

# API Design Document – Employee Management System

Base URL: `/api`

## 1. Get All Employees

- **Method:** GET
- **Endpoint:** `/employees`
- **Description:** Fetches all employee records.
- **Auth Required:** No
- **Query Params:** None
- **Response:**

```
[  
  {  
    "id": 1,  
    "first_name": "Riya",  
    "last_name": "Kulkarni",  
    ...  
  }  
]
```

## Status Codes:

- `200 OK`
- `500 Internal Server Error`

## 2. Get Employee by ID

- **Method:** GET
- **Endpoint:** /employees/:id
- **Description:** Fetches employee details by ID.
- **Path Param:** id (Integer)
- **Auth Required:** No

### Response:

```
{  
  "id": 1,  
  "first_name": "John",  
  ...  
}
```

- **Status Codes:**
  - 200 OK
  - 404 Not Found
  - 500 Internal Server Error

### 3. Create a New Employee

- **Method:** `POST`
- **Endpoint:** `/employees`
- **Description:** Adds a new employee.
- **Auth Required:** No

**Request Body** (*required fields in bold*):

```
{  
  "first_name": "John",  
  "last_name": "Doe",  
  "email": "john@example.com",  
  "phone": "1234567890",  
  "department_id": 2,  
  "bio": "Developer",  
  "profile_pic_url": "http://...",  
  "join_date": "2023-12-01",  
  "address": "123 Street",  
  "date_of_birth": "1990-01-01",  
  "gender": "Male",
```

```
"employment_type": "Full-time",  
"salary": 50000  
}
```

- **Response:** Created employee object.
- **Status Codes:**
  - 201 Created
  - 400 Bad Request (Missing fields)
  - 500 Internal Server Error

#### 4. Update Employee (Partial Fields)

- **Method:** PUT
- **Endpoint:** /employees/:id
- **Description:** Updates selected fields of an employee (email, phone, bio, profile\_pic\_url).
- **Path Param:** id
- **Auth Required:** No

**Request Body** (*any of the below*):

```
{  
  "email": "new@example.com",  
  "bio": "Updated bio"  
}
```

- **Response:** Updated employee object.
- **Status Codes:**
  - 200 OK
  - 400 Bad Request (No fields provided)
  - 404 Not Found
  - 500 Internal Server Error

## 5. Delete Employee

- **Method:** DELETE
- **Endpoint:** /employees/:id
- **Description:** Deletes an employee by ID.
- **Path Param:** id

- **Auth Required:** No

**Response:**

```
{ "message": "Employee deleted" }
```

- **Status Codes:**

- 200 OK
- 404 Not Found
- 500 Internal Server Error

## 6. Change Employee Password

- **Method:** PUT
- **Endpoint:** /employees/:id/password
- **Description:** Changes password for user by ID.
- **Path Param:** id

**Request Body:**

```
{  
  
  "currentPassword": "old123",  
  
  "newPassword": "new456"  
}
```

**Response:**

```
{ "message": "Password updated successfully" }
```

- **Status Codes:**

- 200 OK
- 401 Unauthorized (Wrong current password)
- 404 Not Found
- 500 Internal Server Error

## 7. Total Employees Stats

- **Method:** GET
- **Endpoint:** /stats/employees
- **Description:** Returns the total number of employees.
- **Auth Required:** No

**Response:**

```
{ "totalEmployees": 25 }
```

- **Status Codes:**

- 200 OK
- 500 Internal Server Error

## 8. Employees per Department Stats

- **Method:** `GET`
- **Endpoint:** `/stats/employees-by-department`
- **Description:** Returns count of employees in each department.
- **Auth Required:** No

### Response:

```
[  
  { "id": 1, "name": "Engineering", "employee_cnt":  
    10 },  
  { "id": 2, "name": "HR", "employee_cnt": 5 }  
]
```

- **Status Codes:**
  - `200 OK`
  - `500 Internal Server Error`