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Concept for HR Management System for Private Sectors in Afghanistan

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Abstract

While much of our knowledge concerning traditional HR topics (e.g., recruiting, compensation, or performance management), evidence suggests that new ventures are different and that management of people within them may not clearly map to management within larger, more established organizations.

This paper reviews extant research on managing people in private sectors.

Human Resources Management is an involved issue of every company all over the world from the past till now. Company used many methods to manage their HR that had their strength and weakness. Today companies have systems that manage their HR but most of the especially in Afghanistan still the management is paper based that need more people to run or also if they have a computer based they have their own problems, for example in use of paper based system there is use more budget of the companies, there is no backup, is not organized. Or for example most of the computer based system we see, fingerprint of most of the system do not work as desired and so on We propose a system that manage HR and may solve all above problems.

Keywords

Human Resource management, Paper based system, Backup, Management System

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Chapter 1

1. Introduction

1.1 Introduction to HR Management

The human resource of an organization is composed of all efforts, skills or capabilities of all the people who work for the organization. Some organizations make all these human resources as 'staff' or 'workforce' or 'personal' or 'employees' but the basic meaning remains the same. All those who work for an organization are workers. However, the organization makes all those who do manual work as 'worker' and describes others who do non-manual work as 'staff'. The executives of an organization are supposed to manage its human resources in the most effective manner so that personnel work will be in the best interests of the organization and in their own interests, too. For this purpose, it is essential that good personnel relations are established with the entire workforce [1].

The management of the people and the staff policies and practices that enable an organization to carry out its work. This affects staff from the moment an individual contacts the organization in response to a job advertisement, to the time they leave the organization. Human resource management is about enabling staff to use their qualities in order to fulfill their role and contribute to the organization's mission and purpose.

Good human resource management is essential if organizations want to attract and retain good staff. If people see that an organization values its staff, they are more likely to apply for a job with the organization and more likely to stay once they are recruited. Good human resource management means that an organization reduces risk to its staff

and reputation. It can do this by considering issues such as employment law, child protection and health and safety. Good human resource management can also reduce costs for an organization. For example, good recruitment policies and processes mean that organizations can efficiently recruit people who will carry out their jobs effectively. Good systems for performance management mean that organizations can ensure that they are getting the best from their staff. It should be noted that volunteers are an important resource for many organizations. Some sections of this book, such as salaries and employment contracts, are not relevant to volunteers. However, sections such as benefits, performance management and staff development are relevant to volunteers. Development organizations should consider carefully which policies and practices should also be used with volunteers [2].

1.1.1 Organization culture

Human resource specialists are in a position to influence the culture of an organization. Hence they simply cannot accept the existing situation. The need to be proactive so that can anticipate changes and initiate timely an appropriate action. In different organizations there are different environments and different ways of doing things. There may be a lot of 'shared beliefs and values.' When this shared understanding become a part of collective thinking of the personnel of the organization, it leads to the establishment of an 'organization culture.'

This happens because the personnel work the common interest of the organization as whole [1].

1.1.2 Human resource functions

Human resource management refers to the activities of the specialist staff that are responsible for the personnel objectives of the organizations. The head of this department is responsible for stablishing and implementing strategies for the human resource of an organizations – its people. Staff members of this department are responsible for providing guidance and assistance to both management and employees.

In a sense, it is there job to manage people. They do so by acquiring. Retaining and developing the human resource of the organization. The policies of human resource department effect the entire workforce.

Hence it is there responsibility to look after the interests of all – management as well as other people [1].

Chapter 2

2. Analysis

2.1 Background

The companies managed their human resources by using different methods do up. In all countries evolve Afghanistan these methods had weakness and strength.

Human Resources management is one of the important needs of the companies in order to use efficiently from the company employees and capabilities, because of these we need to have such a system that could be able to do functions such as degrading, assigning, background, evaluating, discipline proceedings, attendance system, salary payment of employees as an integrated system.

This system could simplify the management of company's Human Resource. Early the companies were using computerized management systems for all their resources as well as for human resources and these systems has many benefits because these systems have the strength points of traditional systems and also new useful methods to manage Human Resources. The cause of changing the traditional system to new system is speed, better management, accuracy, cost, reliability and so on.

Because the speed was not acceptable and it was cause of increasing the cost as well as accuracy of the traditional systems was not as better as new systems and human faced with many problems, challenges and wrongness. Also saving data in paper is not secure and could be lost by different factors such fire and ...

There was not possibility to have backup from collection of data of company and it was the cause of companies smash and change of traditional systems to new systems.

The solution for this problems are having to use computerized system instead. thus in many countries evolve Afghanistan have this system, we want to create such a system with more and better functionalities that could be able to assign employees, paying salaries, superannuation that should have all these functionalities which will be with their own order and needs for managing better the human resources of the companies.

2.2 Methodology

Upon consideration of some HR management system, online documentation about HR, HR management and management methods and changes that become to HR management during decade all around the world and specially in our country Afghanistan.

Some of our collected data came from interviewing with some staffs of private companies in Kabul city who were currently staffs of companies and we also reviewed some computer based HR management System. In most of companies there was lack of an organized system to manage the Human Resources and if some of companies had a system but it was not complete. One bug that a staff shared with us said that in the past we had computer based system in our company which was managing our HR, and our attendance were saving by finger print in the database but the system was saving the presentence of staffs more than once at the same time and could not save the presentence of staffs correctly by finger print method and now we do not implement that function system. Therefore, we proceed as....

Chapter 3

3. Concept

Our purpose is to develop a **Human resource management System** according to the afghans companies needs that Generally, fulfill the following functionalities:

Registering employee, deleting employee (no organization delete any employee but maybe any mistake made by any staff who work for company, so the system should have this functionality to delete the target record from database), updating the employees record (the employee status maybe change during the time), record the attendance of employees, reporting process and ... to achieve the company's goals.

Today one of important issue for every company is security. A system without a good security policy is equal to zero because everything in system is for managing of data in a company, so if the date not be secure it means we make a home against flood. To solve this problem, we consider a desktop baes system (desktop base system are more secure than web base systems). This system has the authentication and authorization process to login in system. The system has user levels for employees that those users who have user, they also have specific authority cording to their posts. The system we want to develop has the ability of assigning new employee create user name and password to each employee evaluating each employees creating courses to extol of the employee's abilities.

3.1 HR Manager System Properties

3.1.1 Accessing the System

Security is of great concern when it comes to choosing a human resources management system. The information stored in a HRMS is highly sensitive, including proprietary company data and volumes of personal information about employees. It is essential for companies to choose a solution that utilizes a method [3], thus the system should have the login functionality to login in the system. when the user login to the System they will be able to work with the System at the same time. The System do the authentication and authorization of the user login.

3.1.1.1 Authentication

In this section system authenticate the user if the user with the same name and password was in the System database then the user will be able to login to the System and work with System. Else the user will not be able to log in to the system.

3.1.1.2 Authorization

In this section the system checks the user level of each user that wants to login to the system When the user logged in to the system at the same time the system does the authorization section to authorize the users that what is the ability and responsibility of each user.

3.1.2 Adding new record of employee

Once you have developed your recruitment plan, recruited people, and now have plenty of people to choose from, you can begin the selection process. The selection process refers to the steps involved in choosing people who have the right qualifications to fill a current or future job opening. Usually, managers and supervisors will be ultimately responsible for the hiring of individuals, but the role of human resource management (HRM) is to define and guide managers in this process [4].

The system has the ability to add new employee in this part user collect information about new employee and save the data in to the database and create a contract form between new employee and the company. when the company want to assign employee at first they plan to see how many employees we need and in which fields we want to assign employee. In fact, every company has its own plans as the companies are different according to their size and mission but generally all companies have two kinds plans.

- 1_ strategic plans- example the goal of the companies.
- 2_ general plans- example other plans.

Any company want to reach to it goals has to follow some principals that one of that is to have a high level human recourses management system which is the important point in companies.

General plans help the company to reach the goals and this part is also involving human resources management system.

After a job advertisement that the company must have via television networks or via websites the company interview with applicants and see employees according to their needs and assign employees for the company departments. According to the company policy the person who want to work for the company must fill tow grantee letters and he or she should be granted by tow governmental employee because of security in the company. The grantee letter is hard copy and after filling that by the applicants the company scan it to the system and also save the hard copy. This is one the assigning process of employees for the company.

According to the policy of the company the following employee information should be entered in the system: **employee id-** beside of technical points it facilitates the searching and sorting, **first name, last name, gender, date of birth, phone number, email address, photo, hire date, resign date, line manager id** (team leader) and may be changed during the requirement gathering.

3.1.3 Archiving employee

The system should have the ability to delete any employee. Really this why we add this section to the system? In the real world we will not face with that situation to delete any employee because it is not the reality to delete employee. We add this functionality to system because during the registering an employee any mistake may be made by the staffs so the system should have this ability to delete the wrong record from database.

3.2.4 Updating records of employee

This is also an important functionality of the system to update employees because any information of employee may be change during the time.

For this aim the system should have a form and this form is the same as registration form but in this form all the background information of the target employee should be filled when the update button clicked by the staff and all information are available to change and update.

3.1. 5 Training courses

Any effective company has training in place to make sure employees can perform his or her job. During the recruitment and selection process,

the right person should be hired to begin with. But even the right person may need training in how your company does things. Lack of training can result in lost productivity, lost customers, and poor relationships between employees and managers. It can also result in dissatisfaction, which means retention problems and high turnover. All these end up being direct costs to the organization. In fact, a study performed by the American Society for Training and Development (ASTD) found that 41 percent of employees at companies with poor training planned to leave within the year, but in companies with excellent training, only 12 percent planned to leave [5].

The companies need to training course to extol the abilities of their employees and the system will be able to save the result of term budget of the course and the number of employee that is trained in each term

3.1.6 Reporting

The employee should report the result of their works to the lime manager weekly then the lime manager checks it the decide what will be the next job to do. And also if an employee will not be able to they send a request form to the lime manager and lime manager decide on and send the result to the employee.

The system is able to make a leave request form and send it to the lime manager and receive the result from the manager and save the result to the system.

3.1.7 Salary calculation

The system is able to calculate the salary amount of each employee this calculation involves calculating overtimes bonus and alleviate the tax and evaluate the payable salary.

3.1.8 Contract form

The system should create a contract form between the employee and the company and also create contract form between company and the customer the contract between the company and customer, Include the project name project budget project deadline and project requirement form id that specifies what is the need of the customer.

3.1.9 Attendance

The system is able to save the presents and absents of employees. Check if the absents days have leave request.

3.1.10 Evaluation of employees

This section looks at how to grade jobs and set the levels of salaries and benefits offered to staff. Salaries and benefits are given to people in return for the work they do for the organization. The level of salary makes a difference to how valued a member of staff feels. Salary and benefits play an important part in attracting people to work for the organization and encouraging them to stay.

For good working relationships it is essential to set fair and appropriate salary levels and benefits. Therefore, it is important not to rush into any decisions about salary and benefit levels without working through the steps outlined in this section.

Salaries should be linked with the specific job that someone carries out. For example, a manager would normally be paid more than an administrator.

Benefits usually apply to all staff, although they may depend on the type of contract they have. For example, different benefits may be given to permanent staff than staff on fixed-term, temporary or casual contracts [6].

