Project Report

Incident Management System

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# I. Introduction

## 1. Background

During the course, the project focused on developing a NoSQL-based application for an incident management system. The prototype, demonstrated in the Axure Functional Prototype available on Moodle, served as the basis for the application. The Garden Group case study provided additional context for understanding the project requirements. Deviations from the prototype design were allowed with valid justifications.

## 2.Goal of the Application

The primary goal of the application is to facilitate incident management within an organization. Employees can report problems with their devices to the service desk, where incidents are registered as service tickets. The application caters to both regular employees and service desk employees, offering specific functionalities to each.

# II. Team Organization and Task Distribution

## 1. Task Distribution

The project aimed to ensure a fair distribution of tasks among team members to provide a valuable learning experience for everyone. The tasks were distributed in a way that allowed each member to contribute significantly to the project.

## 2. Team Members

**Member 1: [Bianca]**

**Tasks:**

**1.Login Functionality:**

Implemented the login functionality allowing users to securely log into the system. The passwords are hashed for added security. Additionally, a login design and logo were made for a better UI experience.

**2.Forget Password Functionality:**

Implemented the forget password feature, providing users with a secure method to recover their account access. It provides a form where you write down your username and updated password.

Implemented logic for the login functionality. Logic layers play a vital role in enforcing security measures, ensuring that user authentication is secure, and data remains protected. It valides user input and ensures that only authorized users have access.

**Member 2: [Zoran]**

**Tasks:**

**1.Add Incident for Employees and Service:**

Developed the functionality for employees and service desk agents to add incidents, update them and also delete them.

**2.CRUD Operations on Tickets:**

Implemented CRUD operations for tickets, enabling service desk employees to manage tickets efficiently.

Implemented logic for adding incidents for both regular employees and service desk. CRUD operations are fundamental for data management, allowing tickets to be created, modified and deleted as needed.

**Member 3: [Wouter]**

Worked on the design part.

**Member 4: [Barbora]**

**Tasks:**

**Adding Employees:**

Implemented the functionality for Service Desk employees to add new users to the system.

**Displaying Employees:**

Developed the feature to display the lists of employees in the system.

**Ticket List View:**

Created the ticket list view for users to see their reported tickets and for service desk employees to see everyone’s tickets.

**Filtering Tickets Based on Content (Additional Functionality):**

Implemented advanced filtering options for tickets based on content.

Implemented logic for adding employees, displaying employee lists and managing tickets. Developed filtering logic for tickets based on content.

**Everyone:** ERD, Design, Database

# Why ERD Design is needed:

The ERD serves as a visual representation of the relationships among entities in the database. It provides a clear understanding of how data is structured and connected, aiding in the design and implementation of a robust database.

**ERD Design:**

*Users Collection:*

* Represents the entity for user data, including fields such as FirstName, LastName, Email, etc.
* Relationships: May have associations with Tickets based on user involvement in incidents.

*Tickets Collection:*

* Represents the entity for tickets, including fields like Date Time Reported, Subject, Description, etc.
* Relationships: Connected to Users, indicating the user associated with each ticket.

**Database Design:**

*Users Collection:*

* Fields: Id, FirstName, LastName, Email, Username, Password, Role, Ticket (count of tickets associated with the user).
* Relationships: Linked to Tickets through a UserId foreign key.

*Tickets Collection:*

* Fields: ObjectId, Date Time Reported, Subject, Incident Type, Reported By User, Priority, Deadline Follow Up, Description, Status, Assigned User Id.
* Relationships: Connected to Users through the Assigned User Id foreign key.

# III. Functionalities Implemented

## 1. Common Functionalities for Regular Employees

* 1. Login

Regular Employees can log into the system using their credentials.

* 1. Add an Incident (Ticket)

Regular employees have the capability to add incidents, creating service tickets for reported problems.

* 1. View Own Tickets

Regular employees can view a list of tickets associated with their reported incidents.

* 1. Dashboard

A dashboard is available for regular employees, displaying the current status of tickets, including the percentage open, percentage resolved, and percentage closed without resolution.

## 2. Additional Functionalities for Service Desk Employees

* 1. CRUD Operations on Tickets

Service desk employees can perform CRUD operations on tickets, including creating, reading, updating, and deleting.

* 1. Close Tickets

Service desk employees have the authority to close tickets.

* 1. Add Employees

Service desk employees can add new employees to the system.

## 3. Additional Individual Functionalities

3.1 Searching through incident/service tickets. The search functionality can search based on words that occur in the ticket (subject, content). To get all points for its functionality it is required to include AND + OR search and to order the results by most recent on top.