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HUMAN RESOURCE MANAGEMENT SYSTEM

PROJECT REPORT

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HUMAN RESOURCE MANAGEMENT SYSTEM

1. ABSTRACT:

This report is for human resource management system for Maria B. clothing store. The core focus of this report is on the employees working in the company and the projects being done by the employees of the company, status of the projects is also analyzed. Based on the user requirements, a conceptual database design is proposed, and further recommendations are given.

2. DOMAIN DESCRIPTION:

The Human Resource Management System HRMS can be used to manage the Human Resource of a company. The system helps a company to create vacancies and accept applications from the applicants. Applicants can view and apply for jobs and similarly interview dates are also assigned against applications.

It also assigns the project to Employees and checks the project status. It can keep the record of attendance and salary automatically.

3. REQUIREMENT SPECIFICATIONS:

The System can Store detail of:

1. Employees.
2. vacancies
3. interviews
4. applicants
5. project information

- The system is able to show the status of the projects and its whole detail.
- The system is able to analyze the area most of the employees and applicant belongs.
- The system is able to determine highly paid employee and Remove Employee information that resigned or struck off.

- ❖ It also determined the separate allowances and basic pay separately
- ❖ It also Generate payroll slip.

For the sake of clarity, the entire logistics view has been broken down into four sub processes in this report:

- ➢ EMPLOYEES INFORMATION MANAGEMENT
- ➢ TIME AND ATTENDENCE MANAGEMENT
- ➢ PROJECT ALLOCATION TO EMPLOYEES
- ➢ VACANCIES AND HIRINGS

Functional Requirements:

ID	FUNCTION	ENTITY	PRIORITY
EMPLOYEES INFORMATION MANAGEMENT:			
1	Insert/ Update/Delete/ View of the details of Employees.	Employee ID, Employee Name, Employee CNIC, Employee Contact No, Employee qualification, Employee joining, Employee address, Employee gender, Employee birthdate	HIGH
2	Details of employee salary history.	Salary ID, Employee ID, Employee salary, Allowances, total pay, Basic pay	HIGH

TIME AND ATTENDANCE MANAGEMENT:			
1	Insert/ Update/Delete/ View of the details of attendance.	Attendance ID, Employee ID, Date, Status	HIGH

VACANCIES AND HIRINGS:			
1	Insert/ Update/Delete/ View the vacancies available.	Vacancy ID, Vacancy criteria, qualification required for applying, deadline for applying	HIGH
2	Details of applicants applying for the vacancy available.	Applicant ID, Applicant name, applicant qualification, Email, applicant current address, applicant gender, applicant contact number, submission date, Interview ID,	HIGH
3	Data storage of interviews and hired Applicants.	Interview ID, Applicant ID, Selection round, Status, Date of interview	HIGH

PROJECT ALLOCATION TO EMPLOYEES:			
1	Insert/ Update/Delete/ View of the details of projects.	Project ID, Employee ID, Title of project, Project start date, Project end date.	HIGH
2	Insert/ Update/Delete/ View the project status.	Project ID, project modules, Project status, Project start date, project completion date, Project end date.	HIGH

Non-Functional Requirements:

- The application should be able to handle all the tasks in an efficient manner.
- Login by username, password should be incorporated.
- Certain functions, such as insert, update, delete should only be available to the

authorized staff members.

- The application should be able to provide up-to-date information.
- The database must be available to HR Departments.
- Database should be able to handle multiple users.
- Secure access of applicants or employee confidential data.
- The application should be able to handle all the changes made.

External Interface Requirements:

- **User Interface**

  The software provides good graphical interface for the front end of the database so that new users can make use of the system with ease. The user of the product will get very user-friendly forms which will be very easy to work with.

- **Hardware Interface:**

  - 40GB Hard disk
  - 256 MB RAM
  - Peripheral Devices

- **Software Interface:**

  - Visual Studio
  - Microsoft SQL Server

Performance Requirements:

The system is supposed to be having good memory space and a Bigger Ram above 256 MB preferably. The sound card and graphics card will have to be of good quality and capacity.

4. ASSUMPTIONS:

Employee

- Employee will do work based on projects. They can also watch their current project status.
- Employee data is available according to their AGE and years of experience.
- All personal data of employee is saved and for the authentication of a person, system is also demanding CNIC number.
- We can do changes in Employee section.
- Employee also generate vacancies. Senior employees will take interviews of new applicants.