The system is able to save the evaluation results and by policies that companies have will automatically degrade the employees.

Generally, every company have it is own policies to degrade their staffs may thy have some questions from all employees about all employees, person by person that these question and the response are safe and secure and authorized persons have access to the responses.

After analysis the response and evaluation any employee will degrade the employee automatically.

3.1.11 Leave Request

Any employee who want to get vocation, he/she should fill a form one day before and send to his/her line manager till his/her line manager proofs the leave request and submit the request to the system.

Chapter 4

4. Implementation

As we mentioned before that we want to develop an HR management system that should manage data about employee, customers, projects, users, and ...

Those who work with this system are employee that a company assign for its current affairs. Before all the employee should be registered the system, he/she should prepare enough document to have contract with the company, sign a contract with company for a fixed time which all every employee can have more than one contract with the company, the system saves the employee attendance, overtime.

Every employee should have line manager and weekly report about him/her for his/her line manager. Any employee can request leave for sickness of annual and his/her line manager approve request to dismiss him for a particular time. Any company can evaluate its employee annual once a year and can encourage its employee or punishes for improvement of the company. Every employee should have user account and he/she will be authorized according to his/her responsibility in the company.

We mentioned before that one of important issue that every company faced with it is which they do not have back up from their data in other HR management systems that we implanted in this system and any company who use this HR management system can have back up from their data as they need and restore back up files in the system.

As it is clear every system two important sections: Back-end or a repository which system that save and manage our data, Front-end that is the important section for user that interact with that clearly name is Graphical User Interface (GUI).

4.1 Back-End

For creating the back-end we used SQL Server Database Management System. This management system is good for large systems that are using from multi locations. The database of this system contains 21 tables which all necessary constraints have implanted and system work correctly.

4.1.1 Database

We used SQL Server DBMS to create the Database of our system.



