

# Project Description: Employee Management System with Authentication, RBAC, and Messaging

## Project Objective

Develop a robust backend application using **ASP.NET MVC** to implement an **Employee Management System**. The project will include core backend functionalities such as user authentication, role-based access control (RBAC), email confirmation, password recovery, and real-time messaging between employees. The application must be deployed and a shareable link provided to demonstrate its functionality.

## Key Features and Requirements

### 1. User Registration and Authentication

- Implement user registration with fields for **email**, **password**, and **role selection** (e.g., Admin, Manager, Employee).
- Send a **confirmation email** to new users with a verification link to activate their accounts.
- Enable user login with email and password.
- Implement **"Forgot Password"** functionality:
  - Users can request a password reset link via email.
  - Provide a secure mechanism for resetting the password.

### 2. Role-Based Access Control (RBAC)

- Assign roles to users during registration or by an admin.
- **Admin Role:**
  - Full control over user and employee management.
- **Manager Role:**
  - View employees and send/receive messages.
- **Employee Role:**
  - Limited access, including viewing their own details and messaging colleagues.

### 3. Employee Management

- CRUD (Create, Read, Update, Delete) operations for employee records.
- Include employee-specific fields like:
  - Name
  - Department
  - Position
  - Salary

### 4. Messaging System

- Allow employees to send real-time messages to one another within the application.
- Provide a simple interface for selecting a recipient and viewing conversation history.
- Notifications for new messages.

### 5. Deployment

- Deploy the application to a cloud platform (e.g., Azure or AWS).

- Provide a shareable link to the deployed application for review and testing.

### **Expected Deliverables**

- A fully functional **ASP.NET MVC application** with all required features.
- **End-to-end authentication** workflow, including registration, email confirmation, login, and password reset.
- **Role-based access control** for secured operations and data.
- A **messaging system** enabling real-time communication between users.
- A **deployed application link** to test all features.