ADA UNIVERSITY
SCHOOL OF IT & ENGINEERING

Course: Object-Oriented Analysis & Design

HOMEWORK ASSIGNMENT

Project title: *"Human Resources Management Systems"*

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Introduction

This document briefly specifies the functional and nonfunctional software requirements which also contains core and optional requirements, implementation of use-case, class and sequence diagrams for the Human Resources Management Systems.

The definition of human resources management is used to describe the companies and the employees who work in those companies by being responsible with the management of resources for employees such as involving hiring, firing, developing with trainings and etc. Most of the time the company's HR department is responsible for hiring employees, helping them to develop and maintain the system and governing the employees of the company. For fulfilling all the requirements to develop the company by checking every employee in the system and tasks that are given to the employees HR department uses the system or software Human Resource Management Systems.

The aim of this document/homework is to create the software requirements and diagrams for our system in order to give brief information about the software itself. In upcoming documents, we will be able to develop and maintain our system more by checking the software requirements.

Software Requirements

Functional Requirements

Before specifying all the requirements, first we have to explain what exactly are functional requirements and the importance of them in the development of system. Functional requirements are the requirements that define all the functions that the system should do and accomplish with specifying the behaviors of inputs and outputs of system and how they are affected. Functional requirements are the fundamental concept when someone develops the system because all the requirements should be gathered from stakeholder's (also called

costumers) requests in a sense of what kind of system they desire. Developers use the requirements in order to make the system regarding to the specific request that have been made by stakeholders and develop use-case, class and sequence diagrams by the help of gathered requirements.

During the JAD session, we have created several functional and nonfunctional requirements for our system. Here's the list of functional requirements which we will develop for our project:

Core Requirements

1. The employees should be able to register to the system by specifying the required information.

    Which means for the specific information that the user entered to the database, he or she should be able to register to the system. The system will require all the important information such as name, identification number, birth date and etc. while registering to the system.

2. The employees should be able to login to the system by specifying the information that they specified in the first section.

    After registering to the system, user should be able to add the data that he or she had provided while registering and login to the system. Every user should be able to see different views for the main page when they logged in.

3. The employees should able to modify the data they entered beforehand.

    There should be the section for editing the information for every user in the database. For instance, if user has changed the phone number or the address, he or she should be able to change the data in the database.

4. The system should be able to add the employees to the system and database.

For the system it is important to have the functionality of adding the employees to the database. For instance, if the employee has started the job in the company, the system should check all the details and add that user into the system.

5. The system should be able to check all the employees that has been added to database.

The system should have the functionality of checking and viewing all the registered users in the database. The system should be able to change and modify the data in the system if HR wants.

6. The system should be able to search for registered employees.

Registered users (especially HR) should have the functionality of searching for something in the database. For instance, let say HR wants to search for specific user for getting any kinds of information, he/she should be able to find that information.

7. The system should be able to identify the privileges of the registered users.

The system should have the functionality of viewing all the detailed information about the privileges of the users in the database. This may be for what purpose the user registered into the system which can be employees, admin and others.

8. The system should be able to manage work tasks, requests and delegation.

The system should have the functionality of viewing and editing the tasks that should be done till the specific date.

9. The system should be able to manage vacancies and recruitment.

If there will be any types of new vacancies in the database, the system should have the functionality of adding, editing that data in the database.

Optional Requirements

1. The system should have the functionality which will give an opportunity to assign a task to the users by the authorized users such as HR department.

The system should check the privileges for all users which will help the HR system to assign any task for the employees in the company.

2. The system shall be able to change the progress of the tasks in the profiles of the users.

   The system should have the functionality of viewing the progress for the given tasks to the users. For instance, let say the user has been given to complete one project and he/she should be able to change the progress of any task and the system should be able to view this change.

3. The system should have the functionality of getting reports from the employees about the tasks they have or completed.

   For every user there should be the section for the completing given tasks which will help the user to print out the report for that given task.

4. The system should have the functionality of promoting the employees in the company.

   If the user (in other words employee) does well in the company in a sense of finishing all the given tasks perfectly, the system should have the functionality of promoting that user with several rewards.

5. The system should be able to have user's card information in order to give the salary.

   As we have mentioned in the previous requirements, the user should fill the required information while registering to the system and adding the card information in order to get the salary within the card system.