Figure 1: SQL Server DBMS Logo

4.1.2 List of tables

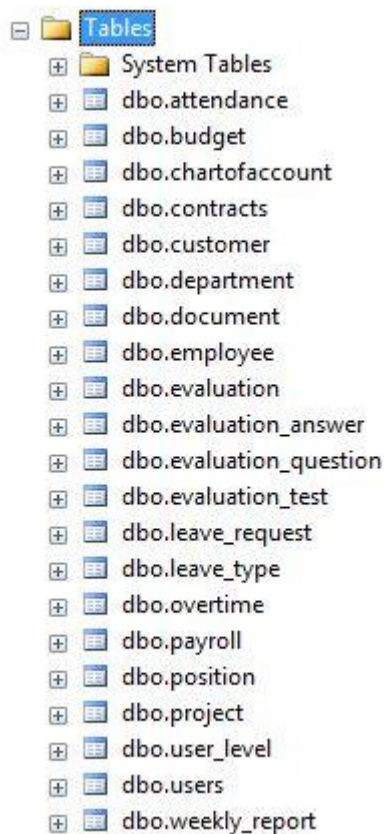


Figure 2: Database Tables

4.2 UML diagrams

4.2.1 Package structure

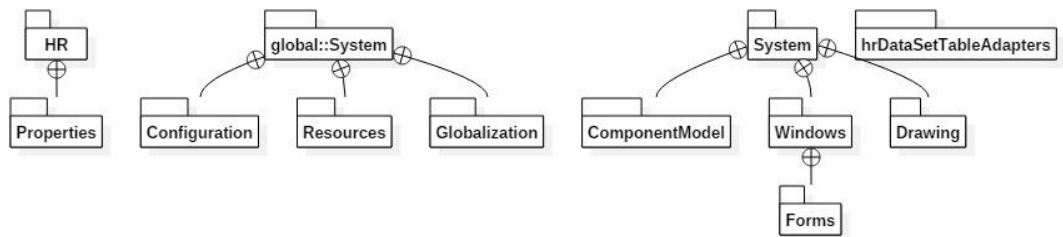


Figure 3: Package structure

4.2.2 Class diagram

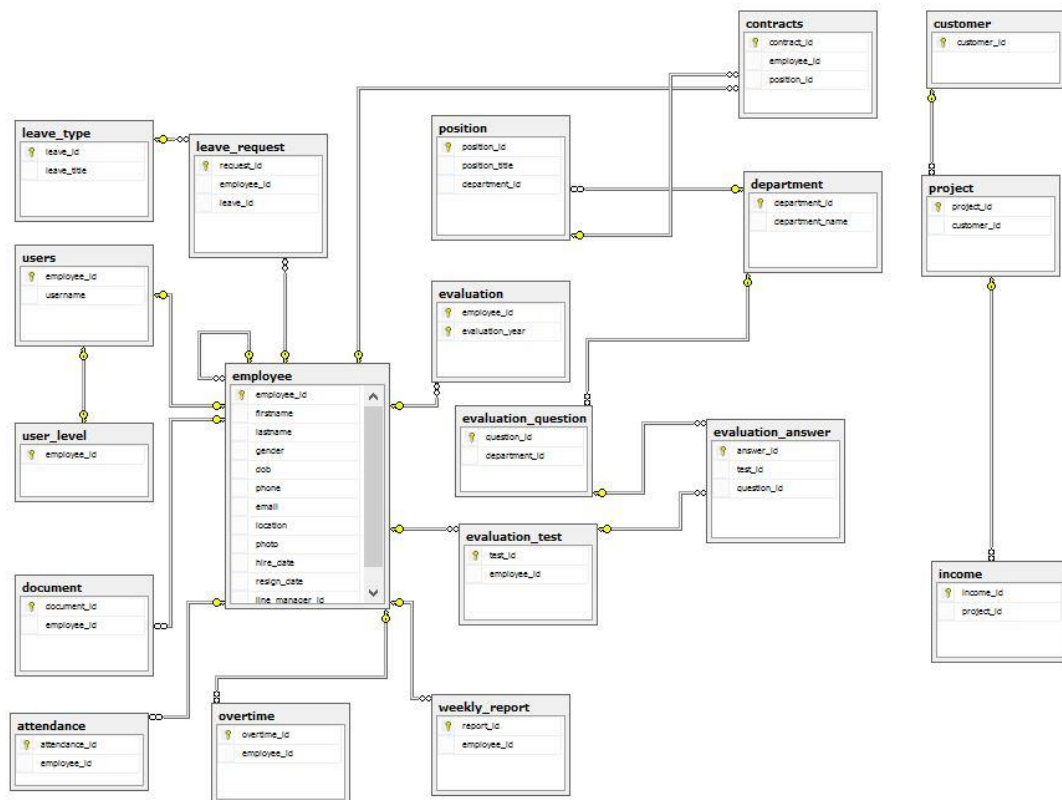


Figure 4: Class diagram

4.2.3 Activity diagram

4.2.3.1 Login activity diagram

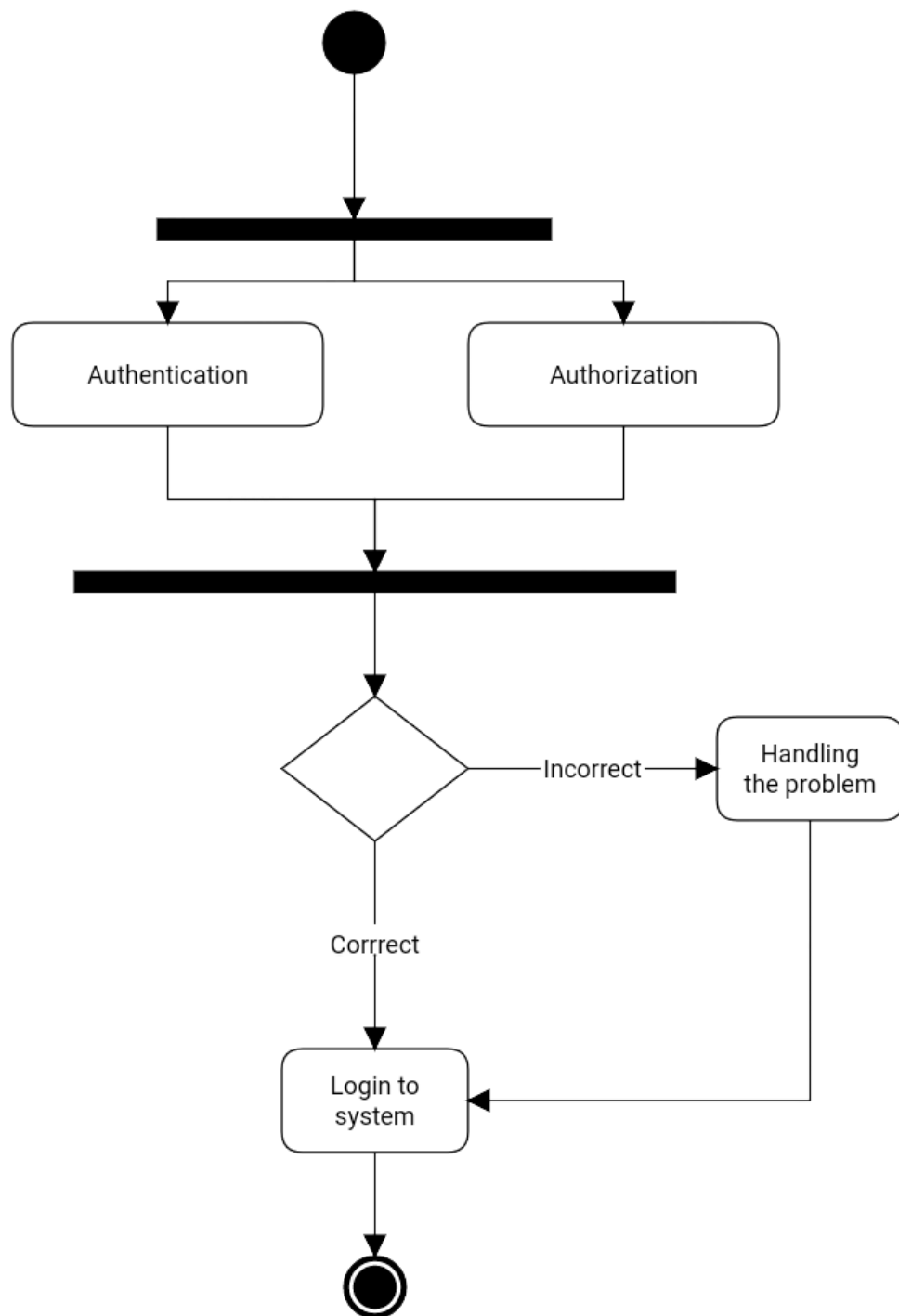


Figure 5: login activity diagram

4.2.3.2 Register employee activity diagram

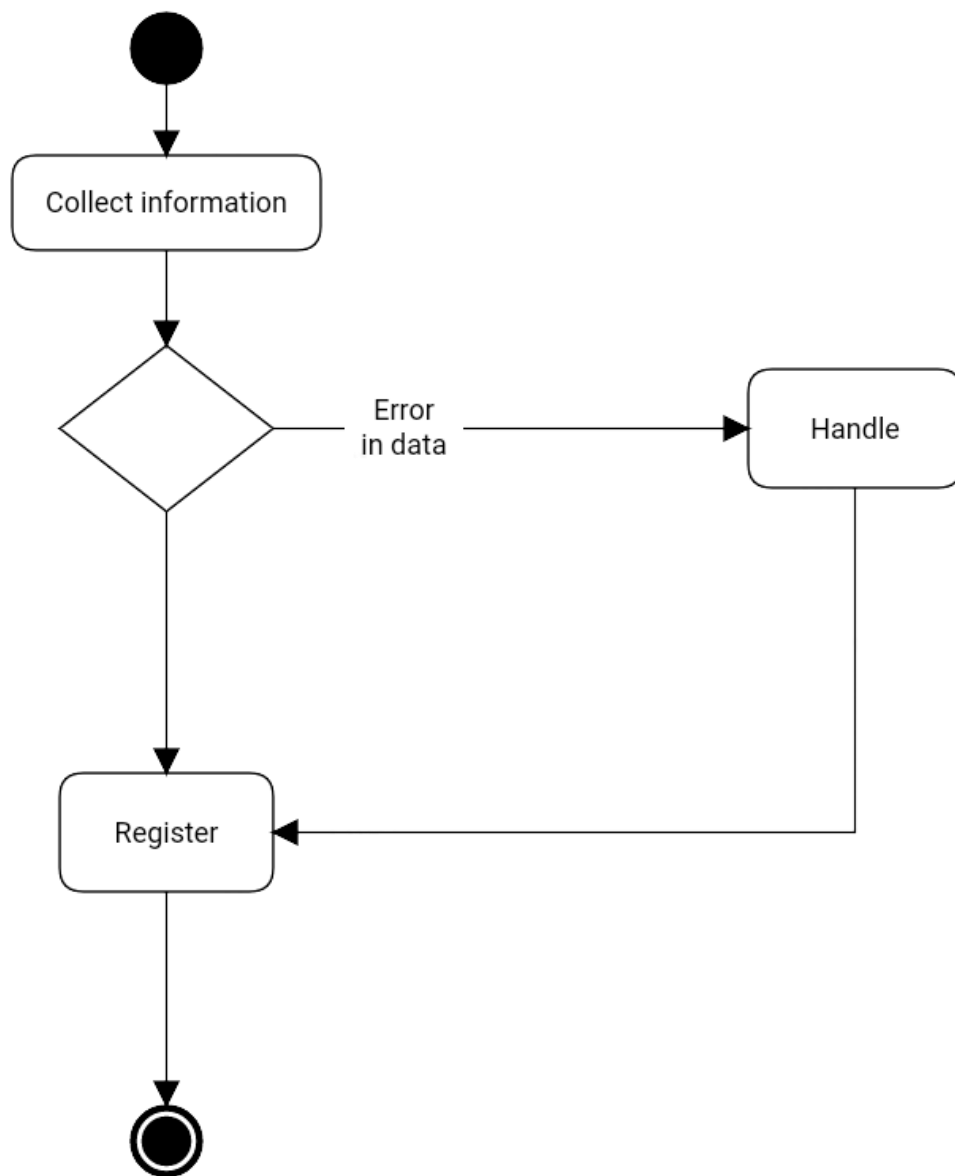


Figure 6: add employee diagram

4.2.3.3 Contract activity diagram

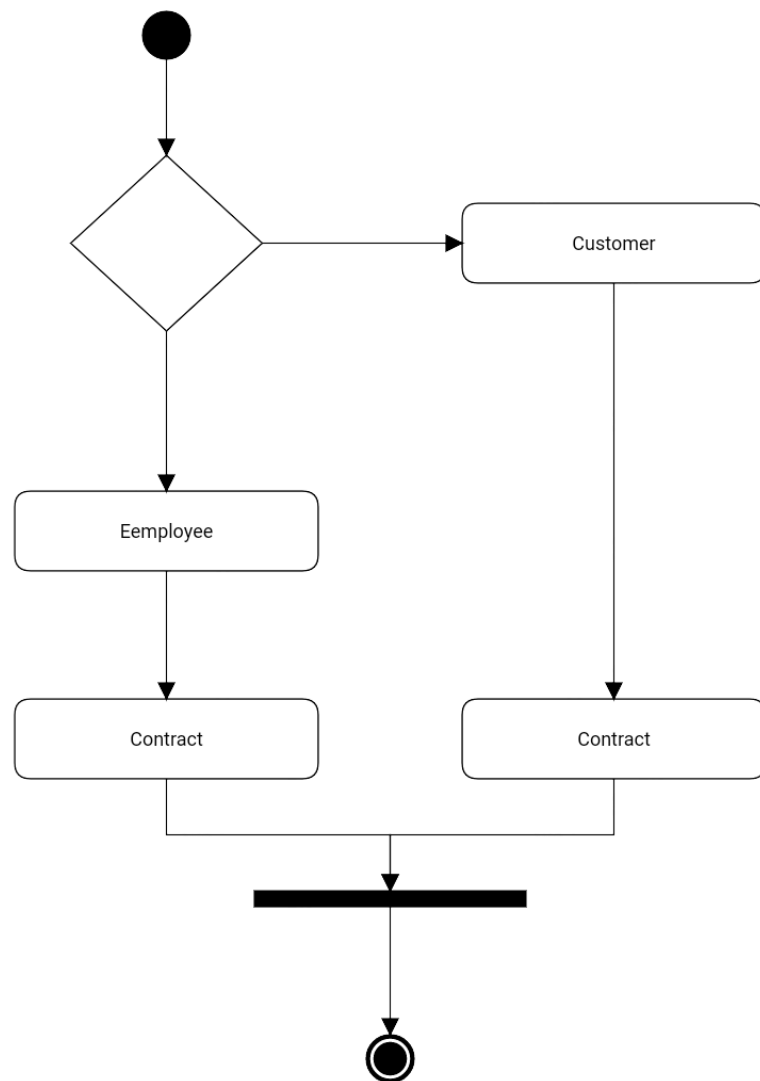


Figure 7: add contract activity diagram

4.2.3.4 Leave request activity diagram

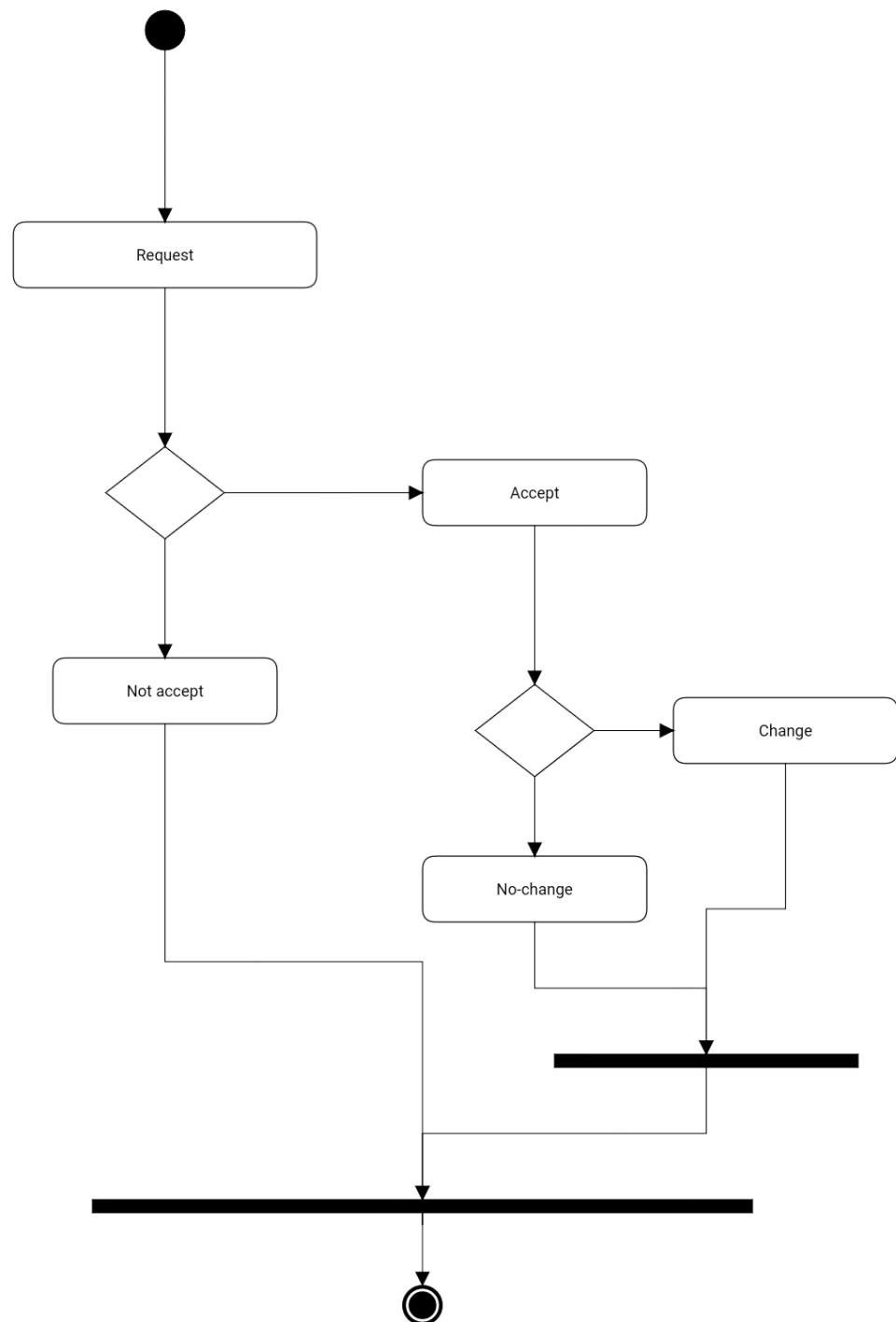


Figure 8: add leave request activity diagram

4.2.3.5 Evaluation activity diagram

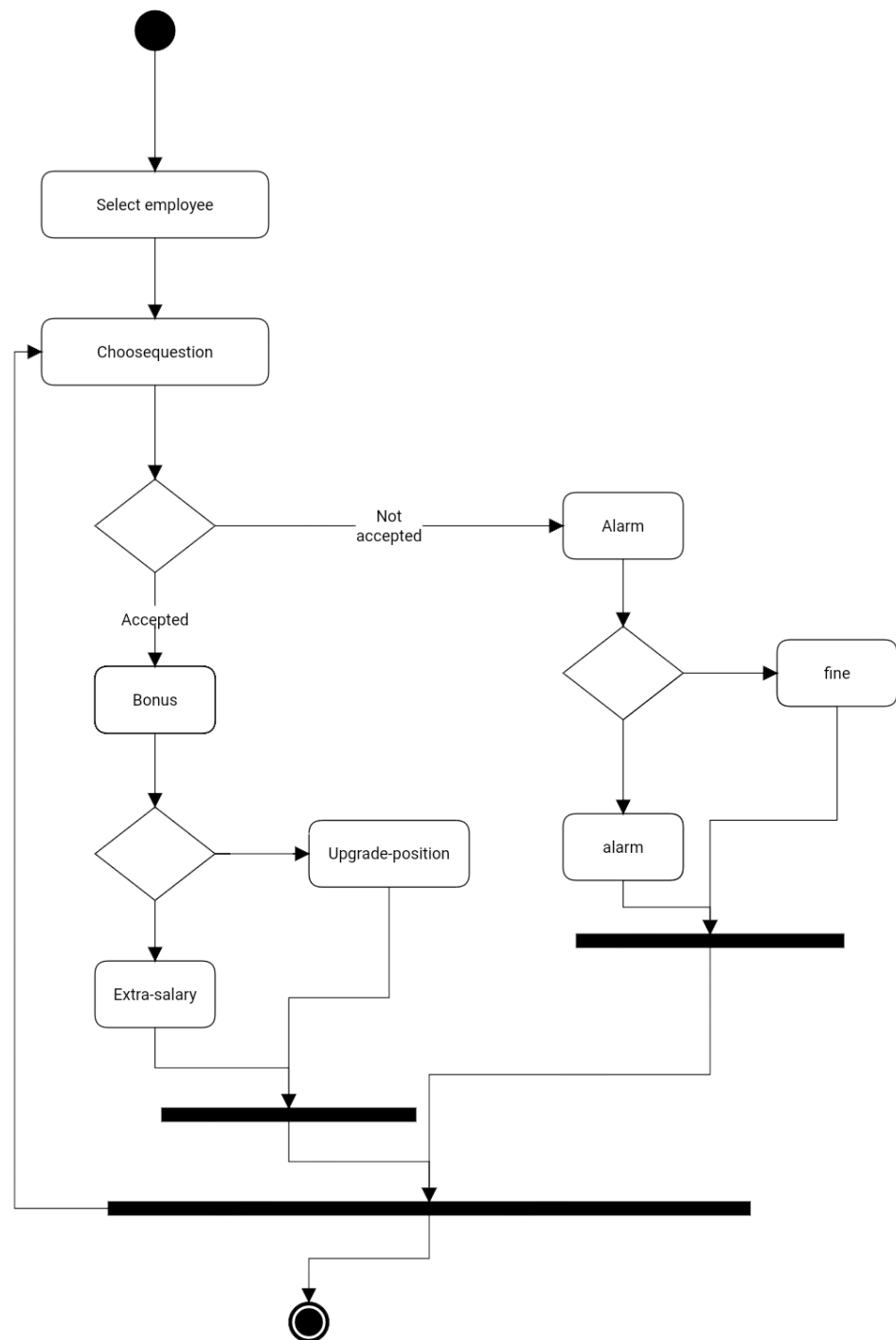


Figure 9: evaluation activity diagram

4.2.4 Use case diagram

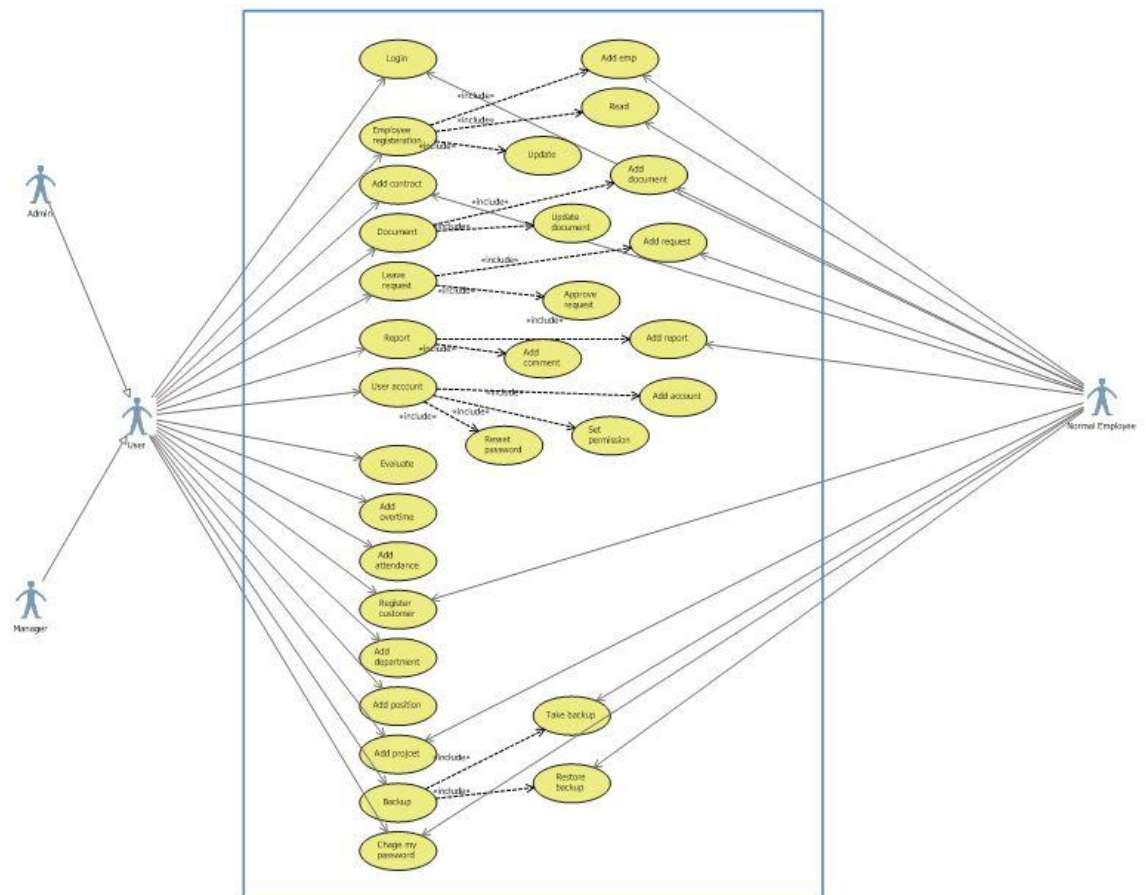


Figure 10: use case diagram

4.3 Front-End

The Graphical User Interface of this system has implanted in C# and it this system is desktop base system. This system has made from more than 50 forms in C#.



Figure 11: Visual Studio Logo

4.3.1 How to achieve the system

As we know that security is an important issue all around the world so every system should be integrated, confidential and Accountable till to say that the system is secure. Achieving the system is one of the way to secure a system. In this system anyone who want to achieve the system, he/should have account and by username and password login in the system and interact with it.

The image displays a screenshot of a web-based login form titled 'HR & Finance System - Login'. The form has a blue header bar with the text 'HR Management System' and a logo of three stylized figures. Below the header, the text 'Login to System' is centered. There are two input fields: 'Username:' and 'Password:'. At the bottom, there are two buttons: 'Cancel' with a red 'X' icon and 'Login' with a green arrow icon.

Figure 12: login form

4.3.2 Home page of the system

In this form we have the menus and those functionalities that occur mostly in a company like weekly report, leave request.

Human Resources Management System

Employee Leave Requests Weekly Report Project Customer Admin Settings

Add New Report Add New Leave Request

Add Report

Report Text: By God's grace we finished our project and ...

Report Date: Tuesday , December 20, 2016

Cancel Add Report

View Reports List Time Table Current Duties

Read report and add Comment

report_id	firstname	lastname	report_date	report_text
18	ali	ahmadi	11/20/2016	the project reamain for comming week
17	ali	ahmadi	11/21/2016	the project has finished.
