amdocs

Employee Performance Management System

Enhancing Employee Management & Performance Evaluation

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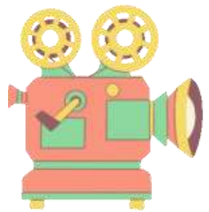
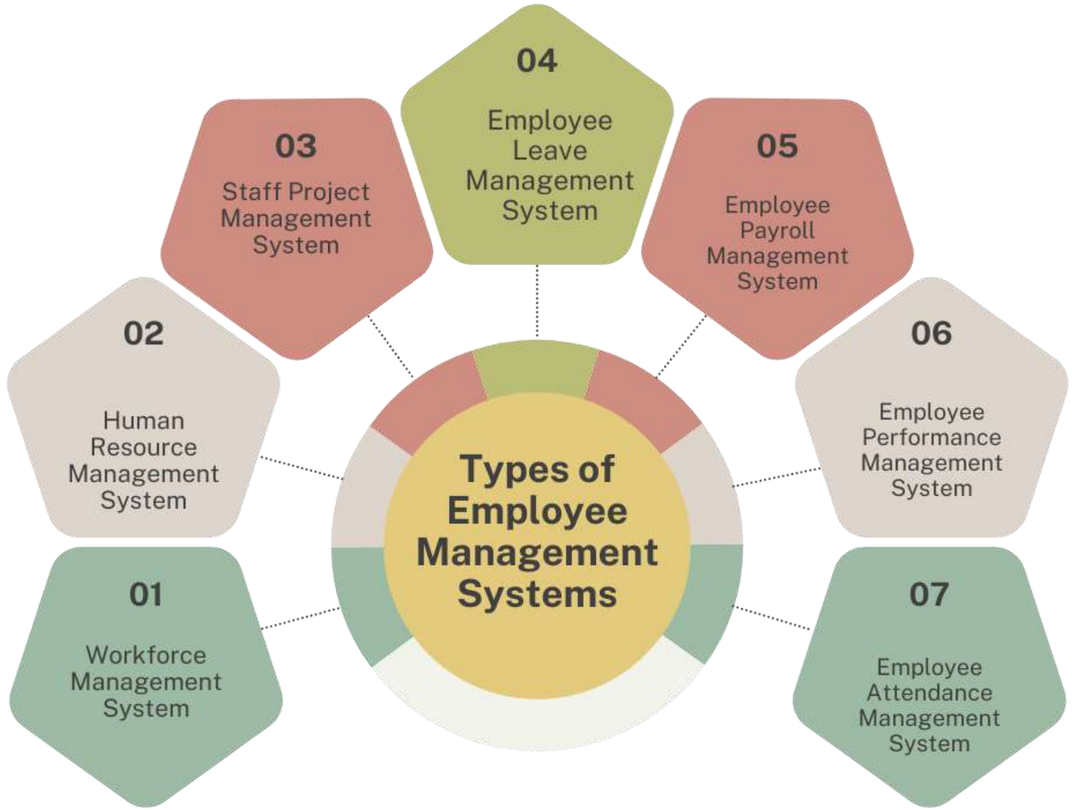


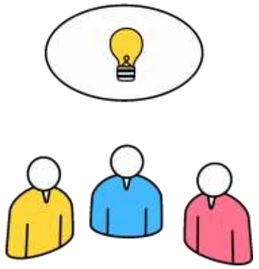
Agenda

1. Introduction
2. Objectives
3. Software Design & Database Structure
4. Key Functionalities
5. Code

To start, let's briefly cover Employee Management Systems (EMS) and their types. While EMS includes various systems for managing general employee information, today, we're focusing on Employee Performance Management Systems (EPMS), which emphasizes tracking and evaluating employee performance to support HR decisions.



Introduction



What is EPMS ?

A system designed to manage employee information, performance, evaluations, and HR processes.

Includes functionalities for employee registration, management, performance, review, and promotion.

EPMS Objectives

- Simplify employee management processes.
- Facilitate performance evaluations and structured feedback.
- Assist HR in decision-making based on performance data and reviews.

System Architecture

Database layer

- Stores user, employee, and performance review information.
- Connects to MySQL for data persistence.

