Vacation Tracking System - VTS

DOCUMENTATION

ABDALLA KHALIFA

Vision

Providing individual employees, the ability to manage their own vacation time, sick leave and personal time off without knowledge in company policy.

Actors of the scene

We have four actors in the scene:

1- **Employee**: The main user of the system. Uses the system to manage his/her vacation time.

2- **Manager**: Employee who has all the abilities and goal of a regular employee, but can also approve or reject vacation requests for his immediate employees. He may also award his direct employees a personal leave time, according to certain limits which been set in the system.

3- **HR Clerk**: Member of the HR department who has rights to view employee's personal data and responsible for ensuring that employee's information in all HR systems is up to data and correct. He can add or remove any record in the system. (HR Clerks may or may not be employees) if they are employees, they use two separate login IDs to manage these two different roles (also mentioned in the functional requirements).

4- **System Admin**: He is responsible for the smooth running of the system's technical resources (web server and the database) and collects and archive all log files. (responsible for the infrastructure but he is also an employee).

Functional Requirements

- Rule based system for validating and verifying vacation requests.
- Manager (if exists) should be able to approve employee's requests.
- Employee should be able to access his previous vacations (for 6 months).
- Employee should be able to make requests for the future 18 months.
- Employee should be able to track his request status (approved, rejected, pending, canceled, withdrawn).
- Employee can withdraw request if not approved and cancel it if approved.
- The system should use email notification service to:
  - o Employee should get an email notification once the request status changed.
  - o Manager gets an email notification once his direct employee made a request.

- Manager should be able to directly award person leave time (according to the system limits).

- HR and system admin should be able to override all actions restricted by roles (these overrides should be logged).

- The system should keep activity logs for all made transactions.

- The system should provide web service to search for any employee's vacation request summary.

- Integrate with the HR department legacy systems to retrieve required employee's information.

- The system should use a single-sign-on mechanism for all actors authentications.

Non – Functional Requirements

- **Usability**: The system must be easy to use giving the user a smooth and simple experience.

- **Scalability**: The system should have the ability to scale and add new features and integrate with systems related to the facility.

- **Secured**: giving it will be an extension for the company's existing software (this means the data should be highly secured).

Constraints

- The system uses the company existing hardware and middleware.

- The system is extension to the existing intranet portal system.

- The system uses the portal's single-sign-on mechanism for all authentications.

- All system transactions are saved in the system logs.

Business Requirements

- All employees work eight hours a day.

- Each employee's vacation time requests are subject to the restrictions of each employee's primary work location in addition to overall company policies and restrictions.

- Vacation requests validation rules are defined and owned by the HR department.