Attendance

- The system provided the facility in which we can easily access the employees with short attendance or regular employees.
- Based on attendance, salary bonuses can be given to the employee or deduction can be done for short attendance employees.

Salary

- Employees with high salary can be access separately and vice versa.
- Salary of each employee will be calculated with respect to their basic pay and allowances.

Vacancies

- Vacancies will be provided by the employees.
- In this, required qualification is specified.
- Criteria for the applicants who can apply to the available vacancy is also provided.
- Specific deadline is given which applicant have to follow.

Applicants

- Nationality of applicant will be checked.

- From this, we can find out that from which areas more applicants are coming.
- We can differentiate the Applicants with respect to their gender also.
- Interview ID is taken as foreign key in it for the purpose that is we can identify when an interview is scheduled for the applicant.
- Total number of applicants who applied for the available vacancy in the given time frame.
- By the use of applicant's qualification, we can check whether the applicant meet the specific criteria for the vacancy available or not.

Interview

- In selection round, applicants who fulfill the criteria for the specific vacancy will be selected for the interview.
- Interviews will be scheduled for the applicants who applied for the available vacancy and got selected in selection round. The details of all the interviews can be accessed in it.
- In the status, final selection will be done.

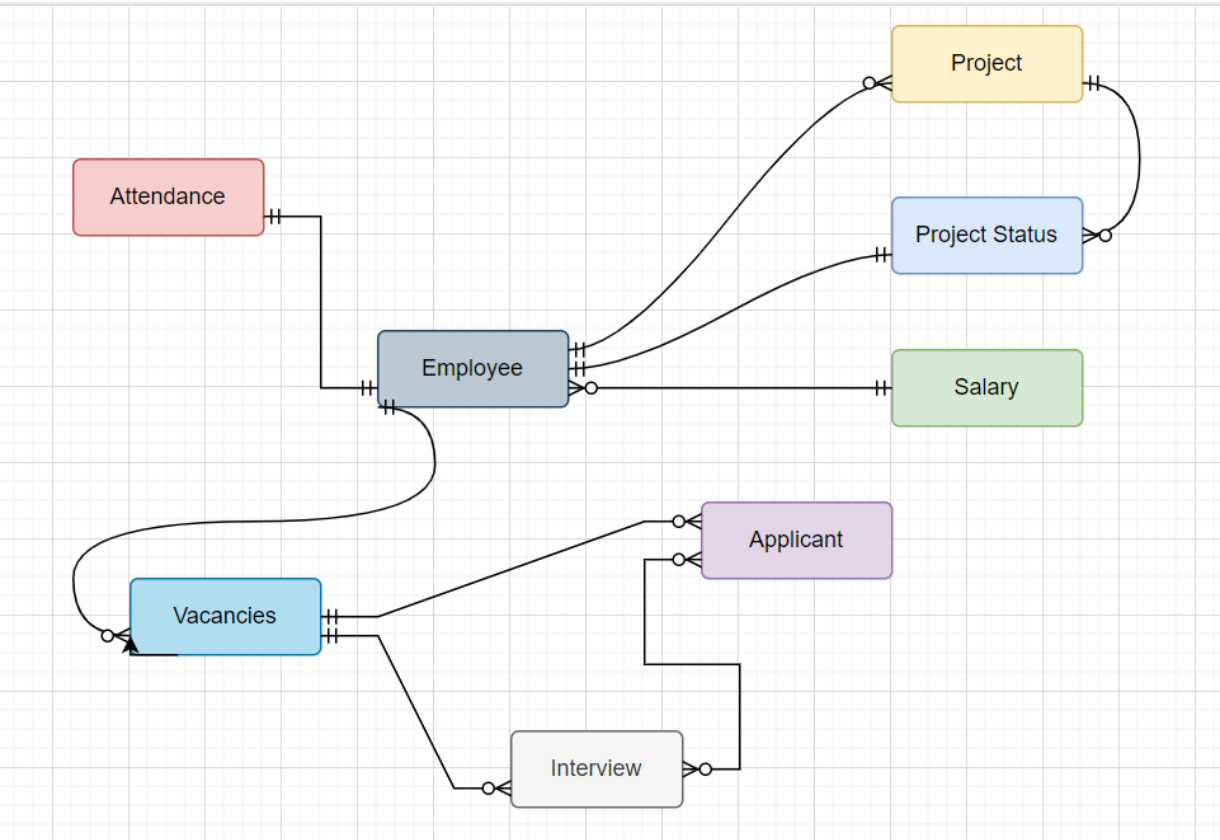
Project

- All the projects who are assigned to the different employees.
- Starting date and ending date of all the projects can also be access in it.
- In this we can identify which employee did which project.