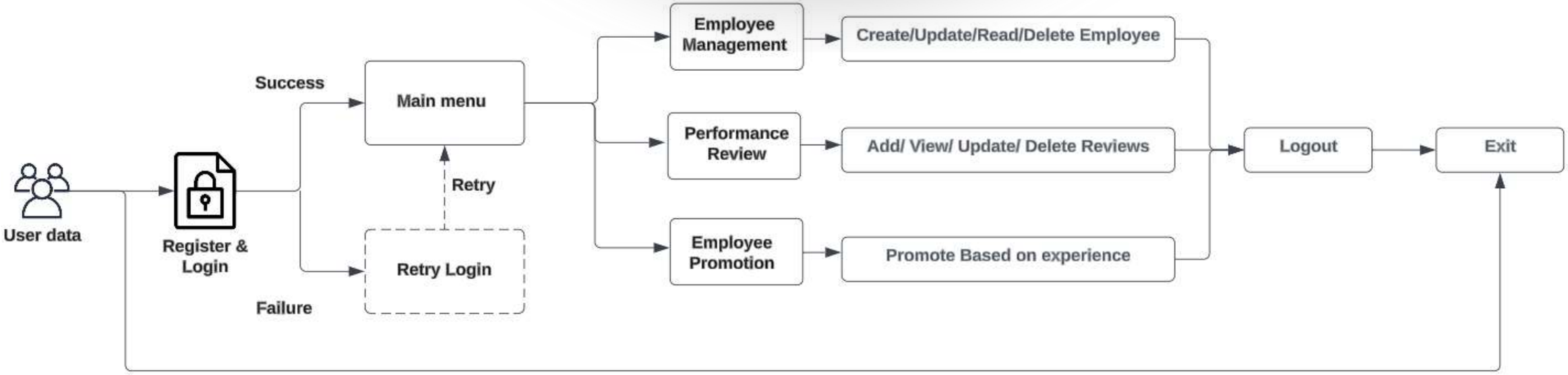
Business Logic layer

- Functions perform CRUD operations for users, employees, and performance reviews.
- Includes functions for user authentication, registration, and promotions.

Presentation layer

- Console-based user interaction handles inputs and displays outputs.

Software Design



Database Schema

Users Table

Column Name	Data Type	Constraints	Description
id	INT	PRIMARY KEY, AUTO_INCREMENT	Unique identifier for each user
email	VARCHAR(100)	UNIQUE, NOT NULL	Email address used for login
password	VARCHAR(255)	NOT NULL	Hashed password for authentication
role	ENUM('manager', 'team_lead')	NOT NULL	Role of the user (manager/team_lead)
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Timestamp of user creation

Database Schema

Employees Table

Column Name	Data Type	Constraints	Description
emp_id	INT	PRIMARY KEY, AUTO_INCREMENT	Unique identifier for each employee
user_id	INT	FOREIGN KEY (users.id)	ID of the responsible user
name	VARCHAR(100)	NOT NULL	Full name of the employee
contact_no	VARCHAR(20)		Employee's contact number
address	TEXT		Residential address
dob	DATE		Date of birth
hire_date	DATE		Date hired
position	VARCHAR(100)		Job title/position
salary	DECIMAL(10, 2)		Salary amount
experience	INT		Years of experience

Database Schema

Performance Reviews Table

Column Name	Data Type	Constraints	Description
review_id	INT	PRIMARY KEY, AUTO_INCREMENT	Unique identifier for each review
employee_id	INT	FOREIGN KEY (employees.emp_id)	ID of the reviewed employee
review_date	DATE		Date of the performance review
rating	FLOAT	CHECK (rating >= 1 AND rating <= 5)	Rating given (1 to 5 scale)
feedback	TEXT		Comments on performance

Key Functional Components

Authentication

- Purpose: Securely hash and verify passwords using bcrypt.
- Security: Ensures password confidentiality and integrity through hashing.

Registration

- Takes user input for registration fields.
- Hashes the password.
- Inserts records into users and employees tables.

User login

- Purpose: Authenticates users based on email and password.
- Process:
- Checks input against hashed password in users table.
- Returns user ID on success.

Employee management (CRUD)