16	ali	ahmadi	11/22/2016	My Dear Manager Mr Amir, in the previos week I completed my...

Employee ID: 14 Name: amir amiri Department: Management Position: HR Manager

Figure 13: Home Page of Our Human Resources Management System

4.3.3 Functionalities

4.3.3.1 Register Employee

To register employee, the following form should be filled



The screenshot shows a web application window titled "HR & Finance - Add New Employee". The header features a logo of three stylized people and the text "HR Management System". The main heading is "Add New Employee". The form contains several input fields: "Firstname:", "Lastname:", "Gender:" with radio buttons for "Male" (selected) and "Female", "Birth Year:" with a dropdown menu showing "1951", "Phone:", "Email:", "Location:", and "Hire Date:" with a date picker showing "Monday, December 26". To the right of these fields is a large empty box for a photo, with a "Choose Photo" button below it. At the bottom right are two buttons: "Cancel" (with a red X icon) and "Register" (with a green checkmark icon).

Figure 14: add employee



The screenshot shows a web application window titled "Employee". The header features the same logo and "HR Management System" text. Below the header is a navigation bar with "Employee List" (active), "Resigned Employee List", and "Refresh" buttons, along with an "Edit" button with a pencil icon. The main content is a table with the following data:

	ID	Manager ID	First Name	Last Name	Phone	Email
▶	10	14	ahmad	wlia	0788188491	ahmad_900
	11	14	amir	rezayee	0792452362	mair_reza
	12	14	ali	ahmadi	0700262626	ahmadi_ali
	13	14	yasin	wahidi	0792262626	yasin_wahid
	14	8	amir	amiri	0794242626	amiriii@yah
*						

Below the table is a grey rectangular area, and at the very bottom is a horizontal scrollbar.

Figure 15: employee lists



	ID	Manager ID	First Name	Last Name	Phone	Email
▶	8	8	hassan	etimadi	0707456656	hassan.etimadi@gamil.com
*						

Figure 16: resigned employee lists

4.3.3.2 Add Contract

After registering an employee, he/she should have a have a contract with the company that he/she want to work with. Every employee may have more than one contract with the company. In this form the company should select the position that employee will work in and also add the contract file which it's hard is signed and save in the company. There is a list in the system that show the contracts and its status which is active or expired. When the contract time finished his/her contract will be expired automatically in the system and he/she will have next contract.

The contract form is available for managers to read or print it from the system.



Contract_Add

HR Management System

Add New Contract

Employee: ahmad wlia

Position: Editor

StartDate: Tuesday, December 20

EndDate: Tuesday, December 20

Salary:

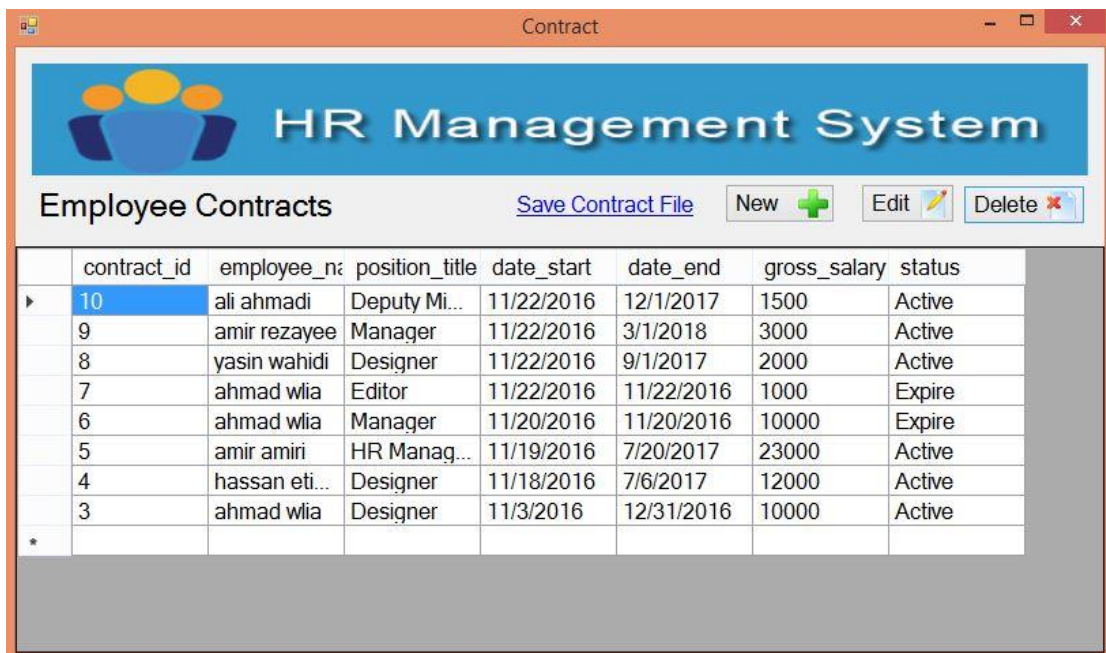
Allowance:

