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**RAPPORT DE STAGE D’INITIATION**

I would like to express my deepest gratitude to everyone who contributed to the success of my initiation internship at Fondation Zakoura. Their support and guidance were invaluable throughout this enriching experience.

**GRATITUDE**

I extend my gratitude to my classmates with whom I shared fruitful exchanges throughout our academic journey.

his internship report reflects the kindness and support I received from all these individuals, without whom this success would not have been possible.

Finally, I thank the pedagogical staff of the École Supérieure de Technologie de Casablanca for offering me a solid education in Computer Engineering.

Furthermore, I would like to thank Mr. Zaari Mohamed, General Director of the Foundation, for graciously welcoming me and giving me the opportunity to undertake my training within his esteemed organization.

I am profoundly thankful to MR.Omar Benjelloun Touimi , my supervisor at Fondation Zakoura, for his unwavering support, kindness, and encouragement during my internship.

In the modern era of digital transformation, education systems must adapt to the changing needs of society. In rural areas, where access to educational resources is often limited, innovative solutions are necessary to bridge the gap between students and quality education.

The "Collège Rural de Proximité" (CORP) project, an initiative by Fondation Zakoura Education aimed at improving educational outcomes in rural Morocco, addresses these challenges by leveraging digital technologies.

The CORP project is designed to overcome the significant barriers faced by rural students, such as geographical isolation and the lack of infrastructure.

By providing a comprehensive e-learning platform, CORP facilitates remote education, ensuring that students in rural areas have access to the same quality of education as their urban counterparts.

This platform is not only a tool for delivering content but also a means of personalized support and interactive learning, tailored to the unique needs of each student.

This report details the development and implementation of the CORP e-learning platform. Chapter 1 introduces Fondation Zakoura Education and explores the background of the CORP initiative, highlighting the specific challenges it aims to address. Chapter 2 focuses on the design and functionality of the platform, utilizing the Unified Modeling Language (UML) to map out the system's architecture.

In Chapter 3, we examine the technologies and tools employed in the platform's development. Finally, Chapter 4 provides a detailed overview of the implementation process, complete with screenshots that illustrate the platform's user interface and operational features.

Through this project, we aim to demonstrate how digital tools can transform education in rural areas, fostering equal opportunities for all students and contributing to the broader goal of educational equity in Morocco.

**General Introduction**

This internship report outlines my comprehensive experience in developing and enhancing an e-learning platform called CORP. The report begins with an in-depth overview of the company, highlighting its organizational structure, key operations, and the environment in which the platform was conceived. The core focus is on the meticulous design and implementation of the CORP platform, which was developed using PHP for robust backend functionality.

The platform's front-end was styled with both CSS and the Bootstrap framework, ensuring a responsive, user-friendly, and visually appealing interface that adapts seamlessly across various devices.

To accurately capture and translate user requirements into a functional system, I employed UML (Unified Modeling Language) to model, visualize, and design the platform’s architecture. This approach allowed for a clear understanding of the system's components and their interactions. Throughout the project, I diligently managed version control using Git, with the project hosted on GitHub. This not only facilitated efficient tracking of changes but also supported seamless collaboration and code sharing.

This internship was an invaluable learning experience, equipping me with advanced skills in PHP, CSS, Bootstrap,JavaScript and the practical application of UML for effective software development. Additionally, it honed my proficiency in using Git and GitHub for professional version control, ensuring that the project adhered to best practices in software engineering and collaborative development.

**Conclusion**

**Chapter 1 : Introduction**

1. **Presentation of the Foundation:**

2.Zakoura Foundation:

**I** am focusing on tasks such as designing user interfaces, implementing functionalities, and integrating various components to enhance the platform's usability and performance. This experience is valuable in deepening my understanding of development practices and preparing me for future challenges in the field.

**D**uring my internship, I am gaining hands-on experience in web application development for an E-learning platform. This opportunity allows me to apply the theoretical knowledge and skills I've acquired during my first year of studies to real-world projects.

**T**he Zakoura Education Foundation is a Moroccan non-profit organization dedicated to education and social development.

