**EmployeePulse Documentation**

**1. Introduction**

EmployeePulse is a comprehensive Human Resource Management System (HRMS) designed to streamline HR operations such as employee recruitment, task management, performance evaluations, payroll, leave management, and more. This system provides a user-friendly interface with robust backend support to enhance HR functionalities within an organization.

**2. Features Overview**

EmployeePulse consists of the following key modules:

* Employee Management: Manage employee details, roles, departments, and reporting hierarchy.
* Task Management: Assign, track, and manage employee tasks efficiently.
* Performance Management: Conduct periodic performance evaluations and reviews.
* Leave Management: Automate leave tracking, requests, and approvals.
* User Authentication: Secure login, role-based access, and password recovery.

**3. Technology Stack**

**Frontend**

* HTML, CSS, JS Bootstrap (for UI design)

**Backend**

* Django (Python)

**Database**

* MySQL

**Deployment**

* Hosted on a cloud platform

**4. System Modules**

**4.1 Employee Management**

**Functionalities:**

* Add, update, and delete employee records.
* Assign roles (Admin, Manager, Team Leader, Employee).
* Associate employees with departments.
* Manage reporting hierarchy.

**Database Structure: Table: employees**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| employee\_id | int (PK) | Unique ID |
| first\_name | varchar(100) | Employee First Name |
| last\_name | varchar(100) | Employee Last Name |
| role\_id | int (FK) | Reference to roles table |
| dept\_id | int (FK) | Reference to department table |
| manager\_id | int (FK) | Reporting Manager |
| created\_at | datetime | Timestamp |

**4.2 Task Management**

**Functionalities:**

* Create and assign tasks to employees.
* Filter tasks by employee, status, or priority.
* Track task progress and completion status.

**Database Structure: Table: tasks**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| task\_id | int (PK) | Unique Task ID |
| title | varchar(100) | Task Title |
| description | varchar(300) | Task Details |
| priority | varchar(50) | High, Medium, Low |
| assigned\_to | int (FK) | Reference to employee |
| status | varchar(50) | Pending, In Progress, Completed |
| created\_at | datetime | Timestamp |

**4.3 Performance Management**

**Functionalities:**

* Conduct employee performance reviews.
* Assign ratings and comments.
* Generate performance reports.

**Database Structure: Table: performance\_reviews**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| review\_id | int (PK) | Unique Review ID |
| employee\_id | int (FK) | Employee Reviewed |
| reviewed\_by | int (FK) | Reviewer ID |
| rating | int | Performance Rating (1-10) |
| comments | varchar(300) | Additional Feedback |
| created\_at | datetime | Timestamp |

**4.4 Leave Management**

**Functionalities:**

* Apply for leave and track approval status.
* Manage leave quota for employees.
* Approve or reject leave requests.

**Database Structure: Table: leaves**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| **leave\_id** | **int (PK)** | **Unique Leave ID** |
| **employee\_id** | **int (FK)** | **Employee applying for leave** |
| **leave\_type** | **varchar(50)** | **Sick Leave, Casual Leave, etc.** |
| **start\_date** | **date** | **Leave Start Date** |
| **end\_date** | **date** | **Leave End Date** |
| **status** | **varchar(50)** | **Pending, Approved, Rejected** |
| **approved\_by** | **int (FK)** | **Manager/Admin ID** |
| **created\_at** | **datetime** | **Timestamp** |

**4.5 User Authentication**

**Functionalities:**

* Secure login with username and password.
* Role-based access control.
* Password reset functionality.

**Database Structure: Table: users**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| **user\_id** | **int (PK)** | **Unique User ID** |
| **username** | **varchar(100)** | **Unique Username** |
| **password** | **varchar(100)** | **Encrypted Password** |
| **role\_id** | **int (FK)** | **Role Assigned** |
| **created\_at** | **datetime** | **Timestamp** |

**5. Deployment**

* The application is deployed on a cloud-based platform with automatic updates.
* The GitHub repository is maintained with proper version control.
* The application runs 24/7 on the live server.

**6. Conclusion**

EmployeePulse is a full-fledged HRM solution designed to enhance organizational efficiency by automating HR processes. With its modular design and scalability, it provides a robust and user-friendly experience for managing employees, tasks, and performance seamlessly.

For further details, refer to the GitHub repository and deployment link.