Job Description:

Contract File: Choose File

Cancel Add Contract

Figure 17: add new contract



Contract

HR Management System

Employee Contracts

[Save Contract File](#) New Edit Delete

	contract_id	employee_name	position_title	date_start	date_end	gross_salary	status
▶	10	ali ahmadi	Deputy Mi...	11/22/2016	12/1/2017	1500	Active
	9	amir rezayee	Manager	11/22/2016	3/1/2018	3000	Active
	8	yasin wahidi	Designer	11/22/2016	9/1/2017	2000	Active
	7	ahmad wlia	Editor	11/22/2016	11/22/2016	1000	Expire
	6	ahmad wlia	Manager	11/20/2016	11/20/2016	10000	Expire
	5	amir amiri	HR Manag...	11/19/2016	7/20/2017	23000	Active
	4	hassan eti...	Designer	11/18/2016	7/6/2017	12000	Active
	3	ahmad wlia	Designer	11/3/2016	12/31/2016	10000	Active
*							

Figure 18: contracts lists

4.3.3.3 Adding Document

Every employ should prepare all of his documents include of his/her qualification documents, diploma and grantee letter and the company add them in system. As necessary the company can read and print the documents of employee through the system.




Figure 19: add document



document_id	employee_id	firstname	lastname	title	attach_date
4	10	ahmad	wlia	Grantee L...	11/21/2016
2	12	ali	ahmadi	CV	11/17/2016

Figure 20: documents list

4.3.3.4 Add line manager for employee

After making contract with employee, the company should set a manager for employee. This functionality can be done through update employee form. When the contract finished if a company do not need an employee so he/she should be resigned which this functionality also will be done update employee form.



The screenshot shows a web application window titled "HR Management System". Inside, there is a form titled "Edit Employee". The form contains the following fields and controls:

- Firstname:
- Lastname:
- Gender: ☒ Male ☐ Female
- Birth Year: (with up/down arrows)
- Phone:
- Email:
- Location:
- Hire Date:
- Resign Date: ☐
- LineManager: ☐

On the right side of the form, there is a placeholder for a photo with Persian text: "می برسی: جقدر دوستم داری؟! می خندم و می گویم: جهان را مقرر کرده ای؟!". Below this is a "Choose Photo" button. At the bottom right, there are "Cancel" and "Save" buttons.

Figure 21: update employee

4.3.3.5 Authenticating

Any employee who work with this system should be authenticated. This functionality is implemented through adding user account for employee which he/she have user name and password and can log in in the system and use it. The admin can change the user name and password of all accounts and every employee can change his/her password.

Account_Add

HR Management System

Create New Account

Employee: ahmad wlia

Username:

Password:

Confirm:

Cancel Create Account

Figure 22: add user account

User_Account

HR Management System

User Accounts [Create New Account](#) [Permission](#) [Reset Password](#) [Delete](#)

employee_id	employee_name	username	Status
12	ali ahmadi	ali	Enable
14	amir amiri	amir	Enable
8	hassan eti...	hasan	Enable
*			

Figure 23: : user accounts list



The image shows a software window titled "Change_Password". Inside the window, there is a blue header bar with a logo of three stylized people (two orange, one blue) and the text "HR Management System". Below the header, the main area is light gray and contains the title "Change Password" in bold black text. Underneath, there are three input fields: "Current Password:", "New Password:", and "Confirm Password:". At the bottom, there are two buttons: "Cancel" with a red 'X' icon and "Save Changes" with a green checkmark icon.

Figure 24: change password

4.3.3.6 Authorization

Because of security issues we add this functionality to this system. Every employee can do some modified functions with this system it means this system set user levels for employee. The person who is the general manager of the company all the functionalities of the system is available for he/she for example (CRUD), those who are manager in each department can do department specific functionalities.

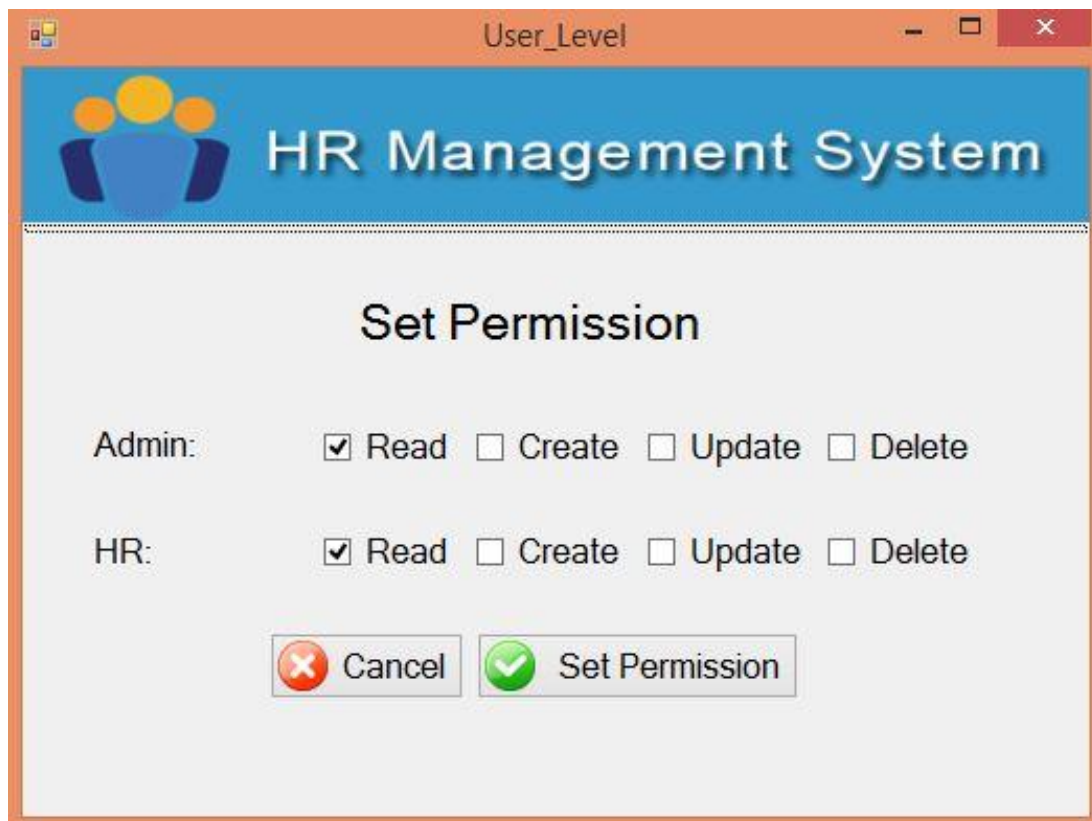


Figure 25: set permission for employee

4.3.3.7 Adding attendance

For easiness of calculating of salary of employee, the system gets just the absentness hours of employee. Every line manager is responsible to add the absent hours of employee in the system and no one change the attendance it should be fully integrated.

Attendance_Add

HR Management System

Add Absent Hours

Employee: ahmad wlia

Absent Date: Tuesday , December 20

Absent Hours:

Cancel Add Absent

Figure 26: add attendance

Attendance

HR Management System

Attendance

Add Refresh Edit Delete

	employee_id	firstname	lastname	total_absent
▶	10	ahmad	wlia	5
	12	ali	ahmadi	8
	14	amir	amiri	0
	11	amir	rezayee	0
	8	hassan	etimadi	0
	13	yasin	wahidi	0
*				

Figure 27: employee attendance list

4.3.3.8 Adding overtime

Some employee may work two shift in a company or some hours more beside his/her shift in a company so his/her line manager should add his/her overtime in the system.



Overtime_Add

HR Management System

Add Overtime

Employee: ahmad wlia ▼

Overtime Date: Tuesday , December 20 ▼

Overtime Hours:

Remark:

Figure 28: add overtime work of employee



	employee_id	firstname	lastname	total_overtime
▶	10	ahmad	wlia	0
	12	ali	ahmadi	0
	14	amir	amiri	0
	11	amir	rezayee	0
	8	hassan	etimadi	0
	13	yasin	wahidi	0
*				

Figure 29: overtime list

4.3.3.9 Adding leave request, read and approve

We have two kinds of leave for employee:

- 1- Annual leave that every employee can have 20 days leave in every year that he/she before have leave should request from his/her manager and after approving him/her will have annual leave.
- 2- Sickness leave that every employee may have any time that he/she become sick so can request and will have leave.

The view option of leave request is enable only for those who are line manager and he/should be the manager that employee to see his/her leave request and accept or reject it.



Leave Type: Annual Leave

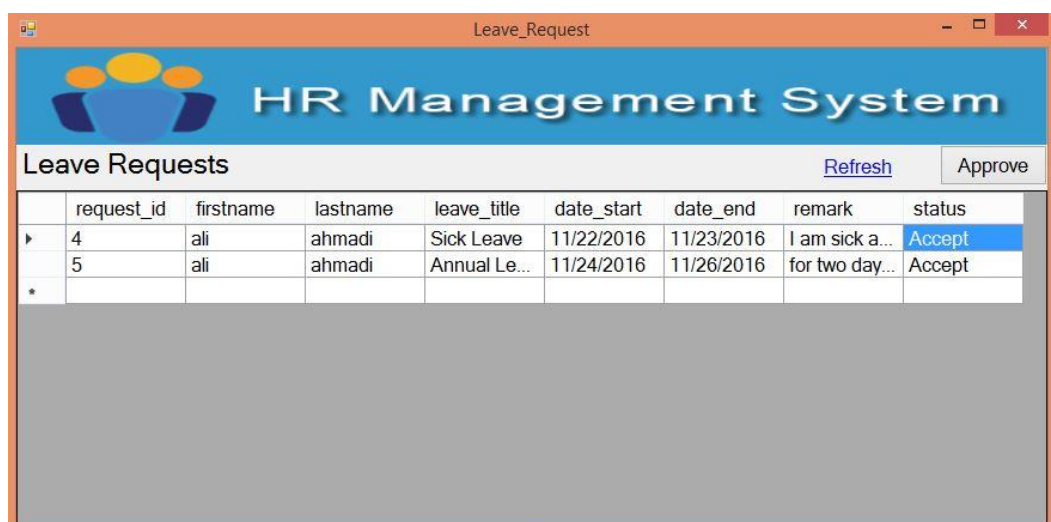
StartDate: Tuesday, December 20, 2016

EndDate: Tuesday, December 20, 2016

Remark:

Cancel Add Request

Figure 30: add leave request




	request_id	firstname	lastname	leave_title	date_start	date_end	remark	status
▶	4	ali	ahmadi	Sick Leave	11/22/2016	11/23/2016	I am sick a...	Accept
*	5	ali	ahmadi	Annual Le...	11/24/2016	11/26/2016	for two day...	Accept

Figure 31: leave list

4.3.3.10 Add report, read report and add comment

Every employee should report his/her manager weekly about his/her one week works and his/her manager will read the report and add comment. The view option of report is enable only for those who are manager and he/she should be the manager of that employee which add the report not all employee s' reports.