**logo**

1.Internship Context



Figure 1 : Zakoura Foundation logo

Recognized as a public utility association, Zakoura Foundation has been working for over 27 years to

promote human development through the education of children, the training of young people and the

empowerment of women in rural areas. It has developed unique expertise in the deployment of socio-

educational projects for rural populations, and benefits from the support and backing of national and

international partners.

The Zakoura Foundation promotes solidarity through its educational and social programs. It works for the common good by providing collective support to disadvantaged communities, encouraging resource sharing, and uniting efforts to improve living conditions.

Figure 1 : solidarity icon

**Solidarity :**

The Foundation’s values are :

**b)**  **Zakoura Foundation values :**

Since 1997, Zakoura's actions have directly benefited over 1,300,000 people, and thousands of resources have been trained to support this dynamic.

As a driving force behind the transformation of Morocco's educational landscape, the Foundation offers a comprehensive range of services including deployment, training, management and consultancy.

The Foundation's mission is built around **3 key strategic pillars**, positioned across the entire educational value chain: **education from the age of 3** (pre-school, remedial education, traditional and digital Non Formal Education; new-generation middle school)**; employability and empowerment** through training and integration programs, particularly in the education professions, and **strengthening the** Foundation's **ecosystem.**

Figure 2 :ethics icon

The Zakoura Foundation operates according to strict ethical principles. This means transparency, responsibility, and moral commitment to the beneficiaries of its programs. All the foundation's actions are conducted with integrity, adhering to high standards of social justice and honesty.

**Ethics :**

The Zakoura Foundation is committed to promoting gender equality in all its projects. It encourages the education of girls, the active participation of women in society, and fights inequalities in access to education, employment, and public life.

Figure 2 :equality icon

**Equality:**

This value is fundamental to the foundation, which recognizes the importance of respecting the rights and dignity of every individual. It ensures that its actions respect the people it supports by offering them opportunities for autonomy, without discrimination or marginalization.

Figure 3 : respect icon

**Respect :**

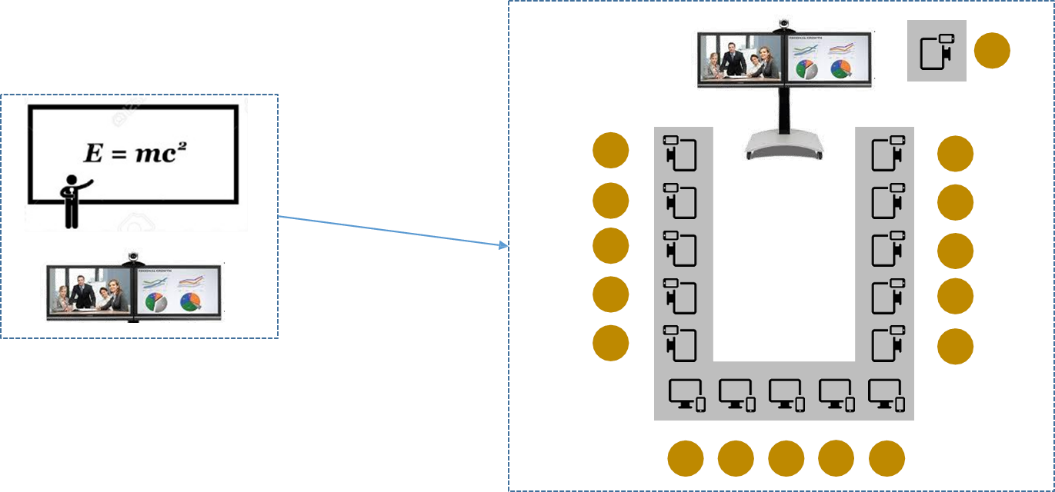
**Quality :**

The Zakoura Foundation works with a variety of partners, including government bodies, private companies, and international organizations. These collaborations help support its educational and development programs across Morocco, providing essential resources and expertise. Through these partnerships, the foundation is able to expand its impact and improve the lives of communities in need.