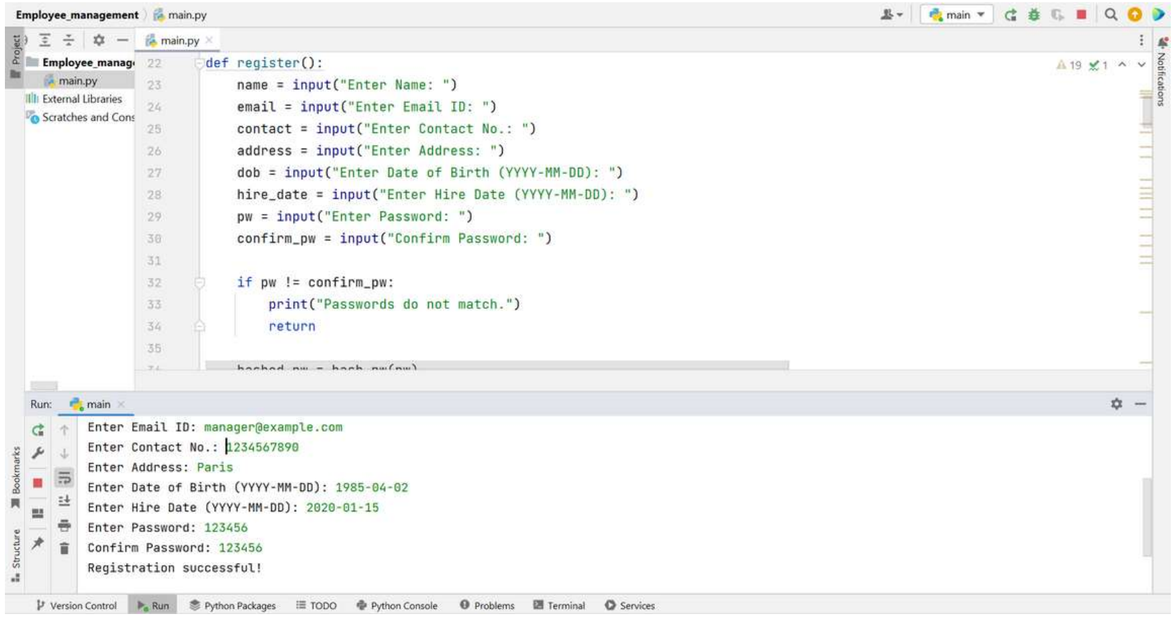
- Create: create_employee(user_id)
- Read: list_employees() and read_employee()
- Update: update_employee()
- Delete: delete_employee()

Performance management (CRUD)

- Add Review: add_review()
- View Reviews: view_reviews()
- Update Review: update_review()
- Delete Review: delete_review()

Promote employee

- Function: promote_employee()
- Purpose: Promotes an employee to a new position based on experience.
- Process:
- Lists available positions.
- Updates position and salary based on user selection.

