



CSE3055 Database Systems Requirement Analysis

Prepared for: CSE3055 Database Systems Term Project

Prepared by: Emir Bückün, İrem Kubalas, Alparslan Köprülü

Instructor: Mustafa Ağaoğlu

19 December 2022

Students

Emir Büçkün - 150119024 (GrRep)

İrem Kubalas - 150119721

Alparslan Köprülü - 150116057

Customer

- Name: Eksim Holding
- Website: <https://www.eksim.com.tr>
- Address: Altunizade, Ord. Prof. Dr. Fahrettin Kerim Gökay Cd. No:36, 34662 Üsküdar/İstanbul
- Tel: +90 216 544 24 00
- Tel 2: +90 216 340 88 88
- Mail: info@eksim.com.tr

Introduction

The purpose of this project is to design a database system and turning it into a website for a project of Eksim Holding. The name of the project is "Request Portal" and the chosen database system technology is MSSQL.

Overview

After creating a database system for Eksim Holding's project, every employee of this company will be able to enter different kind of requests. Firstly, we will use MSSQL to implement the database. After determining the entities and their relationships, we will build our database system. Then we will prepare a website to use this database system.

Entities & Definitions

- City: Cities in Turkey where employees live.
- Department: Departments of the Eksim that employees work
- Company: Eksim Holding owns many companies and each employee works in one of these companies.
- User: User information for each employee to login to the Request Portal.
- Request: General informations stored in the Request entity for each request of the employees like create date of the request and explanation of the request.
- RequestFlow: Each request has a flow that contains when it's submitted to an approver and when it's accepted or rejected with an explanation.
- LeaveRequest: This is for employee leave requests.
- TravelRequest: This is for employee travel requests.
- AdvanceRequest: This is for employee advance requests.
- EducationRequest: This is for employee education requests.
- OverTimeRequest: This is for employee over time requests.

Business Processes & Definitions

Eksim Holding is a large company. There are several companies, departments and lots of employees. In order to follow the requests of the employees, a system is needed where they can collect them. Based on this need, we tried to design a database system that we can collect some specific requests. These requests are:

- Leave Request
- Travel Request
- Advance Request
- Education Request
- Over Time Request

On the other hand, some employee information is requested to be kept in the system like:

- City where the employee lives
- Department where the employee works
- Company the employee works for
- User information that employee use to login to the portal

The most important part, creating request and advancing the flow of requests, will be as follows:

1. The user chooses the type of request for their needs.
2. The user enters the information needed for the request. (Each request type needs its own information.)
3. The user creates the request.
4. The flow of the request occurs automatically and it goes to the manager of the employee who created the request.
5. Manager has two options, approve or reject.
6. If manager approves the request, then the request flow is forwarded to the manager of the manager, that is, to the next manager.
7. If manager rejects the request, then flow stops.
8. If the flow of the request is approved in the last manager, the request will be finalized.

Apart from the processes of creating requests and advancing its flow, there will also be some lists on the portal where we can view requests and their flows like:

- Pending Requests: Managers can view and take action on requests sent to them
- Past Requests: Managers can view requests they have processed before.
- My Requests: Employees can view the requests and their flows they created before

Finally, the portal will have an admin panel, where it will be possible to add, edit and delete data in the database.

Business Rules & Restrictions

We need some rules when designing this system. The rules to be followed are as follows:

- City, company and department data should be inserted initially.
- Each employee must has a city, company and department.
- Each employee's manager can be from their own company and department.
- An employee who does not have a manager cannot create a request because the request flow will not be forwarded to anyone.

Functional Business Requirements

- Admins of the portal should be able to see the fields and data of the database via website.
- Every employee which has user information should be able to login to the website and create any request.
- Managers should be able to see a list which contains requests that waits for their approval.
- Employees should be able to see their requests which they created before.

Non-Functional Business Requirements

- Database system will be implemented with Microsoft SQL Server Management Studio tool.
- Entity-Relation Diagram will be prepared for the database system.