**C)**  **Partners:**

The foundation's goal is to ensure the highest possible quality in its educational programs, infrastructure, and services. This is reflected in its constant commitment to providing sustainable training and solutions that meet community needs.

Figure 2 :equality icon



* 2018 - Launch of the Rural Education Fund - F.E.R
* 2019 - Intensive Wave of Preschooling
* 2006 - Launch of Preschool and Academic Support Programs
* 2001 –Implementation of Adult Literacy Modules
* 2000 -Launch of the Integrated Development of Douars (DID)
* 2022 - Visit from Madagascar's Ministry of National Education
* 2021 - New Programs
* 2020 - Preschool Pedagogical Toolkit Approved

- The Journal - A Review by Zakoura Lab  
 - Launch of CORP

- First Digital Rural Proximity College in Morocco

* 2017 - Launch of the Parental Education

- Creation of the First Recycling Vocational Training CenterProgram

* 2016 - Launch of the Consulting Division
* 2015 - Aneer: Community-Based Preschool

- "MAMA TABIAA": Environmental Education

- Launch of the Zakoura Academy in a Different Way

-

* 2014 - Launch of the First Digital School in Morocco
* 2010 - Integration of Environment into Zakoura Projects
* 2008 - Launch of the Scholarship Program
* 2007 - Launch of Integrated Programs
* 1997 - Creation of the Zakoura Education Foundation

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Bas du formulaire

**e)**  **historical :**

**a) Presentation of the project:**

**b) Project description:**

The Zakoura Foundation has developed a comprehensive solution to address the challenges of access to secondary education in rural areas, while staying attuned to evolving national and international trends. The initiative involves the creation of a Local Digital Rural Middle School, located in previously underserved areas, where traditional middle schools were unavailable. This innovative approach relies on a remote teaching staff, allowing the best educators to be mobilized virtually. This digital model ensures flexibility and accessibility, enabling efficient education delivery within an integrated and streamlined system.

3.The project context

Use case diagrams help structure the requirements of the various actors and the different functionalities offered by the system. Use cases identify the system’s actors and their interactions with the system. They help classify the actors and organize the system’s objectives. In this section, we model the different functionalities provided to the two actors through use case diagrams, representing the features offered by the solution to be developed.

Figure 2 : UML use cas diagram symbol

**Chapter 2 : Design**

1. **Use Case diagram**

In this chapter, we will explore in detail the analysis and design phases of the web application development. This stage is crucial in the process as it enables the transformation of identified needs and specifications into a solid and functional technical architecture.

We will start by thoroughly analyzing user requirements, along with the functional and non-functional demands of the application. Additionally, we will address the technical and organizational constraints that need to be taken into account throughout the project.

**Introduction**

Figure 2 : Use case diagram2

Figure 2 : Use case diagram1

Figure 8 : Class diagram

The class diagram is another widely used modeling tool in software engineering. It represents the static structure of the system by focusing on classes, attributes, methods, and relationships between the classes. In the class diagram for the application, we will identify the relevant classes along with the attributes associated with each of them.

1. **Class diagram**

Sequence diagrams are particularly important for designers as they clarify the roles of objects in a flow and provide essential information for determining the system’s functionalities. A sequence diagram includes chronological sequences and shows the explicit order of messages, as it is crucial to visualize the chronological flow of messages.

1. **Sequence diagram**

**a) Manage Account**

Figure 9 : Sequence diagram manage account

Figure 9 : Sequence diagram create user

1. **Create User**

**b) Manage User**

The sequence diagram illustrates the interaction between a user and a server during the login process. It manages the login by verifying the user's existence. If the user exists, the server displays the appropriate page. If the user does not exist, an error message is displayed, indicating "User not exist."

Figure 9 : Sequence diagram update user

1. **update User**

This visual representation offers a clear and chronological view of how users are manually created within the platform, following a structured step-by-step process. The user fills out a form, and the platform verifies whether the user already exists in the database. If the user is new, their information, such as username, email, and other relevant details, is stored systematically. This process ensures proper data validation, seamless integration into the system, and efficient management of user accounts, making it easier to onboard and manage users within the platform.