Report_Add

HR Management System

Add Report

Report Text:

Report Date: Tuesday , December 20, 2016

Cancel Save

Figure 32: add report

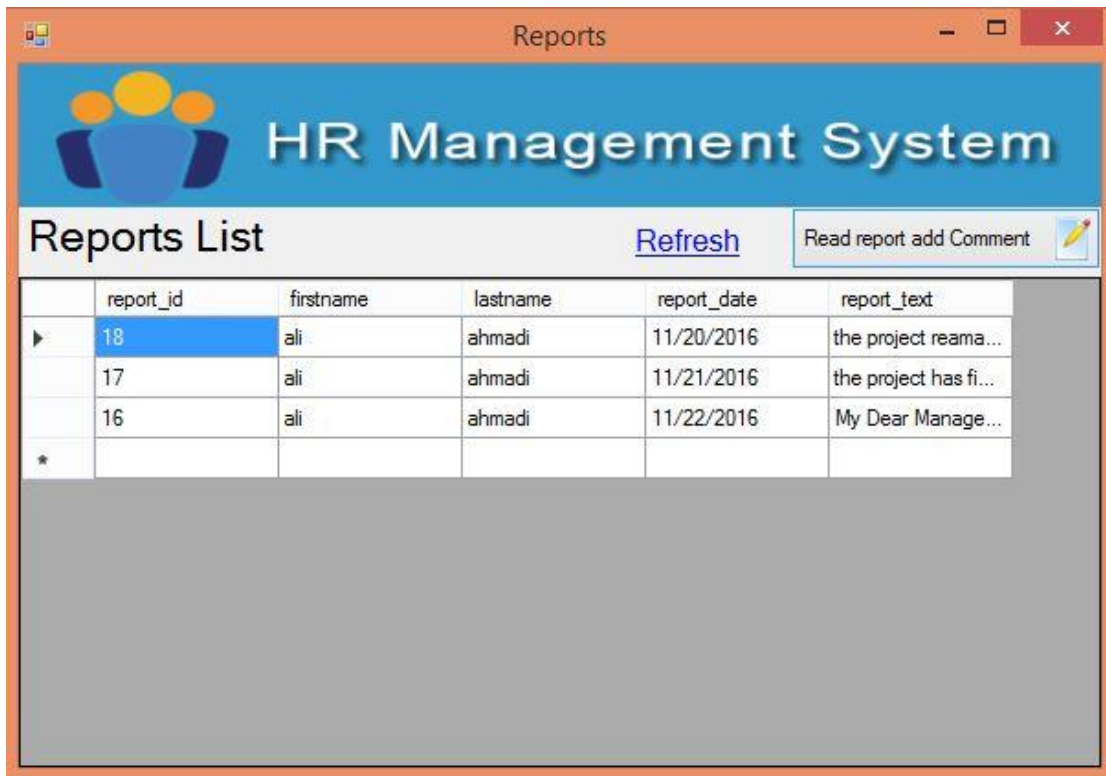


Figure 33: reports lists

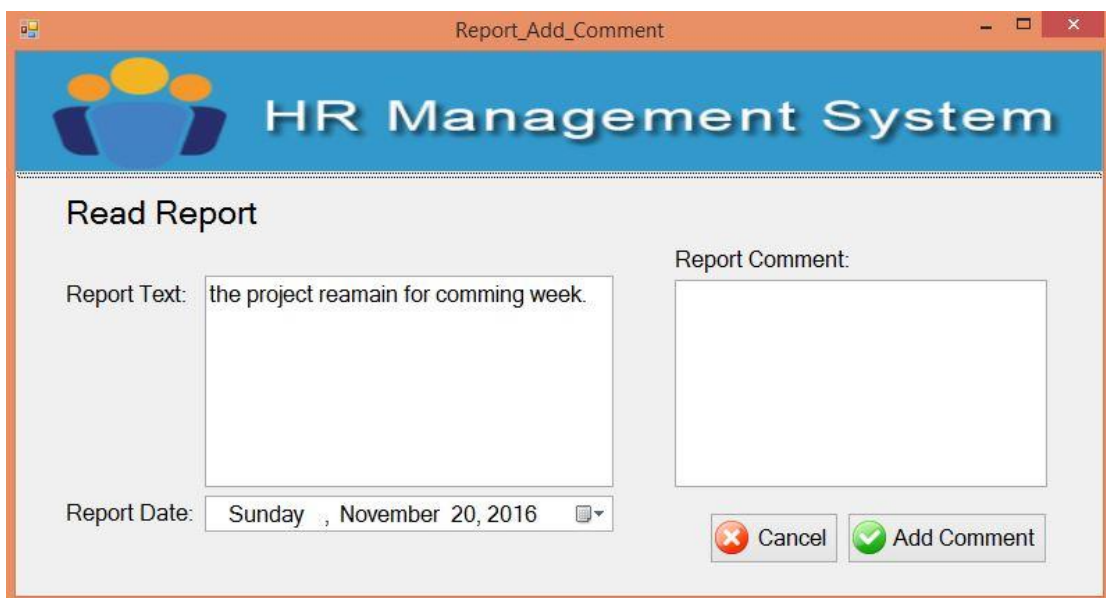
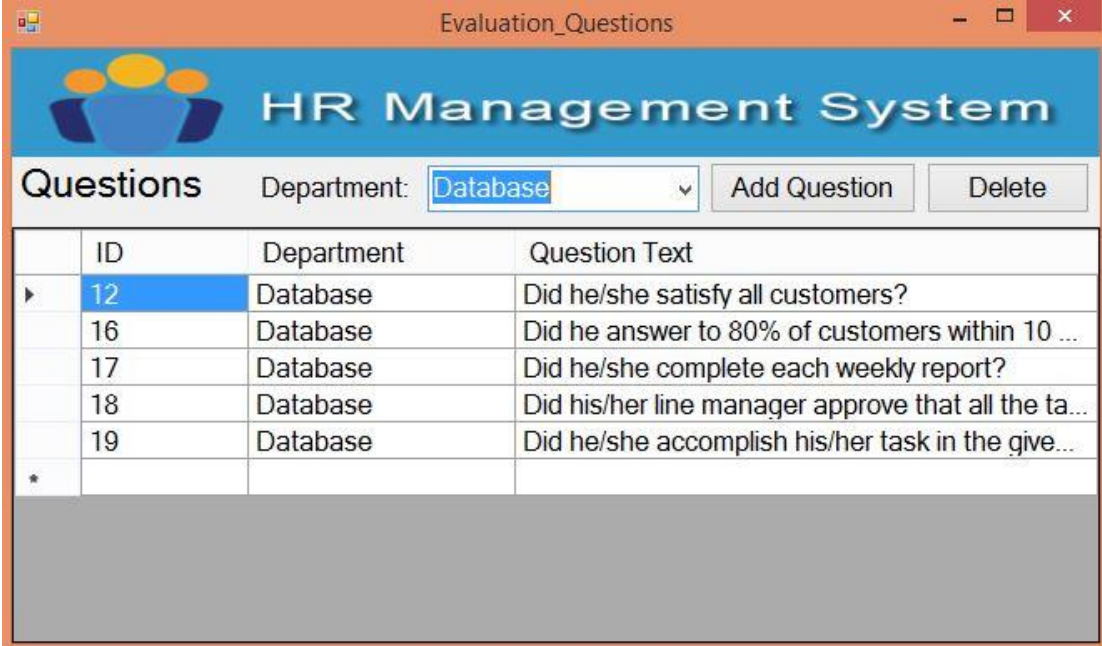


Figure 34: read report and add comment

4.3.3.11 Evaluation

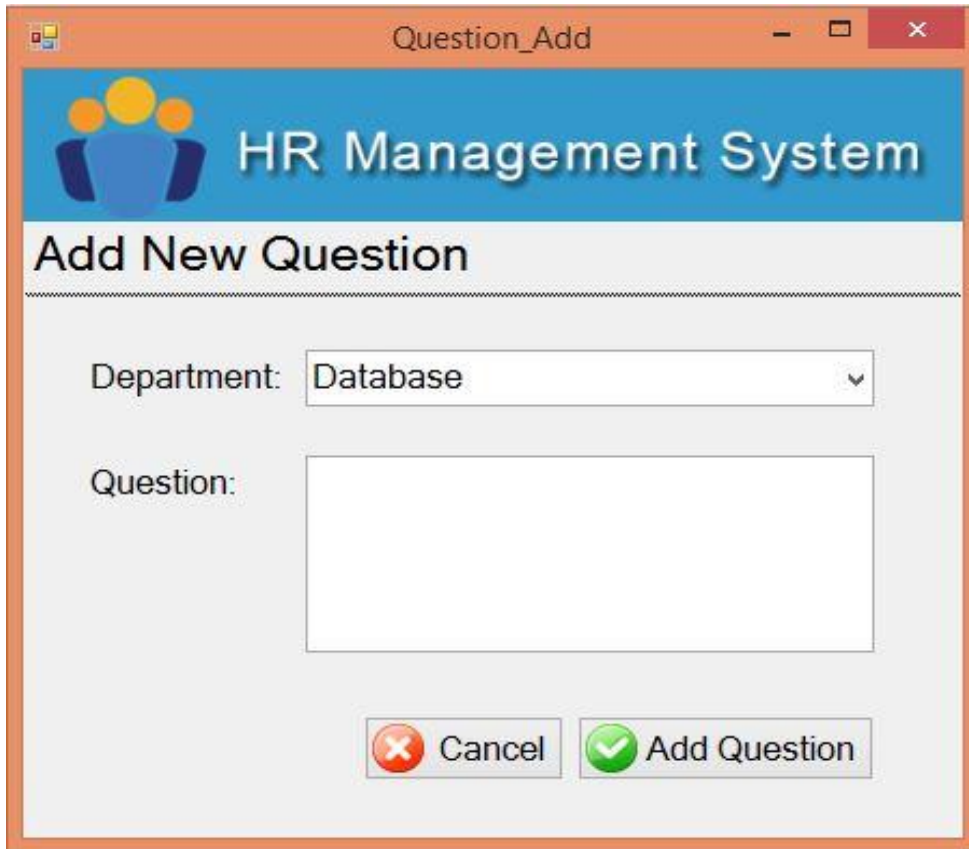
The company can evaluate the employee annual. The general manager or the manager of departments according some criteria make questions department specific and add them to the system and can evaluate the employee. The system automatically rates the employee according the answer and the company can degrade the employee or awards them to encourage them.



The screenshot shows a web application window titled "Evaluation_Questions". The header features a logo with three stylized figures and the text "HR Management System". Below the header, there is a section labeled "Questions". To the right of this label is a "Department:" dropdown menu currently set to "Database", followed by "Add Question" and "Delete" buttons. Below this is a table with four columns: "ID", "Department", and "Question Text". The table contains five rows of data, all with "Database" as the department. The first row (ID 12) is highlighted in blue. Below the table is a large grey rectangular area.

