

// Add a new task

function addTask() {

const task = taskInput.value.trim();

if (task !== '') {

tasks.push(task);

localStorage.setItem('tasks', JSON.stringify(tasks));

displayTasks();

taskInput.value = '';

}

}

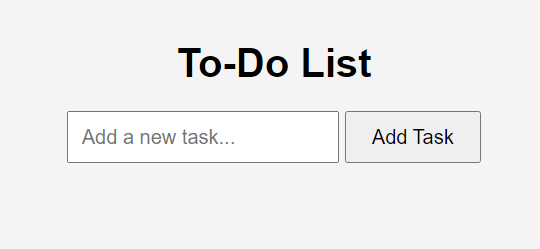
// Event listeners

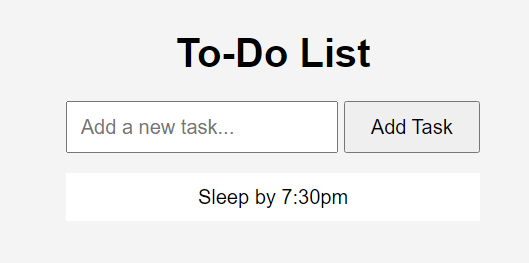
addButton.addEventListener('click', addTask);

// Initial display of tasks

displayTasks();

});





# **CHAPTER THREE**

## **3.1 CHALLENGES ENCOUNTERED**

There were a lot of challenges encountered during the training. First of all, one of the challenges was difficulty in getting a placement, relative to what I wanted to do which is Web Development. And the amount I was told to pay in order to start the training was a lot. Another challenge I encountered was the payment of transport fares, and feeding, because during this period I wasn’t at home, and the stipend was no longer regular as usual. More so, other challenges which I faced were irregular or poor power supply in my IT place, poor internet access.

### **4.2 RELEVANCE OF SIWES PROGRAM**

From whatI have learnt, I know for sure how relevant the SIWES Program is, and the application of my course of study here at the University of Port Harcourt being Computer Science. The SIWES program has really broadened my scope of reasoning due to the training I have gotten so far. This scheme has also helped in preparing me as a student to fit well into the industrial system after graduation. The program has also helped in making me understand the relationship between my course of study and how computing has and can still ease life. Last but not least, the SIWES program has really helped me to apply my theoretical knowledge in real work situations like computing.

## 

## **CHAPTER FOUR**

## **4.0 CONCLUSIONS AND RECOMMENDATION**

**4.1 CONCLUSION**

Conclusively, I will say that I am very pleased about my industrial training experience, because the training was satisfactory. Moreover, during the training my expectation of having a basic knowledge of Web Development was met by me, and I will also recommend more students to be trained in Web Development, because of its importance in this 21st Century. I will also advise students going to their industrial next year, to make use of every opportunity given to them to acquire skills that would make them relevant to labour market after graduation. Thanks.

### **4.2 RECOMMENDATIONS**

I would recommend that, school management, and the Federal government should build a well-equipped Information and Communications Technology, where students will go and acquire various computing skills, because in this our contemporary society, Technology is rapidly advancing every day, and virtually all disciplines in our tertiary institutions have one way or the other in which they ought to be automated, and the importance of ICT in our society cannot be underestimated, and the world they say is a ‘’global village’’, so, every university student ought to have one or more computing skills.

**APPENDIX**

**Figs.1-3 Pictures taken during the Industrial Training.**

**REFERENCE**

Students Industrial Work Experience Handbook.

Oyol Computer Consult, Inc. Company Profile.