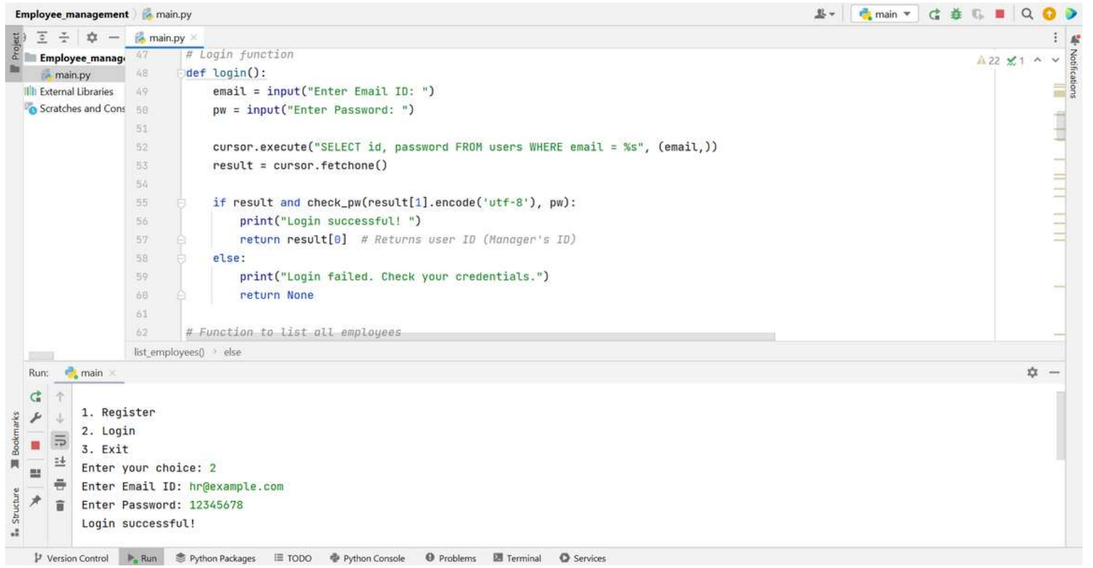


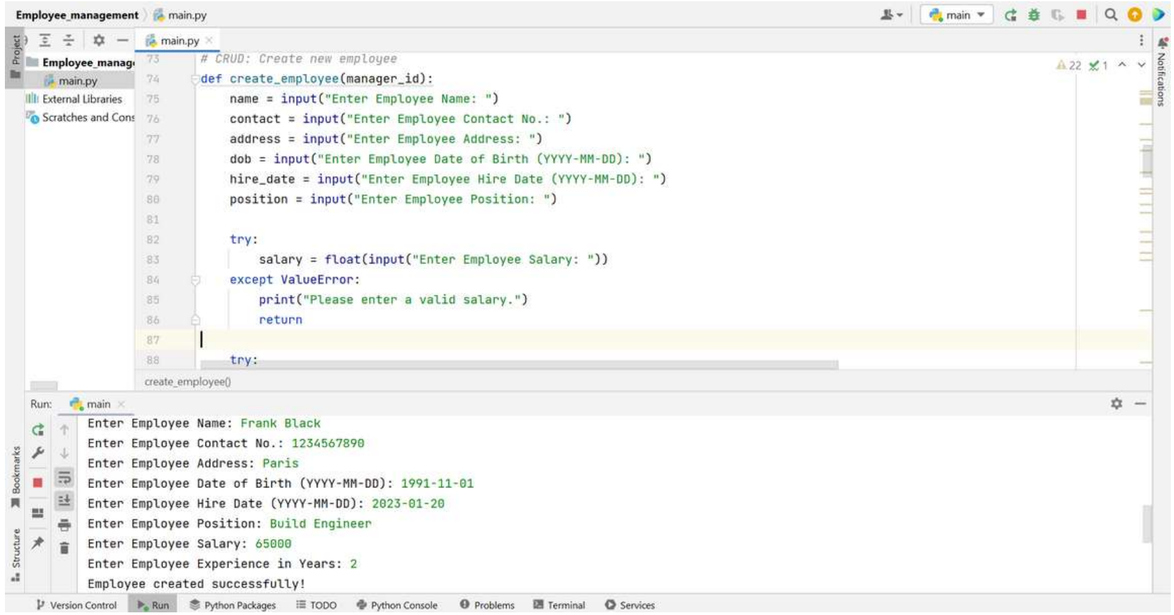
Registration

- Registers employees with secure password hashing using bcrypt.
- Inserts user data into users table.

Login

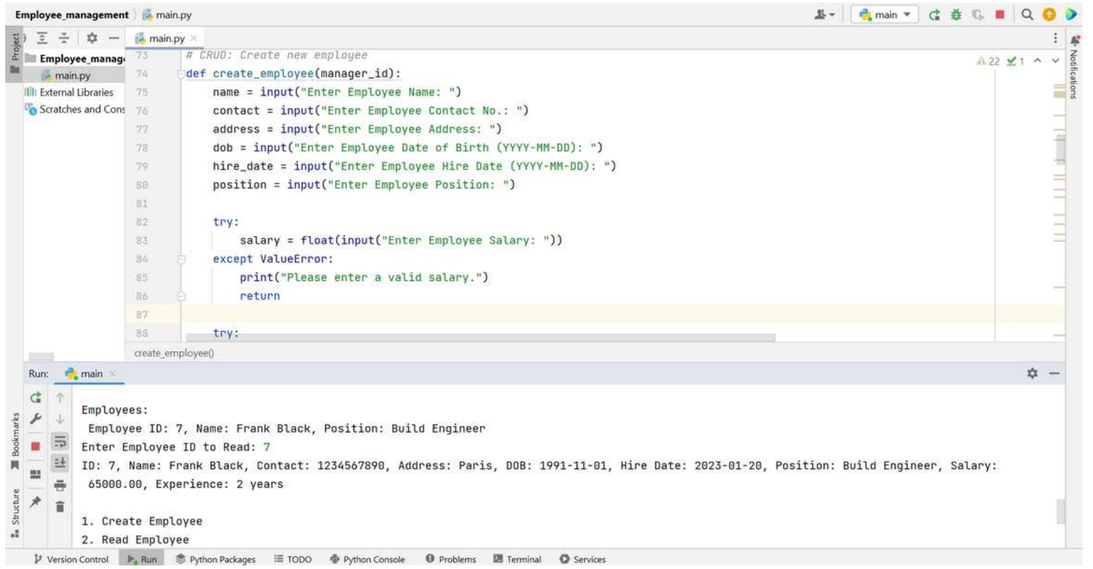
- Logins employees and they can view the main menu
- Main menu inserts data in other 2 tables

