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Application Development I

Project Deliverable 1

**Project Title**

Gerencia tu empresa con E-Figuro - Management System for Employees

The E-Figuro desktop application is designed to provide small to medium sized companies an easy to use management system for both administrators and employees. After creation of user profiles and implementation of the E-Figuro system, both administrators and employees will be able to efficiently access the payroll, vacation and leave, user profiles, employee performance as well as other options according to their access control to simplify the management process and help maximize productivity of the company.

**Project Scope**

1. Features

* **Access to payroll:** Administrators will be able to update employee’s salary and employees can access their payroll information at any time.
* **Vacation scheduling:** E-Figuro will allow employees and administrators to request and approve for vacation time and dates respectively.
* **Absence and leave management:** In case of unforeseen circumstances, the employee can request for leave for the administrator to approve. Both parties will also be able to keep track of absences.
* **Attendance registration:** Companies using our system can implement a timestamp for employees to indicate the time they start and end their work day.
* **Employee performance:** All year-end reports and misconducts reports can be kept in the E-Figuro system as well as the appropriate feedback given for each to monitor employee performance.
* **Employee profile:** Details such as start-date, official job title, contact information, and even allergies can be stored in the system for ease of access.
* **Employee benefits portal:** Employees will also be able to access any details regarding their health and/or dental insurance as well as any other benefits that are being offered by the company. This will also allow for easier visibility if administrators need to adjust the insurance policies or other benefits.
* **Management hierarchy:** Hierarchy trees can be implemented in E-Figuro to allow a quick and efficient way for employees to know who to contact in the event that someone in higher management is needed.
* **Career opportunities:** To promote employee retention, administrators can also include job postings from other departments for the benefit of the employee as well as allow the employee to send their application.

1. End users

The project will have 3 user profiles, employees and two types of administrators (leaders and human resources), which will have different types of access to each part of the system:

* **Employees**, who will be able to register their attendance everyday, see their payroll information in detail, manage their vacations and verify the approvals, request for leave in case of emergencies, track their absences, see their general information, consult their benefits, consult the career opportunities in the company and send their applications, see the hierarchy tree of different departments and consult any feedback given by their managers.
* **Leaders,** who will be able to see their payroll information in detail, register their vacation and approve their employee’s vacation, see their feedback and register the feedback for their employees, see their general information, consult their benefits, consult the career opportunities in the company and send their applications, and see the hierarchy tree of different departments
* **Human Resources,** who will be able to update employee’s salary, register the employee's general information and their benefits, update the career opportunities in the company, update the hierarchy tree of different departments.

1. Integration of the end users (user stories)

**Employee and Administrator needs:**

* As an employee or administrator, I want to access my general information.
* As an employee or administrator, I want to be able to see my payroll information in detail (by month, total hours, etc.) and be able to download a report.
* As an employee or administrator, I want to register my vacations, send my request to my manager and see if my request was approved or not.
* As an employee or administrator, I want to have access in detail to all the benefits I have from the company (ex: health insurance)
* As an employee or administrator, I want to be able to search and see all the career opportunities in the company and send my application
* As an employee or administrator, I want to be able to see my position in the company hierarchy and also, consult the hierarchy tree of other departments.
* As an employee or administrator,  I want to be able to consult all the feedback I received.
* As an employee or administrator, I want a high performance application

**Employee’s needs:**

* As an employee, I want to register the time I start and finish my work and my lunch break. Also, I want to request any corrections to my timesheet if I make a mistake or if I forget to register my hours.
* As an employee, I want to be able to track my absences

**Administrator’s needs:**

* As an administrator, I want to ensure that the system must be capable of handling a large number of users.
* As an administrator, I want to be able to register the employee's general information and their benefits in an easy way.
* As an administrator, I want to update employee’s salaries.
* As an administrator, I want the system to show me my employee’s requested vacation and to be able to approve them or not.
* As an administrator, I want to approve any request of correction sent for my employees.
* As an administrator, I want to be able to register the formal feedback I gave to my employees.
* As an administrator, I want to be able to update the career opportunities in the company to help the employees to find new opportunities.
* As an administrator, I want to update the hierarchy tree of all the company departments.

1. Areas covered by this project

* **Profile creation:** The user, both employee and administrator, will be able to create their profile through a simple process.
* **My Profile portal:** This portal will allow both employees and administrators to consult and modify their profiles as well as review their performance and access details regarding their employment benefits. Administrators will also be able to update performance reviews and modify employment benefits if needed.
* **Attendance portal:** Here employees can indicate the time they start and end their work day as well as request for leave while administrators will be able to keep track of employees’ hours and approve/deny leave
* **Payroll portal:** Employees can access their payroll information as well as make requests for vacation days while administrators can approve vacation days and review or adjust employees’ salaries.
* **Department portal:** Administrators can update and modify the management hierarchies as well as post career opportunities for different departments while for employees they will be able to access this information and apply for these careers.

**Project Users / Actors / Vendors / Actuators**

1. Users:

* **Employees:** They have multiple functions within the system, including registering attendance, accessing payroll information, managing vacations, requesting emergency leave, tracking absences, viewing and updating their general information, checking benefits, exploring career opportunities, and viewing feedback from their managers.
* **Leaders:** This group includes managers or team leaders who can access their payroll information, approve timesheet corrections, manage their own vacations, approve employee vacations, view and provide feedback, access general information, check benefits, explore career opportunities, and view the departmental hierarchy.
* **Human Resources (HR) Personnel:** HR staff members can update employee salaries, manage employee general information and benefits, update career opportunities within the company, and maintain the hierarchy tree of different departments.

1. Actors:

* **IT Administrators:** Responsible for maintaining the system, ensuring data security, managing user access, and handling  technical aspects of the software.
* **Software Vendor** (Management System Provider): If the Management System is a third-party software solution, the vendor would provide support, updates, and maintenance services.

1. Vendors:

* **Software Vendor** (Management System Provider): If the Management System is a third-party software solution, the vendor providing the software is a vendor.

1. Actuators:

* **Database:** The database stored on the SQL server will store the data related to user profiles, salaries, attendance, hierarchy trees and other relevant data
* **E-Figuro management system:** The software application acts as the central actuator for the project. It will be responsible when required by the user for pulling the relevant data from the database as well as saving any changes made by the employee or administrator to the database.

**Project Properties**

This project will be developed using a combination of:

* Microsoft SQL Server Management Studio version 19.x for the database that will include all the user’s information
* Visual Studio 2022 as the IDE for C# which will function as the programming language for this project
* .Net Framework version 4.8.x which will provide the graphical user interface

**Plan Details**

* **Week 1:** Discussion and choosing project idea
* **Week 2:** Writing deliverable 1 (project scope, users/actors/vendors/actuators, project properties)
* **Week 3:** Designing the database structure and tables with appropriate relationships
* **Week 4:** Filling database with data and begin programming user creation
* **Week 5:** Develop My Profile portal
* **Week 6:** Develop Attendance portal
* **Week 7:** Develop Payroll portal
* **Week 8:** Develop Department portal
* **Week 9:** Developing GUI using .Net Framework
* **Week 10:** Continue and finish developing GUI
* **Week 11:** Final stages of testing and debugging
* **Week 12:** Preparation for project submission and presentation