	ID	Department	Question Text
▶	12	Database	Did he/she satisfy all customers?
	16	Database	Did he answer to 80% of customers within 10 ...
	17	Database	Did he/she complete each weekly report?
	18	Database	Did his/her line manager approve that all the ta...
	19	Database	Did he/she accomplish his/her task in the give...
*			

Figure 35: questions for evaluation



Question_Add

HR Management System

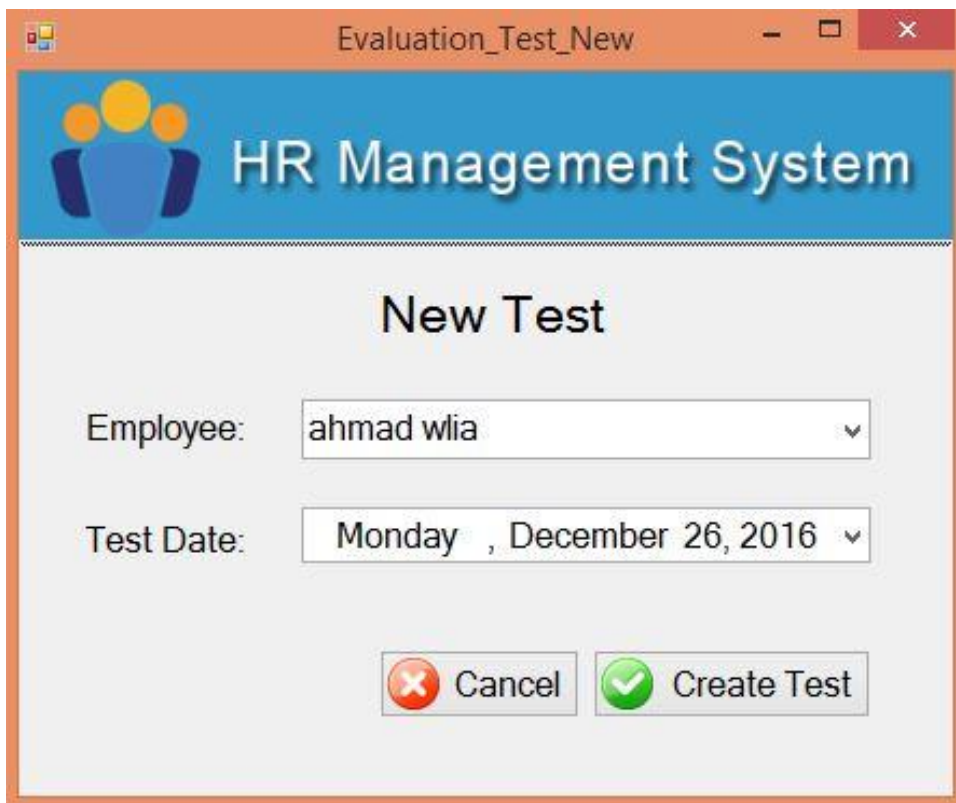
Add New Question

Department: Database

Question:

Cancel Add Question

Figure 36: add question



Evaluation_Test_New

HR Management System

New Test

Employee: ahmad wlia

Test Date: Monday , December 26, 2016

Cancel Create Test

Figure 37: add test

Evaluation_Answer_Add

HR Management System

ID	Question	Answer
12	Did he/she satisfy all customers?	<input checked="" type="checkbox"/>
16	Did he answer to 80% of customers within 10 min...	<input type="checkbox"/>
17	Did he/she complete each weekly report?	<input type="checkbox"/>
18	Did his/her line manager approve that all the task ...	<input type="checkbox"/>
19	Did he/she accomplish his/her task in the given p...	<input type="checkbox"/>
*		<input type="checkbox"/>


 Save Results

Figure 38: answer the questions

Evaluation

HR Management System

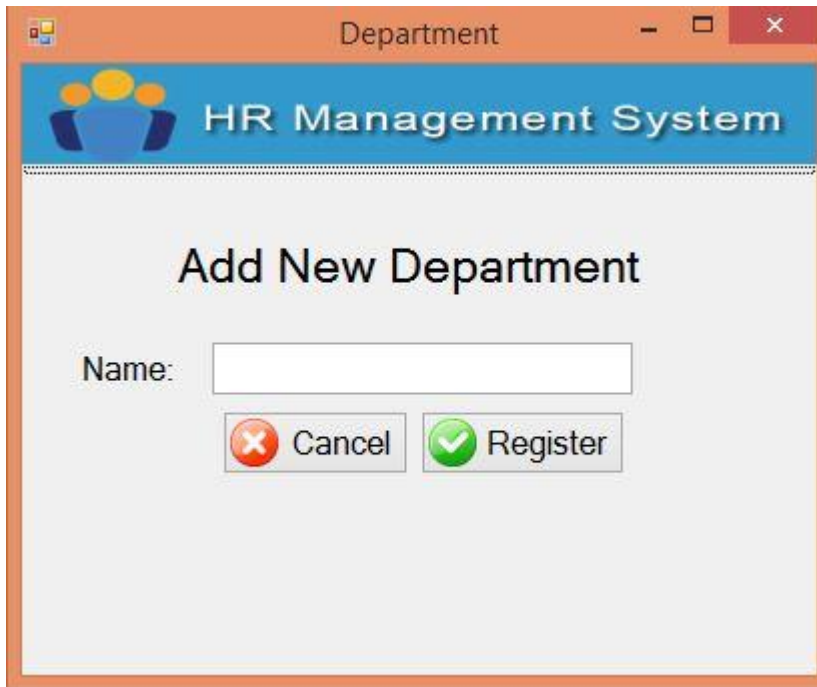
Employee Evaluation [Refresh](#) [Questions](#) [New Test](#)

employee_id	firstname	lastname	year	rate
10	ahmad	wlia	2020	6
10	ahmad	wlia	2018	2
11	amir	rezayee	2017	7
10	ahmad	wlia	2017	6
10	ahmad	wlia	2016	10
14	amir	amiri	2016	8
11	amir	rezayee	2016	5
14	amir	amiri	2015	4
10	ahmad	wlia	2015	4
*				

Figure 39: evaluations

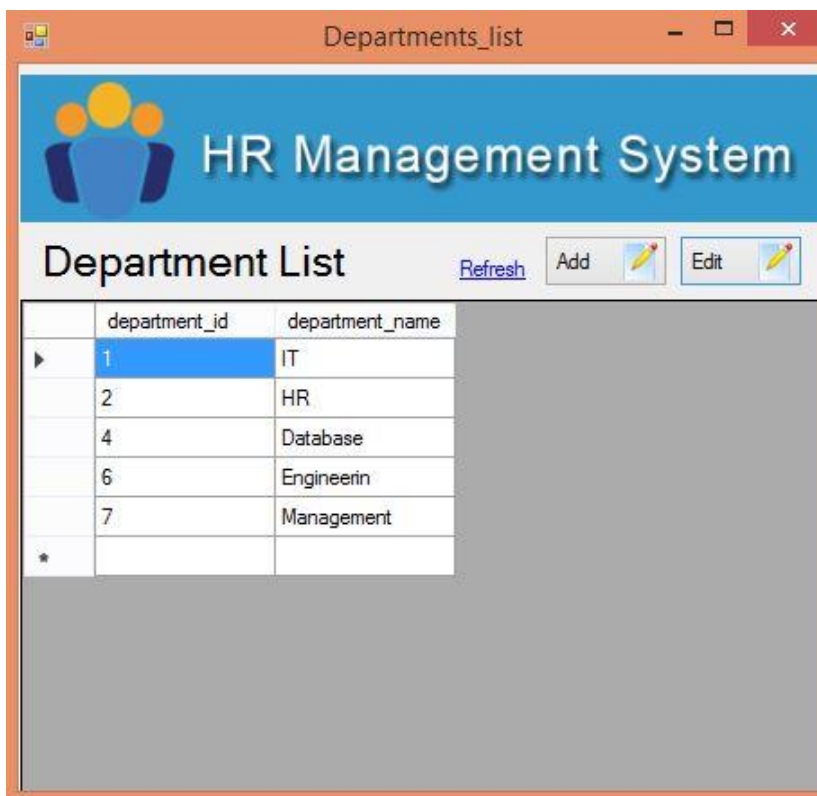
4.3.3.12 Adding department

Every company may have departments which in every department may work the employee. The system adds the department.



The screenshot shows a window titled "Department" with a header bar for the "HR Management System". The main heading is "Add New Department". Below it is a text input field labeled "Name:". At the bottom, there are two buttons: "Cancel" with a red 'X' icon and "Register" with a green checkmark icon.

Figure 40: add department



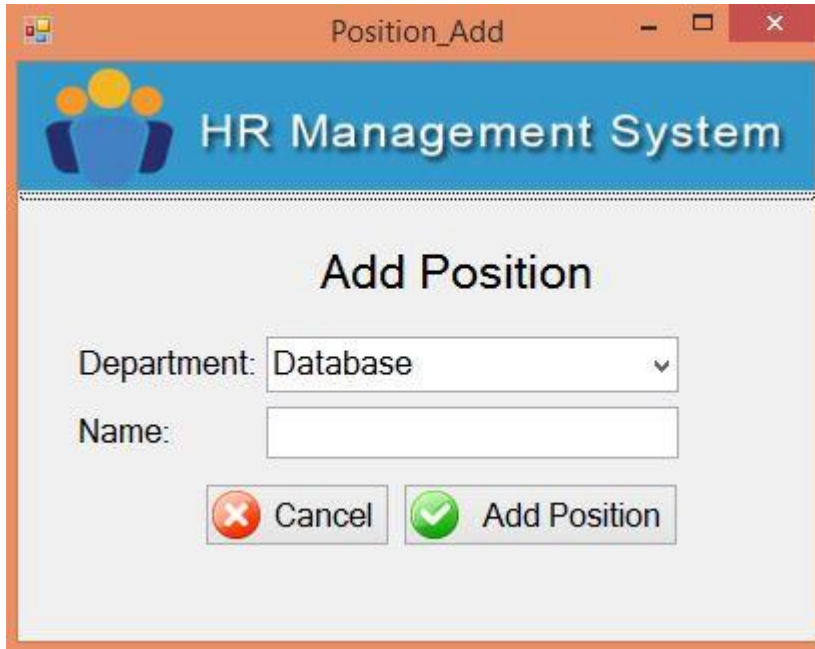
The screenshot shows a window titled "Departments_list" with a header bar for the "HR Management System". The main heading is "Department List". To the right of the heading are three buttons: "Refresh" (text), "Add" (pencil icon), and "Edit" (pencil icon). Below the heading is a table with two columns: "department_id" and "department_name". The table contains five rows of data, with the first row highlighted in blue. A star icon is visible in the bottom left corner of the table area.

	department_id	department_name
▶	1	IT
	2	HR
	4	Database
	6	Engineerin
	7	Management
★		

Figure 41: departments list

4.3.3.13 Adding position

In every department there will be positions which employee work in. before setting an employee in a position, the company should add them to the system as needed for the company.



