

Project Report

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**RESUME**

Numerous Telecommunications Operators aim to energize its resources and their clients through a web application. The goal of our application is to develop a web application that can be used by different telecommunications operators, it will be done in C Sharp language via the .Net framework and JAVA language using the JEE platform, in order to visualize each resource.

This report presents the details of the project from a technical point of view, where the first chapter will be devoted to the description of the companies we are working with, as well as the problem and the solution. The second chapter will be reserved for the functional study accompanied by diagrams such as the use of case diagram, class diagram, the last chapter will contain the tools used.

General Introduction

During the academic year 2019-2020, we are asked to realize an application as part of the Project Integration Development module. The project puts into practice the skills acquired in different programming languages (JEE, .NET) as well as discovering the professional world of complex applications development.

In the same context, we are honored to apply our knowledge in these modern technologies to embody the idea of our client. The aim is to create an application for multiple telecommunications operators such as Ooredoo to foster the development and retention of its resources in a context of labor shortages. The main goal is to ensure that it has a global view of its clients and their usage of different offers and products.

This report will therefore discuss the different phases of our project, namely the preliminary study, the in-depth study and the design. It then comprises three chapters: The first chapter will be dedicated to the presentation of the project.

The second chapter will be devoted to the functional study, where we will present the main UML diagrams of the application.

The third and the last chapter is dedicated to the implementation. We will present the appropriate method to properly manage this project as well as the development tools that we will use.

Chapter I

GENERAL CONTEXT

**Introduction**

In this first chapter we first will introduce the company followed by a study of the existing.

Then, we will focus on the different Functional as well as non-functional requirements.

* 1. Company Presentation

I.2 Problematic

The issue with this project is that the companies need a powerful tool able to manage all of it activities, from managing the different clients and their lines. The application also needs to offer a global view of the company’s activities.

I.3 Study of the existing

The digital transformation has become a strategic issue for companies. To succeed in this transformation. Organizations must face the challenge of mastering all dimensions such as the evolution of their business model, improving the customer experience, redesigning business processes, setting up a culture of innovation and the exploration of digital technologies.]

Here is an example of a telecommunication operator:



Sprint Corporation is American telecommunications company that provides wireless services and is an internet service provider, It is the fourth-largest mobile network operator in the United States and serves 54.5 million customers as of March 2019.

Location: Based in Overland Park, Kansas in the United States.

Website: <https://www.sprint.com/>

I.4 Project Discerption

Desiring to promote the development and retention of its resources in a context of labor shortage, Our companies want to ensure that it has a global view on the allocation of all its clients, as well as the duration of their subscription, date of entry… However, this is not currently possible with current tools.

In this sense, we need to set up a resource allocation tool that will allow it to have an overview of these resources, as well as other relevant information.

I4.1 Identification of actors

|  |  |
| --- | --- |
| **Actor** | **Description** |
| Visitor | To benefit from the features of our platform the visitor should register. |
| Client | Our application allows customers to use the different services of our companies. |
| Administrator | The administrator handles all the administrative tasks. |

I.4.2 Functional requirements study

These are the features to be provided by the application which specify the input-output behavior. The application must allow to:

Register: This feature allows the visitor to create a profile to benefit of the services offered by our platform.

Authenticate: This feature allows a user to connect safely.

Customers management: The administrator will have the privilege to accept a subscription request, modify and ban a client.

…

I.4.3 Non-Functional requirements study

These are the features tat characterize the system. These are requirements related to performance and the type of design. These needs may relate to implementation constraints.

As part of this work, the application must be able to:

Technical requirements:

|  |  |
| --- | --- |
| Requirement | Description |
| Performance | Queries must be optimized to ensure minimal response time. High availability and tolerance to breakdowns. Avoid the problem of scalability. |
| Maintainability | The application must evolve over time as it must be closed to modification and open extension. |
| Security | Ensure account security through encrypted passwords at the database. The application requires authentication while managing access controls. |
| Capacity | The ability to communicate with other remote applications and provide the service to different clients. |

Ergonomic requirements:

|  |  |
| --- | --- |
| Requirement | Description |
| Design | Navigation between interfaces must be simple, homogeneous, light and fluid. |
| Ease-of-use | The user must be guided when entering certain information in order to respect the formats of the fields of our database. |

Conclusion

In this chapter, we have developed a general outline of the project context and the major objectives to be addressed. We will continue with the next chapter on the functional study.