- An employee can't take more than x consecutive days of leave for Y type of grant.
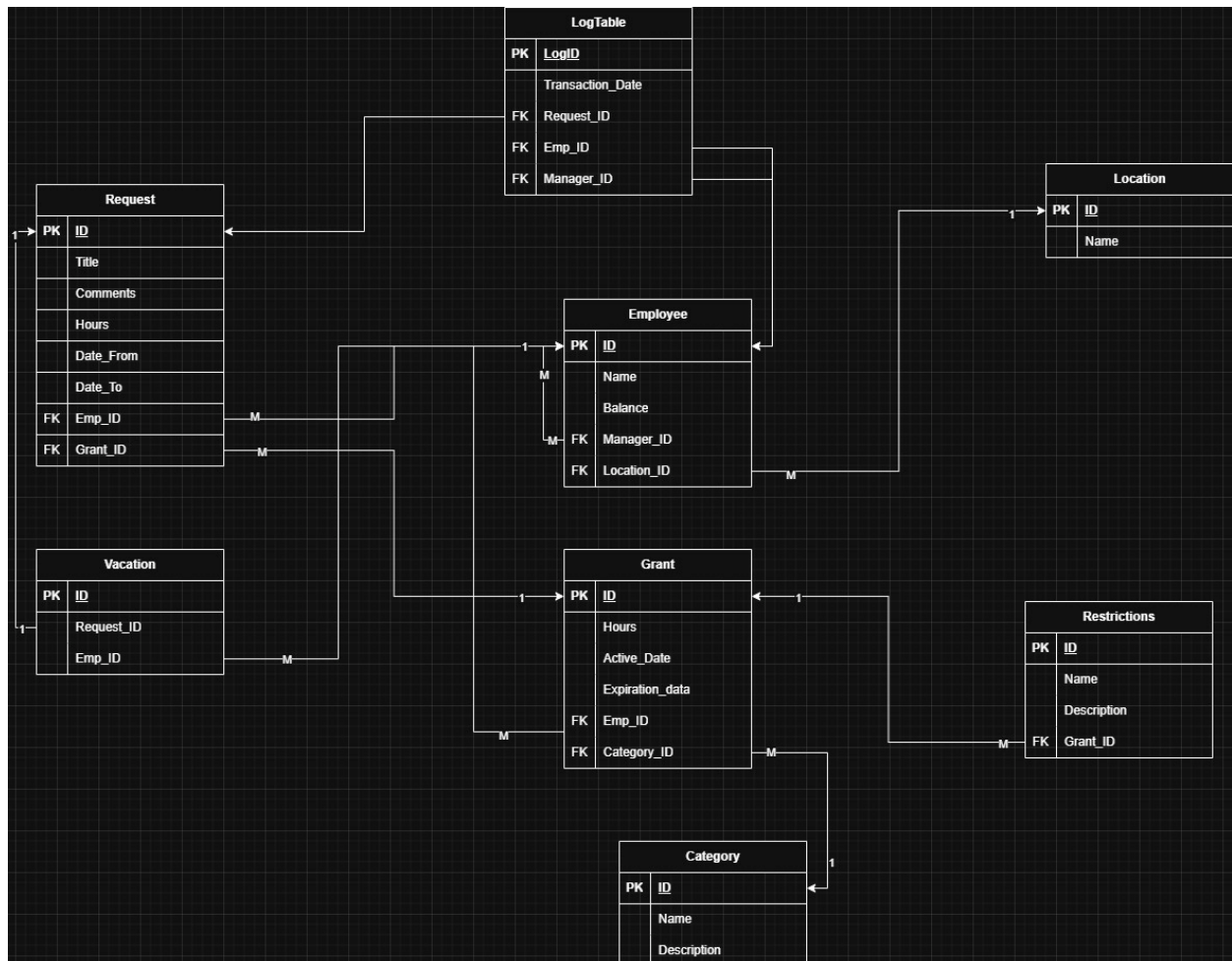
- Vacation time of type X cannot be taken when directly adjacent to a company or location – specific holiday.

- Vacation time may not be granted when there is only x number of employees scheduled to work from a predefined list of Y employees (there is short of employees count).

- Vacation time may not be granted on specific dates.

- Vacation time of a certain type is limited to certain days of the week.