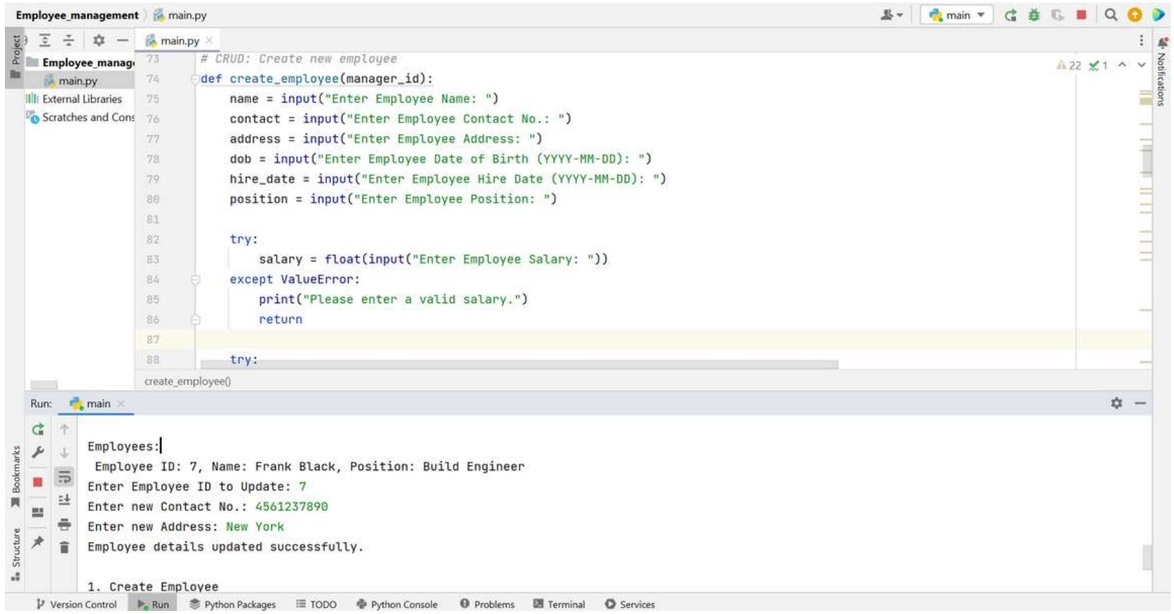




Add Employee

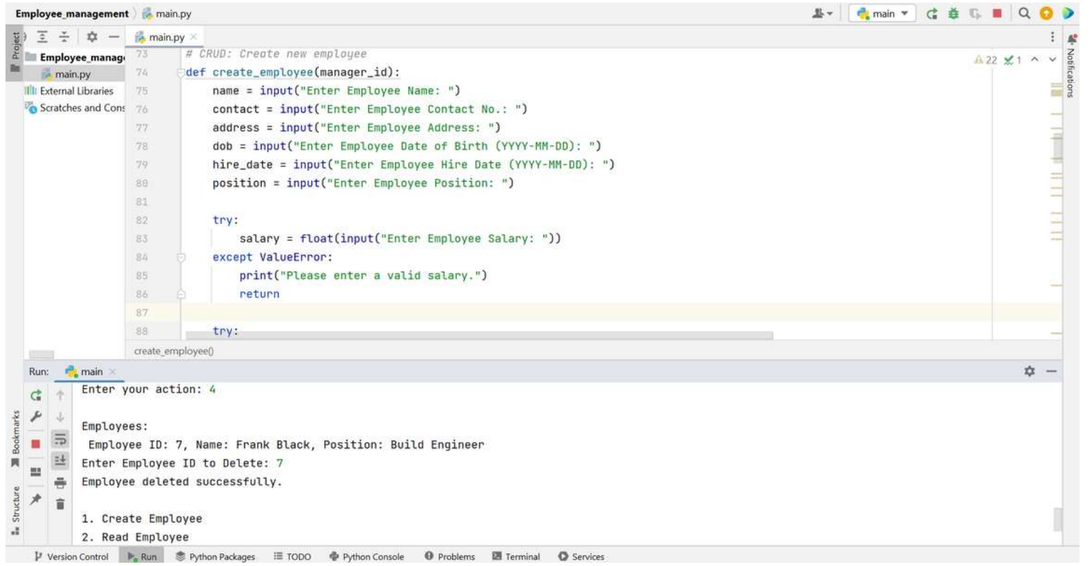
Read / View

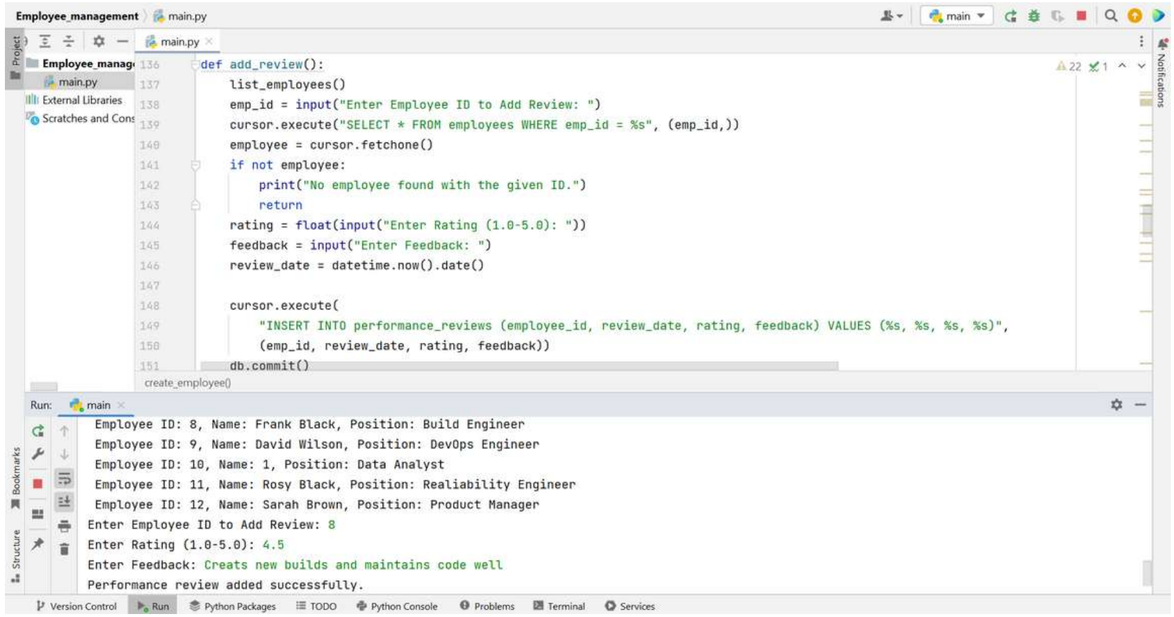




Update details

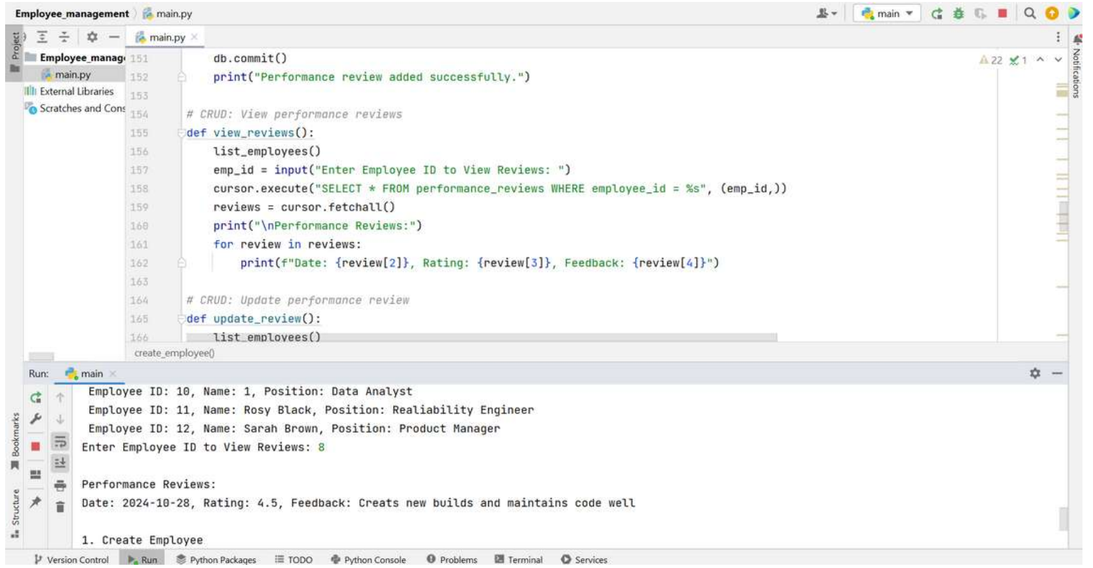
Delete employee