Nonfunctional Requirements

1. The number of online employees of the HRMS can be estimated as 50 at most.

   Online users should be limited to have in the system because of having smoothness.

2. There should not be any restriction on the number of users to be added to the database.

   Depending on the number of employees, the database should be able to get all the employees in the system not depending on the number of them.

3. The system should have a user-friendly homepage which means all links should be able to find in three clicks.

   If the user wants to find anything in the webpage, he/she should find that information within only three clicks.

4. The system should be able to have the function of audio call for conferences.

   If the company owners (in other words HR managers) want to have a conference with the employees they should be able to have audio call functionality.

5. The system may have the function of video call for conferences.

   For the representation of presentations, the system should have the functionality of video call.

6. The system should also automatically generate documents which facilitate related human resources management activities.

   For the companies it is must important thing to have a functionality of generating all the important information such as documents within the system.

7. The system should be able to monitor the status of issued problems for the company.

   If there's some kinds of bugs in the system or database, they system should have to find out the error and display to the system.

8. The system should be able to determine and apply the appropriate pay scale for employee.

   For the system it is required to have the functionality to have all the information for the employer's salary and pay scale in order to give the salary.

9. The system may have the option of updating personal information about the employee.

System should be able to edit all the data of the employee if needed.

10. The system should be able to generate the report for one year of work.

It is the most important thing for the company to create the report of all the

completed data in the system.

11. The system should be able to provide capability to identify the transactions from other
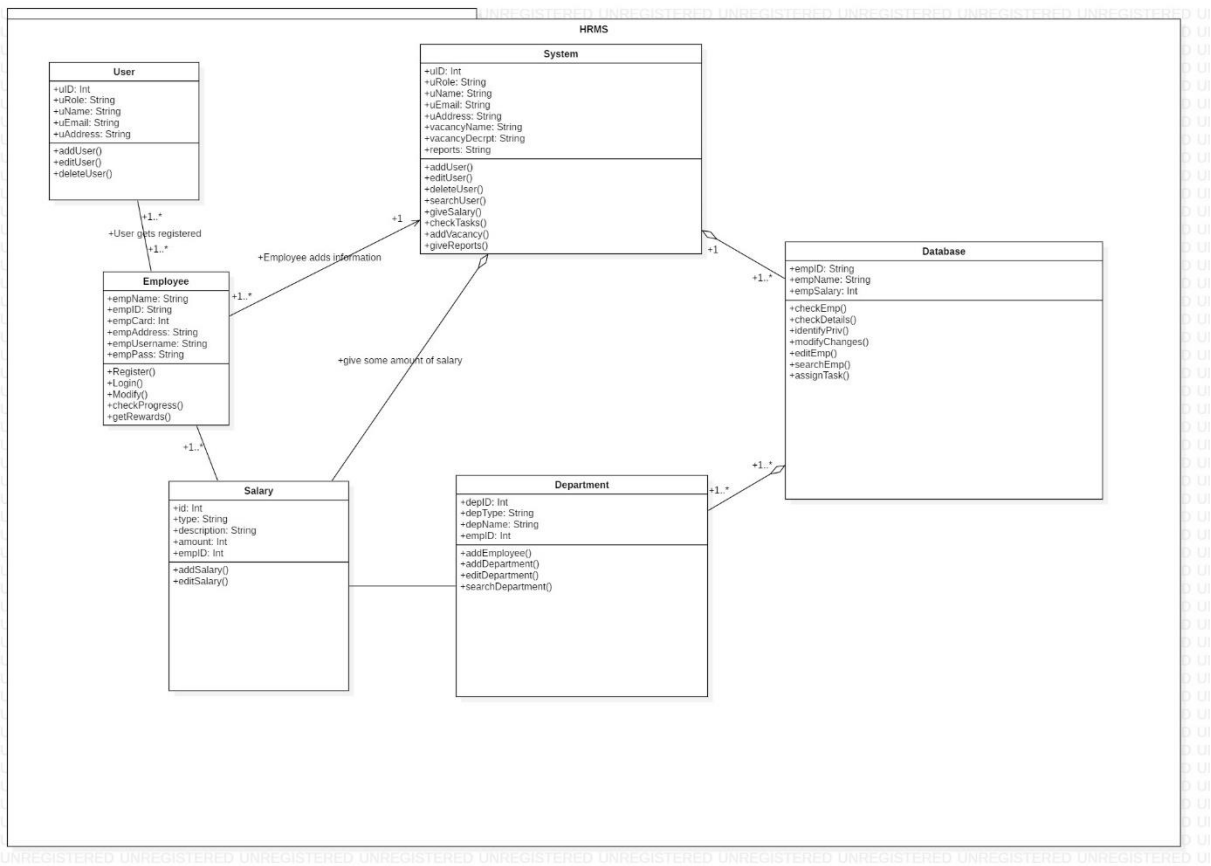
systems.