Note: All specific constraints are in the company policy maintained by the HR department.
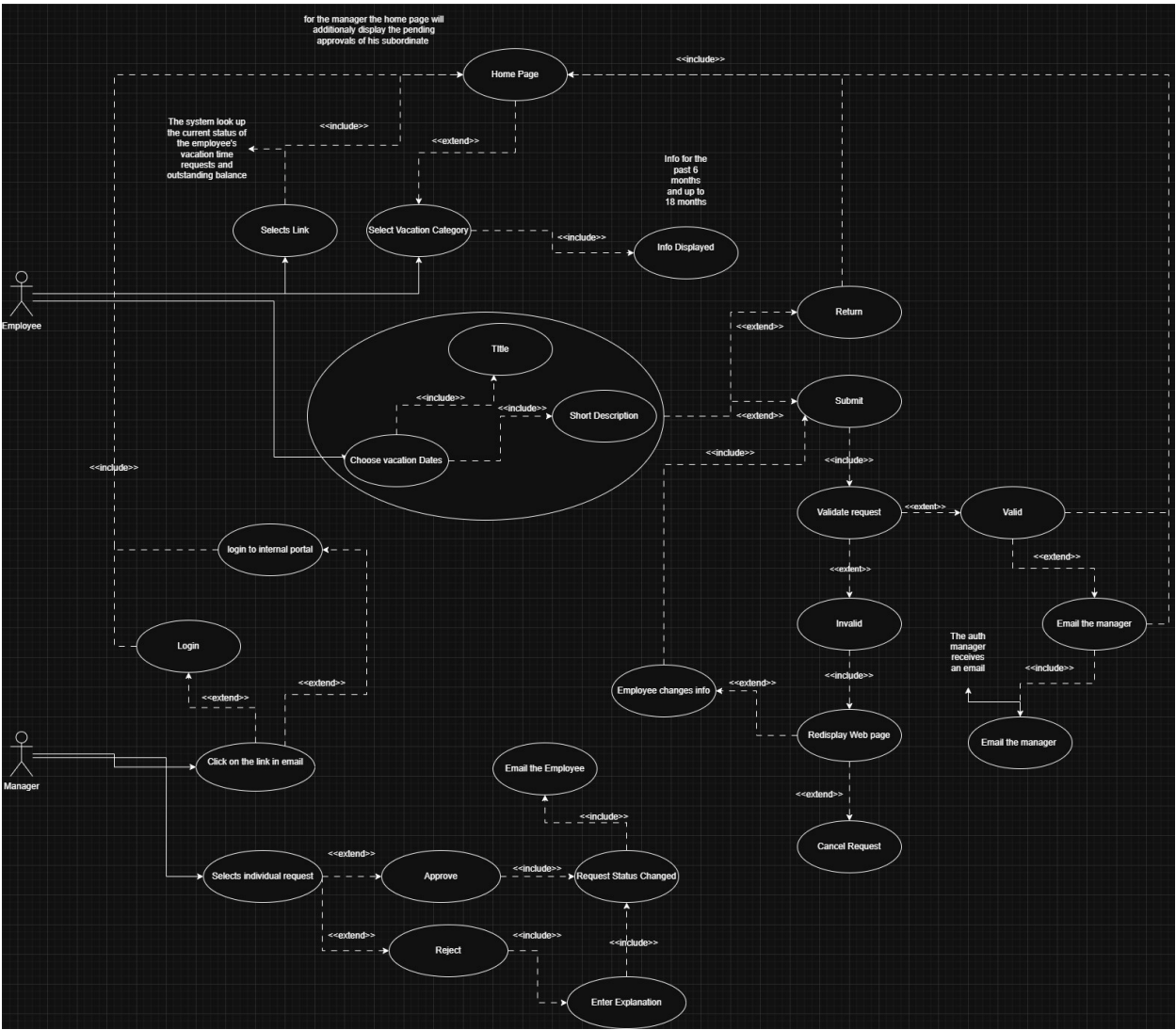
Assumptions

- The company's existing software is scalable and have the ability to integrate with new made extensions.

- The company's infrastructure is sufficient and supports our needs.

Data Model

LogTable

PK	LogID
	Transaction_Date
FK	Request_ID
FK	Emp_ID
FK	Manager_ID

Location

PK	ID
	Name

Request

PK	ID
	Title
	Comments
	Hours
	Date_From
	Date_To
FK	Emp_ID
FK	Grant_ID

Employee

PK	ID
	Name
	Balance
FK	Manager_ID
FK	Location_ID

Vacation

PK	ID
	Request_ID
	Emp_ID

Grant

PK	ID
	Hours
	Active_Date
	Expiration_data
FK	Emp_ID
FK	Category_ID

Restrictions

PK	ID
	Name
	Description
FK	Grant_ID

Category

PK	ID
	Name
	Description

Use Case Diagram

Sequence Diagram

Employee Scenario
Employee should be authenticated to access the portal

Manager Scenario
Manger should be authenticated to access the portal