**APIs to Create for Admin Role in the Backend**

**1. Admin Management APIs (5 APIs)**

1. **Register Admin** (POST /api/v1/admin/register)
2. **Admin Login** (POST /api/v1/admin/login)
3. **Get Admin Profile** (GET /api/v1/admin/profile)
4. **Update Admin Profile** (PUT /api/v1/admin/profile)
5. **Delete Admin Account** (DELETE /api/v1/admin/profile)

**2. HR Management APIs (6 APIs)**

1. **List HR Accounts** (GET /api/v1/admin/hr)
   * Fetch all HR profiles.
2. **Create HR Account** (POST /api/v1/admin/hr)
   * Add new HR users.
3. **Get HR Profile** (GET /api/v1/admin/hr/:hr\_id)
   * View specific HR details.
4. **Update HR Profile** (PUT /api/v1/admin/hr/:hr\_id)
   * Modify HR information.
5. **Delete HR Account** (DELETE /api/v1/admin/hr/:hr\_id)
   * Remove an HR account.
6. **Reset HR Password** (POST /api/v1/admin/hr/reset-password)
   * Reset password for HR.

**3. Employee Management APIs (7 APIs)**

1. **List Employees** (GET /api/v1/admin/employees)
   * Fetch all employees.
2. **Create Employee Account** (POST /api/v1/admin/employees)
   * Add new employees.
3. **Get Employee Profile** (GET /api/v1/admin/employees/:employee\_id)
   * View specific employee details.
4. **Update Employee Profile** (PUT /api/v1/admin/employees/:employee\_id)
   * Modify employee information.
5. **Delete Employee Account** (DELETE /api/v1/admin/employees/:employee\_id)
   * Remove an employee account.
6. **Assign Roles to Employees** (POST /api/v1/admin/employees/:employee\_id/roles)
   * Assign or update roles.
7. **Reset Employee Password** (POST /api/v1/admin/employees/reset-password)
   * Reset password for employees.

**4. Payroll Management APIs (4 APIs)**

1. **Generate Payroll** (POST /api/v1/admin/payroll/generate)
   * Generate payroll for all employees.
2. **View Payroll** (GET /api/v1/admin/payroll/:employee\_id)
   * View payroll for a specific employee.
3. **Update Payroll** (PUT /api/v1/admin/payroll/:employee\_id)
   * Modify payroll details.
4. **Delete Payroll** (DELETE /api/v1/admin/payroll/:employee\_id)
   * Remove payroll record.

**5. Leave Management APIs (5 APIs)**

1. **View Leave Requests** (GET /api/v1/admin/leaves)
   * Fetch all leave requests.
2. **Approve Leave** (POST /api/v1/admin/leaves/:leave\_id/approve)
   * Approve leave request.
3. **Reject Leave** (POST /api/v1/admin/leaves/:leave\_id/reject)
   * Reject leave request.
4. **Create Leave Policy** (POST /api/v1/admin/leaves/policy)
   * Define or update leave policies.
5. **Delete Leave Request** (DELETE /api/v1/admin/leaves/:leave\_id)
   * Remove a leave request.

**6. Report and Analytics APIs (3 APIs)**

1. **Generate Reports** (GET /api/v1/admin/reports)
   * Generate HR, payroll, and leave reports.
2. **View Audit Logs** (GET /api/v1/admin/logs)
   * Fetch logs of admin actions.
3. **Export Data** (GET /api/v1/admin/reports/export)
   * Export reports as CSV or PDF.
4. **Notification Management APIs** (2 APIs)
5. **Send Notification (POST /api/v1/admin/notifications/send)**
6. **List Notifications (GET /api/v1/admin/notifications)**

### **Complete Database Schema for IgniteHR (Admin, HR, Employee, Payroll, Leave, Notifications, Roles)**

Here’s a detailed **MongoDB schema** design for all collections required for your HR management syste

## ****1.Database Schema for Admin Collection (****admins****)****

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| admin\_id | ObjectId (auto-generated) | Unique identifier for each admin. |
| email | String | Unique email address (required). |
| password | String (Hashed with BCrypt) | Hashed password (required). |
| full\_name | String | Full name of the admin (required). |
| role | String (default: admin) | Role of the user (always admin). |
| created\_at | Date | Timestamp for creation date. |
| updated\_at | Date | Timestamp for last update. |

## ****2.**** hrs ****Collection**** (For HR Role)

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| \_id | ObjectId (auto-generated) | Unique ID for HR. |
| email | String (unique, required) | HR email address. |
| password | String (hashed, required) | Hashed password. |
| full\_name | String | HR's full name. |
| department | String | HR department. |
| role | String (default: hr) | Role of the user. |
| created\_at | Date | Account creation timestamp. |
| updated\_at | Date | Last update timestamp. |

**Indexes:**

* Unique index on email.

## ****3.**** employees ****Collection**** (For Employee Role)

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| \_id | ObjectId (auto-generated) | Unique ID for employee. |
| employee\_id | String (unique, required) | Auto-generated ID. |
| email | String (unique, required) | Employee email address. |
| password | String (hashed, required) | Hashed password. |
| full\_name | String | Employee's full name. |
| department | String | Employee department. |
| designation | String | Job title or designation. |
| salary | Number | Monthly salary. |
| role | String (default: employee) | Role of the user. |
| leave\_balance | Number | Remaining leave days. |
| created\_at | Date | Account creation timestamp. |
| updated\_at | Date | Last update timestamp. |

**Indexes:**

* Unique index on email and employee\_id.

## ****4.**** payrolls ****Collection**** (For Payroll Management)

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| \_id | ObjectId (auto-generated) | Unique ID for payroll record. |
| employee\_id | String (required) | Reference to employee's ID. |
| basic\_salary | Number | Basic salary amount. |
| bonuses | Number | Any bonuses. |
| deductions | Number | Deductions (leaves, taxes). |
| net\_salary | Number | Calculated net salary. |
| status | String (default: pending) | Payroll status (pending, paid). |
| generated\_at | Date | Payroll generation date. |

**Indexes:**

* Index on employee\_id.

## ****5.**** leaves ****Collection**** (For Leave Management)

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| \_id | ObjectId (auto-generated) | Unique ID for leave request. |
| employee\_id | String (required) | Reference to employee's ID. |
| leave\_type | String | (sick, casual, earned). |
| start\_date | Date | Leave start date. |
| end\_date | Date | Leave end date. |
| reason | String | Reason for leave. |
| status | String (default: pending) | Leave status (pending, approved, rejected). |
| created\_at | Date | Request creation date. |

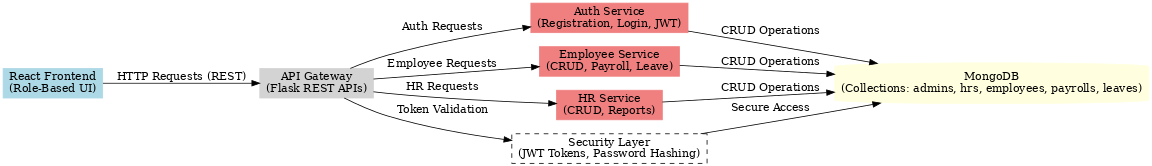
**Indexes:**

* Index on employee\_id and status.

## ****6.**** roles ****Collection**** (For Role Management)

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| \_id | ObjectId (auto-generated) | Unique ID for role. |
| role\_name | String (unique, required) | Role name (admin, hr, employee). |
| permissions | Array of Strings | List of permissions (create, read, update). |

**Detailed architecture diagram**

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