Position_Add

HR Management System

Add Position

Department: Database

Name:

Cancel Add Position

Figure 42: add position



Positions_List

HR Management System

Position List

Refresh Add Edit

	position_id	position_title
▶	2	Editor
	3	Coder
	4	Designer
	5	Manager
	8	Deputy Minister
	9	HR Manager
*		

Figure 43: position list

4.3.3.14 Adding customer

The customers and their projects are very important for the company because the outcome is from customers' projects. Before adding the project of the customer, the company add the customer who is the project owner in the system. The system also wants the customer type because the customer may be a person or a company and also should clear that is local or foreigner.



RegisterCustomer

HR Management System

Add New Customer

Name:

Phone:

Email:

Location:

Type: ☒ Person ☐ Company

IsNational: ☒ Local ☐ Foreigner

Figure 44: add customer

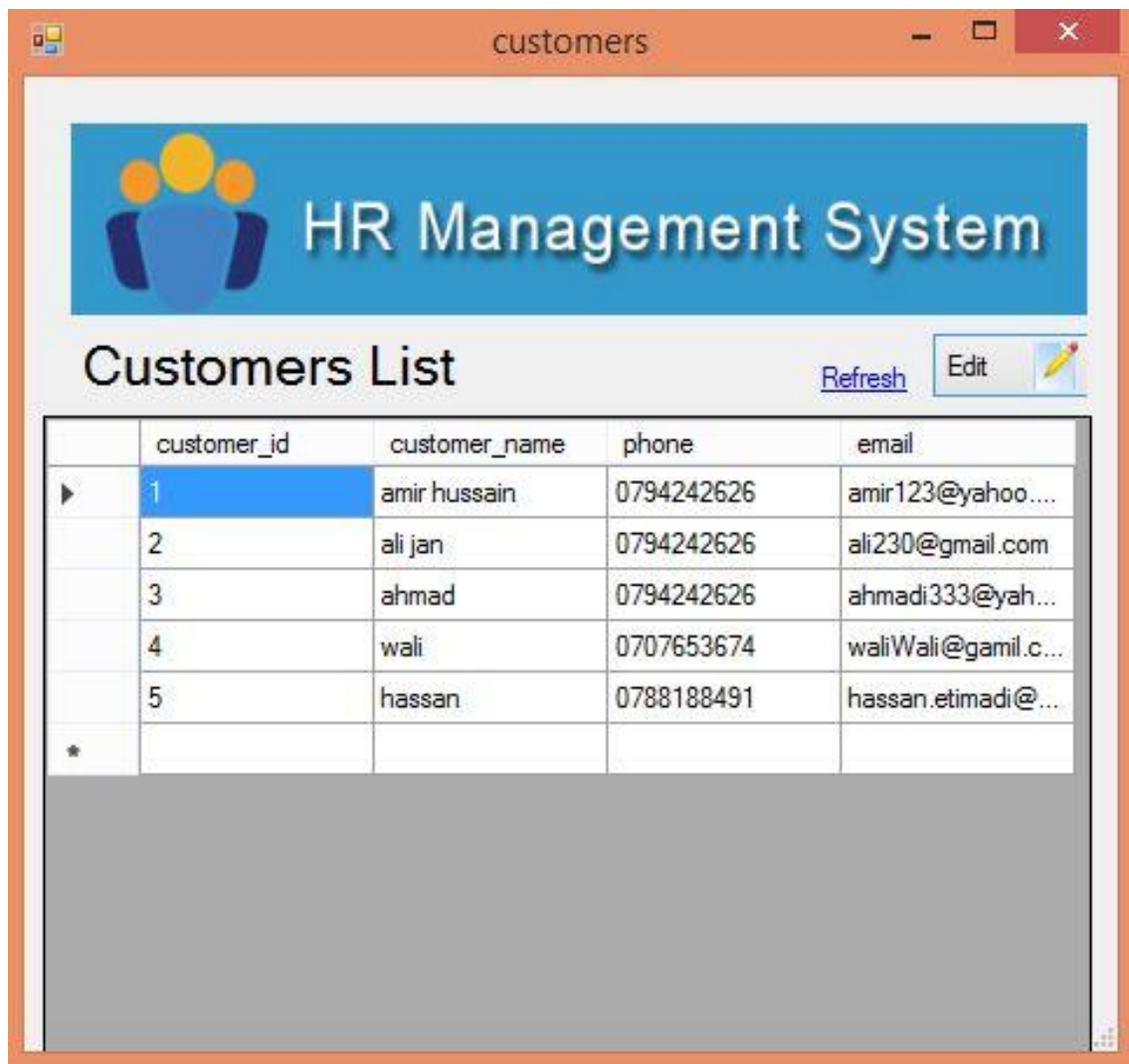


Figure 45: customers list

4.3.3.15 Adding project

After registering the customer in the system the company can add project of the customer in the system and define start date and delivery date and cost of the project.

Project title:

Start Date:

End Date:

Project Cost:

Customer:

Figure 46: add project

Projects List [Refresh](#)

	project_id	title	date_start	date_end	project_cost	customer_id
▶	1	Software	11/2/2016	11/2/2016	10000	1
	2	Devlopment	11/1/2016	3/1/2018	200000	1
*						

Figure 47: projects list

4.3.3.16 Budget estimation

The company can estimate all the expense and the salaries which pay for employee and add the sum in the system and at the end of the year the outcome will be clear.



The screenshot shows a web application window titled "Budgets_List". The header features a logo of three stylized figures and the text "HR Management System". Below the header, the main section is titled "Budget List". To the right of the title are three buttons: "Refresh" (a text link), "Add" (with a plus icon), and "Edit" (with a pencil icon). Below these buttons is a table with the following columns: "budget_id", "budget_year", "amount", and "program". The first row of the table is highlighted in blue and contains the values "1", "2012", "10000", and "Training". Below the table is a large, empty gray rectangular area.

	budget_id	budget_year	amount	program
▶	1	2012	10000	Training
★				

Figure 48: budget estimation

4.3.3.17 Backup and restore

Taking backup is an import functionality of computer based system which save the data from many risks. The system get backup from the data as needed and the company can restore the data as needed.

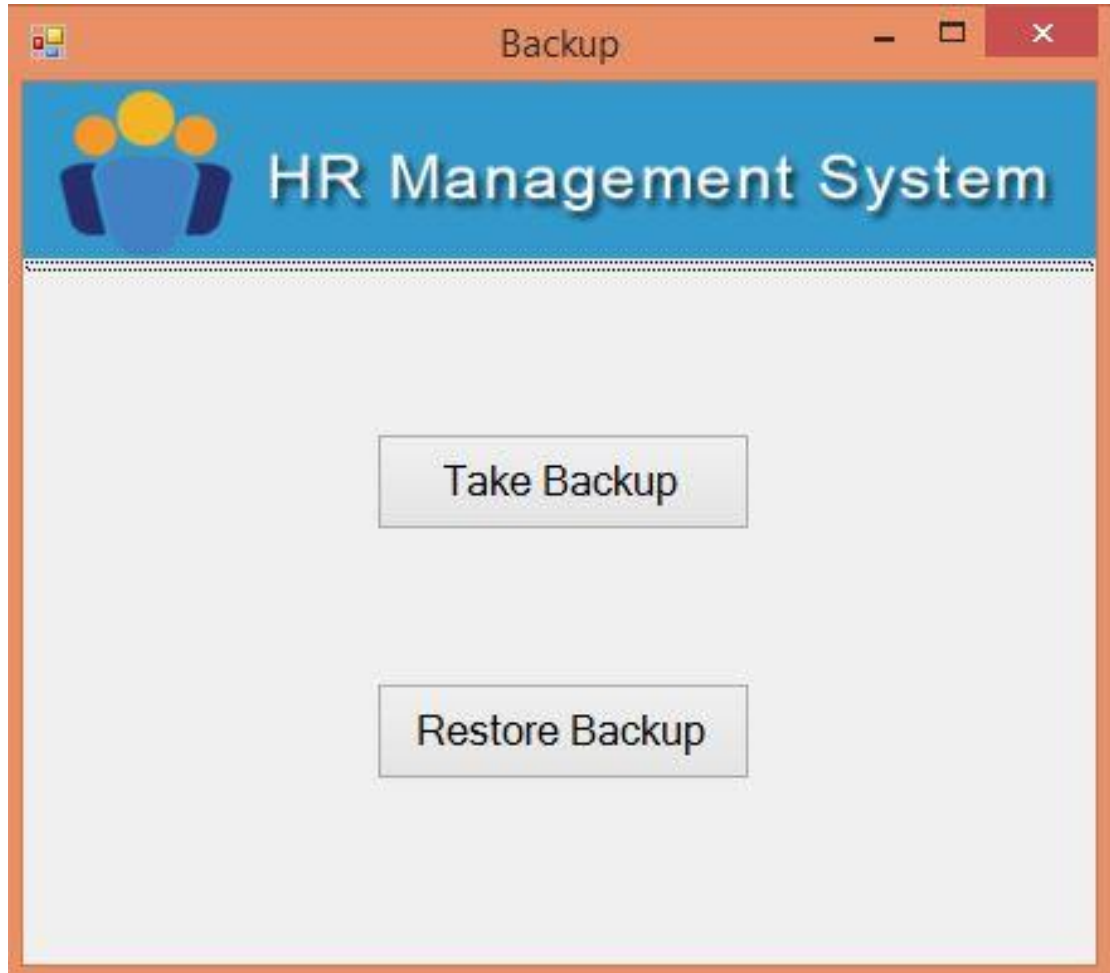


Figure 49: take backup and restore

Appendix: Interview form

Interview form

When we were interviewing, we asked interviewee the following questions.

1. What should the application do?
2. Which platform is it going to be available on?
3. What are the functionality of the system?
4. Who will use it?
5. What problem should it solve?

The answer we received from most of our interviewee are:

a.1 The application should perform Human Resources and facilitate in performing Human Resources Management tasks, save the time of management.

a.2 Because windows operating system is licensed and is responsible for paying the compensate if the fault result was from operating system side, so most of companies and people use windows operating system.

most of our interviewee use windows and they want us the system should run on window.

a.3 The application should perform works such as inserting and updating employee, employee should be able to send request for manager, report their works to manager, the manager should be able to response for requests, see the reports and comment on them, the system should have part to evaluate the employee annual and rate them

a.4 All employee should be able to interact with the system based on their authorizations the system should be able when an employee login to the system just make enable those function that the employee is authorized in by this we mean that there are two type of user level normal employee and manager

a.5 The system should save the time, take backup from data minimize budget consumption

References

[1] Manmohan Joshi, “Human Resources Management,” in *Human Resource Management*, 1th edition, UK, 2013, pp. 9-10.

[2] ATG Educational, “Introduction,” in *Human Resources Management*, 1th ed, London, UK, 2008, pp.9-10.

[3] Dave Rietsema. (2016, June, 10). HRM Security
[Online]. Available: <http://www.hrpayrollsystems.net>

[4] Unknown, “Selection,” in *Beginning Management of Human Resources* (v.1.0), 2012, pp.143-144.

[5] Unknown, “Training and Development,” in *Beginning Management of Human Resources* (v.1.0), 2012, pp.270-271.

[6] ATG Educational, “Grading, salaries and benefits,” in *Human Resources Management*, 1th ed, London, UK, 2008, pp.9-10.

[Figure 1] www.tegil.com

[Figure 11] www.baboo.com.br