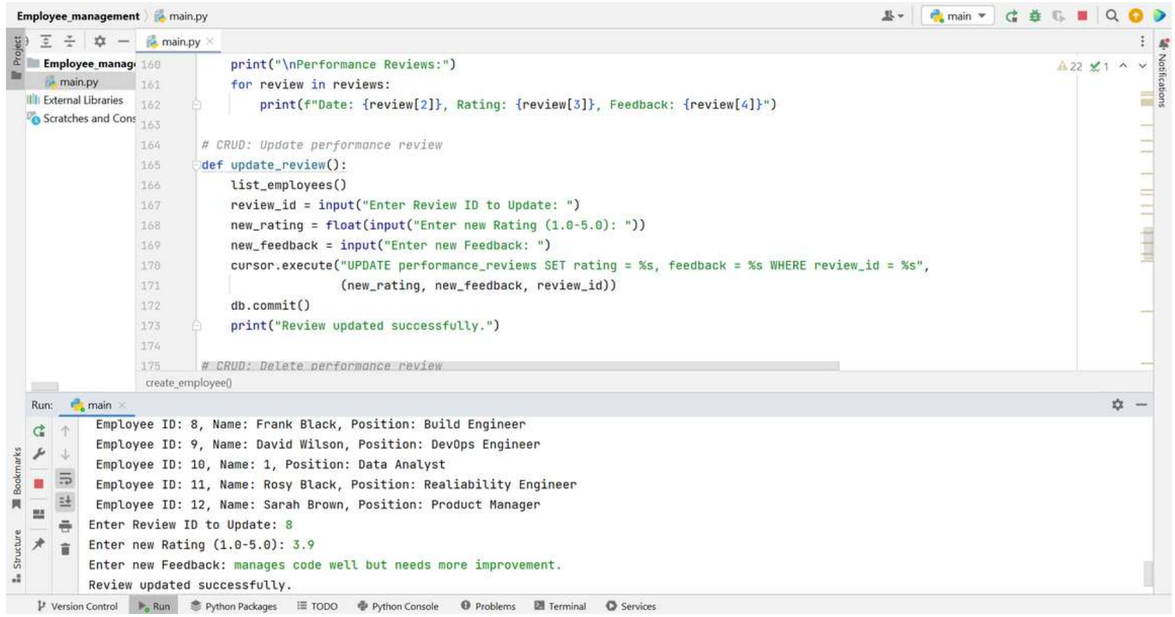




Add Performance review

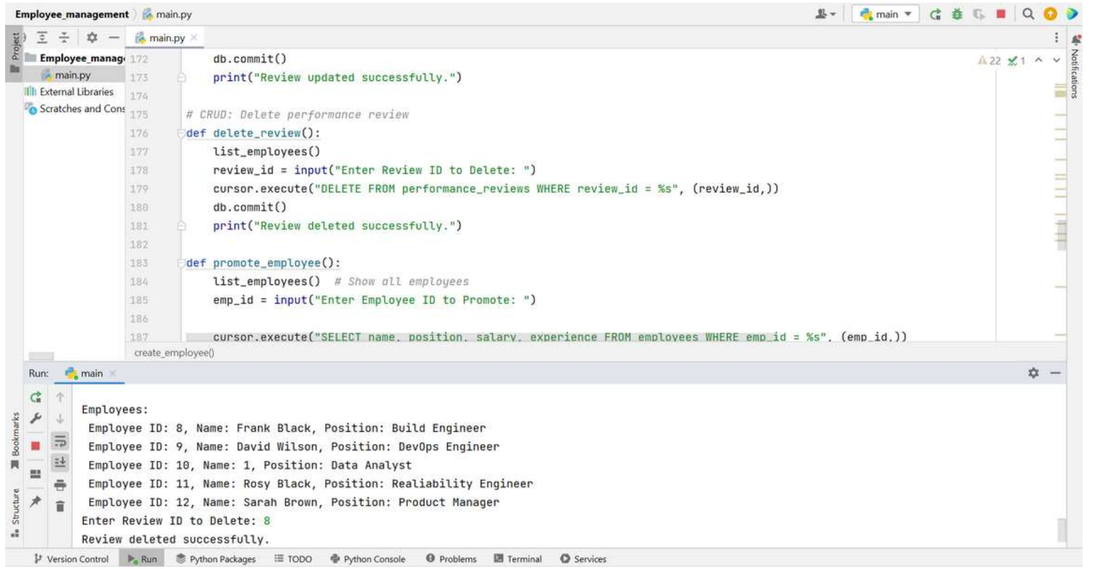
View Performance Review

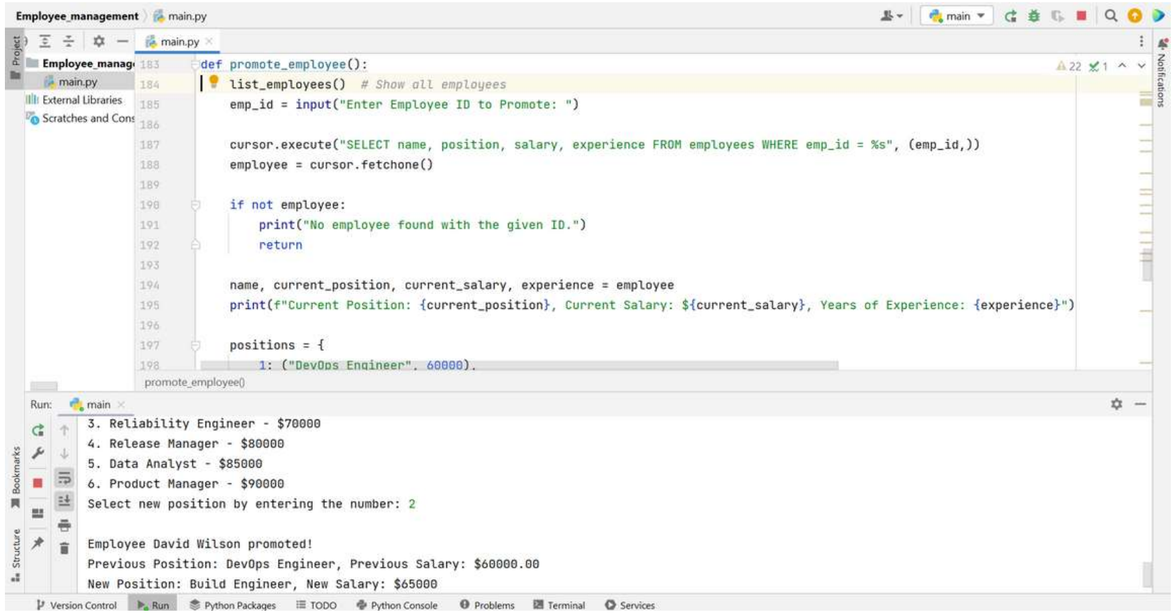




Update Performance review

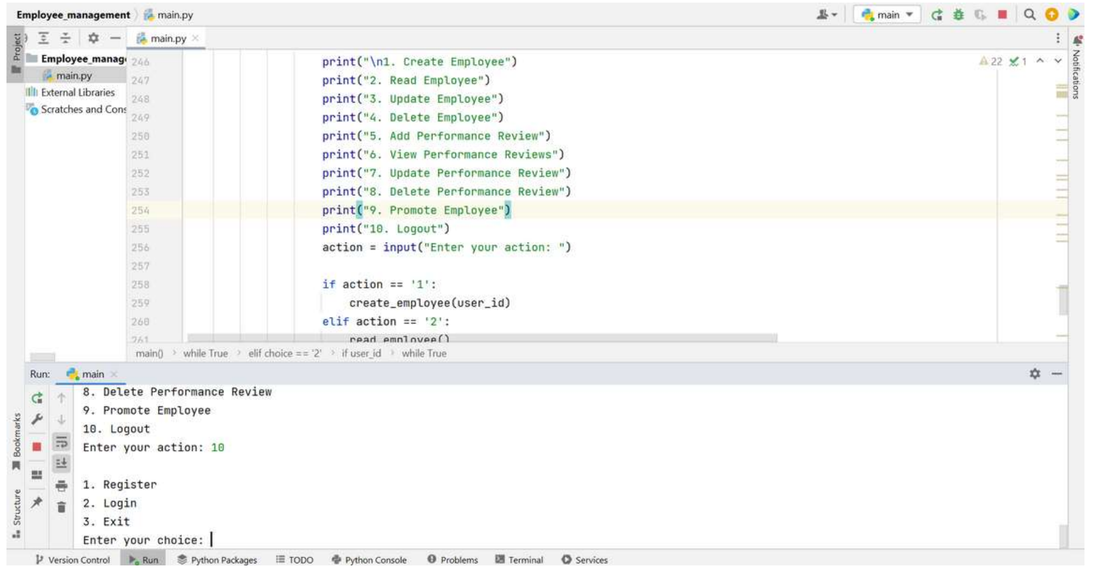
Delete Performance Review





Promote Employee

Logout



Conclusion

The Employee Performance Management System (EPMS) is designed to streamline employee and performance management in a secure and efficient manner. The system allows for CRUD operations on employees and reviews, secure password management, and promotion handling, while following a layered architecture. Future enhancements will focus on improving usability, security, and scalability.

Thank you