Project Status

- All the currently projects will be in the project status on which employees are working.
- The starting date of the project will also be available in data and its ending date will be updated when the employee completes his/her project.

ER DIAGRAM:



5.1 ENTITIES AND ATTRIBUTES:

1. Employee

Emp_ID	Integer
Emp_CNIC	Integer
Contact_No.	varchar
Emp_qualification	Varchar
Emp_join_date	Date
Emp_designation	Varchar
Emp_address	Varchra
Emp_gender	Varchar

Emp_birthdate	Date
Emp_Name	Varchar

Employee table keeps the information about the employee. A new employee ID is generated every time a new employee comes into the company and it is the primary key of the table Employee. Employee name attribute helps in assigning a project task to any employee. Employee gender attribute helps in identify the majority of employees belong to which gender. Employee CNIC number is used to have the poof of from where that person belongs to and all the data provided by him/her is matching with the record of NADRA. Employee designation attribute is here to look for on which post or designation which employee is hired.

2. Attendance

Att_ID	Integer
Emp_Id	Integer
Date	Date
Status	varchar

Attendance table have the record of employee's attendance, date and check status if employee is absent or present. Employee ID is working as foreign key. For every employee, one Attendance ID is assigned, which is a primary key of this table.

3. Salary

Salary_ID	Integer
Emp_ID	Integer
Basic_pay	Integer
Allowances	Integer
Total_Pay	Integer

Salary table have the records of salaries of every employee or person working in the office. Employee ID is taken as a foreign key here and against every Employee ID, one Salary ID is generated, which is a primary key of this table. Salary table have the basic pay, allowances and

total pay attributes, basic pay is the pay given to the employee, in allowances all the details of allowances come. Total pay is generated after the addition of the basic pay and the allowances.

4. Vacancies

Vacancy_ID	Integer
Criteria	Varchar
Qualification	Varchar
Deadline	Date

Vacancies table have the record of all the vacancies available on which new employees can be hired. Vacancy ID is the primary key of the table. Qualification and criteria for the available vacancy is also given to which a new employee should meet. Deadline for apply is also available in it.

5. Applicant

App_ID	Integer
Int_ID	Integer
App_Name	Varchar
App_CNIC	Integer
App_Qualification	Varchar
App_Email	Varchar
App_Address	Varchar
App_City	Varchar
App_Gender	Varchar
Submission_date	Date
App_contact	Varchar

Applicant table have the Applicant ID which is a primary key of the table. Interview ID is taken as the foreign key from the interview table. Each interview ID is present against each applicant. Applicant CNIC is taken as to verify that from where that applicant belongs to, and

data provided is correct. Qualification attribute is there to specify whether the qualification of the applicants meet the required qualification criteria for the vacancy that employee is applying for. Submission date attribute is there to check whether the applicant apply before the due date or not. Applicant's contact number and email id is available for the purpose to contact with the applicant.

6. Interview

Int_ID	Integer
App_ID	Integer
Selection_Round	Varchar
Status	Varchar
Date	Date

Interview table have the Interview ID which is a primary key of the table. Applicant ID is taken as the foreign key from the interview table. Each Applicant ID is present against each interview ID. The selection round has the details of applicants who fulfill the criteria for the specific vacancy and then they will be selected for the interview. The details of all the interviews can be accessed in this table. The status attribute has the final status regarding the applicants who apply for the vacancy available.

7. Project

Project_ID	Integer
Emp_ID	Integer
Title	Varchar
Start_date	Date
End_date	Date

Project table have the Project ID which is a primary key of the table. Employee ID is taken as the foreign key from the Employee table. Projects are assigned to every employee. Therefore, each project ID have Employee ID as foreign key to link these two tables. Title of the project, starting and ending date of the projects are also available in this table.