This visual representation illustrates the process of deleting a user from the platform. The system first verifies the existence of the user before proceeding with the deletion. Once confirmed, the user's data is removed from the database, ensuring that all associated roles, permissions, and records are cleared. This process guarantees a clean removal, freeing up resources and maintaining the integrity of the system by preventing any unauthorized access from the deleted account.

Figure 9 : Sequence diagram delete user

1. **Delete User**

This visual representation outlines the steps for updating user information within the platform. The process begins by retrieving the existing user's data, allowing the user or administrator to modify details such as username, email, or access level. Once the changes are validated, the updated information is saved to the database. This method ensures that user profiles stay up-to-date, reflecting any role changes, permissions, or additional information required for smooth platform operation.

In this chapter, we have presented the design of key project components, focusing on the client's necessary features depicted through sequence diagrams. The application's architecture and structural layout were demonstrated using component diagrams, and various interaction flows between system modules were explored through activity diagrams, providing a comprehensive understanding of how different elements work together within the system.

**Conclusion**

This visual representation details how users can be consulted or viewed on the platform. The system retrieves the necessary information, displaying the user’s details, including roles, permissions, and activity records. This process allows administrators or authorized users to monitor and verify user data effectively, ensuring accurate oversight of account information and user activities.

Figure 9 : Sequence diagram consult user

1. **Consult User**

Figure 9 : JSON logo

JSON (JavaScript Object Notation) is a lightweight data interchange format that is easy for humans to read and write and easy for machines to parse and generate. It is often used for data transmission between a server and a web application, as well as for configuration files, data storage, and other purposes where structured data needs to be exchanged.

1. **JSON**

PHP is a widely-used, open-source server-side scripting language designed for web development but also suitable for general-purpose programming. It supports procedural, object-oriented, and functional programming paradigms. PHP offers features such as dynamic typing, automatic memory management, and a built-in exception handling system. It is known for its flexibility and compatibility across various platforms.

Figure 9 : PHP logo

1. **PHP**

In this chapter, we will explore the various tools and technologies employed throughout the development process. We will evaluate the project's technical requirements and determine the most effective solutions to implement them, ensuring smooth functionality. The focus of this chapter is on identifying the necessary technologies and detailing the strategies used to successfully address the project’s demands, regardless of the particular features integrated.

1. **Back-End**

**Introduction**

**Chapter 2 : TOOLS AND SOFTWARE USED**

CSS (Cascading Style Sheets) is a style sheet language used to describe the presentation and formatting of web documents written in HTML and XML. In simpler terms, CSS allows you to control the layout, appearance, and design of web pages. It separates the structure (defined by HTML) from the presentation (defined by CSS), making it possible to style web content consistently and efficiently.

Figure 9 : CSS logo

1. **CSS**

HTML (Hypertext Markup Language) is the foundational language for creating web pages and web applications. It allows developers to structure content, including text, images, multimedia, forms, and hyperlinks, to be displayed on the web. By defining the layout and organization of a webpage, HTML serves as the backbone of web development, ensuring that content is properly formatted and accessible to users. It works in conjunction with CSS and JavaScript to build interactive and visually appealing websites, making it an essential tool for anyone involved in web design and development.

Figure 9 : HTML logo

1. **HTML**
2. **Front-End**

Figure 9 : Boostrap logo

Bootstrap is a popular open-source front-end framework used for building responsive and visually appealing web applications and websites. It was initially created by Twitter and is now maintained by a community of developers. Bootstrap provides a collection of pre-designed HTML, CSS, and JavaScript components and styles that make it easier to create consistent and user-friendly web interfaces.

1. **Boostrap**

JavaScript is a versatile and widely used programming language primarily used for adding interactivity and dynamic behavior to websites. It is an essential technology for web development and allows developers to create interactive web applications, control the browser, and manipulate the Document Object Model (DOM) to update web page content in real-time.

Figure 9 : JS logo

1. **JAVA SCRIPT**