It is required for the system to determine all the transactions has been made.

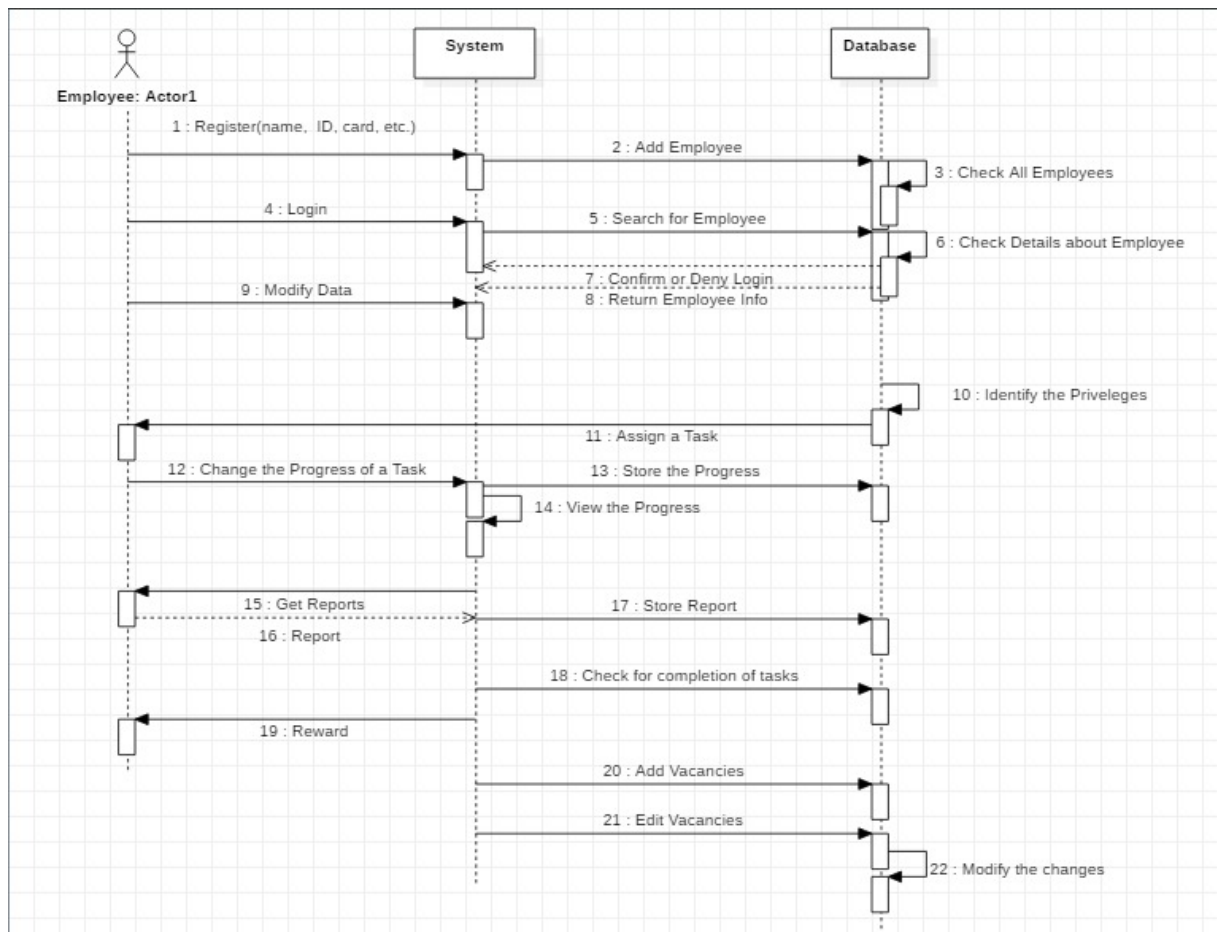## Development of Use-Case Diagrams
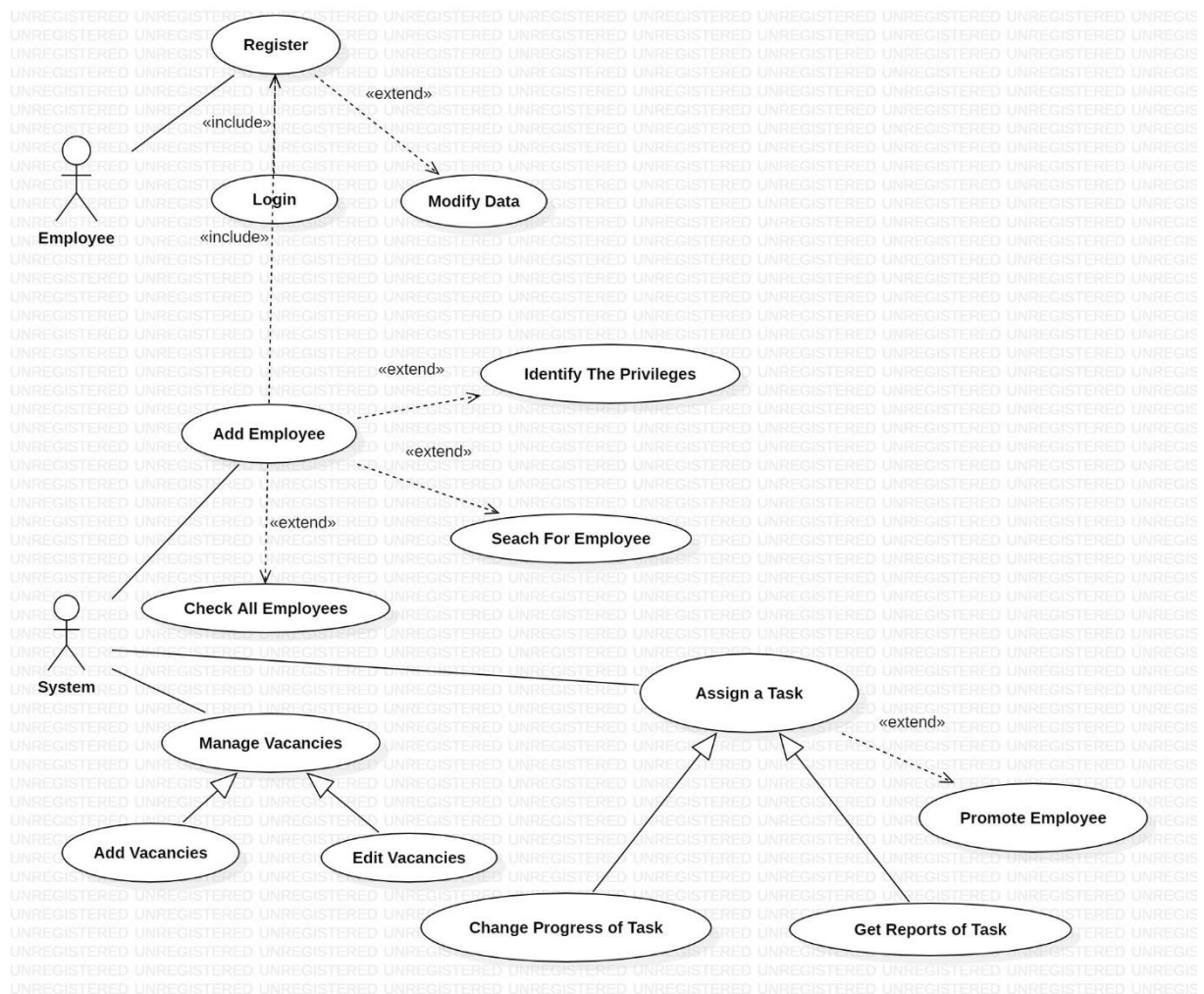
Building the Class Diagrams

Building the Sequence Diagrams

Conclusion

This document briefly describes all the information about our project which is about HR management system. After stating what is HRMS we talked about all the functionality including core and nonfunctional requirements of our system by stating several elements that we will create in our system. This document is for describing the technicality of the project.

In other paragraphs we talked about the diagrams such as use-case, class and sequence diagrams which mainly describes all the functionality that the system will have.