8. Project Status

Project_ID	Integer
Modules	Integer
Status	Integer
Start_date	Date
Completion_Date	Date
End_date	Date

Project status table have the Project ID which is a foreign key from the table Project. This table have the information about the status and other activities of the project like starting date, completion date and the end date.

5.2 RELATIONSHIP AND LABELS:

Employee

- The employee ***can have multiple or no*** project assigned.
- An employee can ***have a*** project status.
- Employee ***must have one*** attendance record associated to it.
- An employee ***must have one*** salary.
- Employee ***may publish multiple or no*** vacancies.

Salary

- Salary ***may belong to multiple or no*** employee.

Attendance

- ***One*** attendance is ***submitted by one*** employee.

Vacancies

- ***A*** vacancy must be ***generated by one*** employee.
- ***A*** vacancy ***is available for multiple or no*** applicant.
- For ***a*** vacancy, ***no or multiple*** interviews may schedule.

Applicant

- ***An*** applicant ***must*** apply ***only for one*** vacancy.
- ***An*** applicant ***may*** give ***none or multiple*** interviews.

Interview

- Interview can be scheduled for ***multiple or no*** applicant.
- Interview ***must belong to one*** vacancy.

Project

- Project ***must belong to only one*** employee.
- Project ***can have multiple or no*** project status.

Project Status

- Project status ***belongs to only one*** project.
- ***A*** project status ***belongs to only one*** employee.

5.3 VALIDATION:

As can be seen from the preceding description of entities and their connections, the model is explicitly gathering all of the information that is of relevance to the organization, so the completeness of the conceptual model can be tested against the collection of user needs.

5.4 DESCRIPTION:

Entity Relationship Diagram illustrates the structure of the Logistic section of the proposed system. It can be observed from the diagram that HR management system department of Maria B. is performing four main functions which are:

- Employee's information management
- Time and attendance management
- Project allocation to employees
- Vacancies and hirings

The System can Store detail of Employees, vacancies, interviews, applicants, and project information. The information about the person is kept in the employee table. Every time a new employee joins the corporation, a new employee ID is issued, and it serves as the primary key for the table Employee. When providing a project assignment to any employee, the employee's name property comes in handy. The employee designation attribute is used to determine which employee is engaged for which job or designation.

Employee attendance, admission time, and departure time are all recorded in the attendance table. The employee ID serves as a foreign key. This table's main key is the Attendance ID, which is assigned to each employee.

Every employee or individual working in the office has their compensation recorded in the salary table. Employee ID is used as a foreign key, and for each Employee ID, a Salary ID is created, which is the table's main key.

The Vacancies table keeps track of all open positions for which new employees can be hired. The table's main key is Vacancy ID.

The Applicant table has an Applicant ID that serves as the table's primary key. From the interview table, the foreign key is obtained as the interview ID. Each interview ID is associated with a certain candidate.

The Project ID is the main key of the table in the Project table. From the Employee table, the foreign key is obtained as Employee ID. Every employee has a project allocated to them. To link these two databases, each project ID has an Employee ID as a foreign key. This table also includes the project title, as well as the project's start and conclusion dates.

5. CONCLUSION:

Human Resource Management System is the main system of any company which should have all the details about the employees, their work and work status, new vacancies available in the company, record of the applicants applying for available vacancies. HR Management system

is an essential for any company to efficiently manage all the records at the center point. It keeps the record of employees and all the working done by those employees. All operations of every table have importance accordingly.

We can summarize this overall report by some key purposes which are as follows:

- Storing the data of employees.
- Storing all the detail about the projects and their current status.
- Calculating Salary of the employees by adding the allowances given to them and the basic pay.
- Storing all the record of applicants and also scheduling interviews for the applicants and selecting a applicant for the vacancy.

6. RECOMMENDATIONS:

Depending on the client requirements and the company's geographic locations, a centralized database server should be established at each of the offices. A web application interface should be included in the database, which connects all remote departments via a secure link. It is suggested that a security strategy be developed, limiting system access to only authorized individuals and taking into account the ease of information access and the automated system's availability. These methods are anticipated to improve the whole business process by considerably increasing reaction speed, information quality, and cost-effective transactions.

Word count: 2580