 **Employee Management System**



**By: Mentor:**   
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* **Purpose of this Project**Provides a **centralized platform** for managing and organizing employee information.
* **Streamlines HR and administrative tasks**, reducing manual effort and improving data accuracy.
* Ensures **secure access** with user registration and login features, allowing only authorized users to access sensitive data.
* Supports **comprehensive employee record management**, including adding, updating, deleting, and viewing records in one place for quick data retrieval.
* Minimizes dependency on **paper records** or manual databases, enhancing record-keeping efficiency.
* Offers **salary analysis tools** that break down salary components (base salary, allowances, provident fund, tax deductions).  
  Includes additional features such as:  
  1. **Tenure calculation** for employees.  
  2. **Department summaries** for team and resource planning.  
  3. **Salary filtering** to support budgeting and financial planning.
* Enhances **data security** and supports **informed decision-making** with easily accessible insights.
* Improves **overall operational efficiency** in employee management, making it an essential tool for organizations.



**System Requirements**

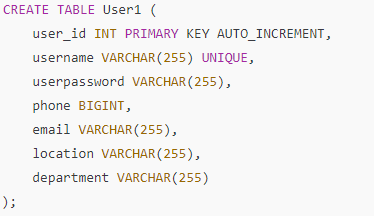
* **Hardware**: 8GB RAM, i5 Processor
* **Software**:
  + Python (Version 3.13)
  + MySQL Database
  + Required Libraries: mysql.connector, getpass, datetime, mysql.connector.python, mysqlclient

**Database Setup**

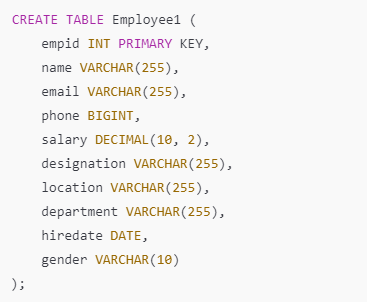
database = mysql.connector.connect(  
 host="localhost",  
 user="root",  
 passwd="root",  
 database="emp",  
 auth\_plugin='mysql\_native\_password'  
)



**Database Design**

**For user table**

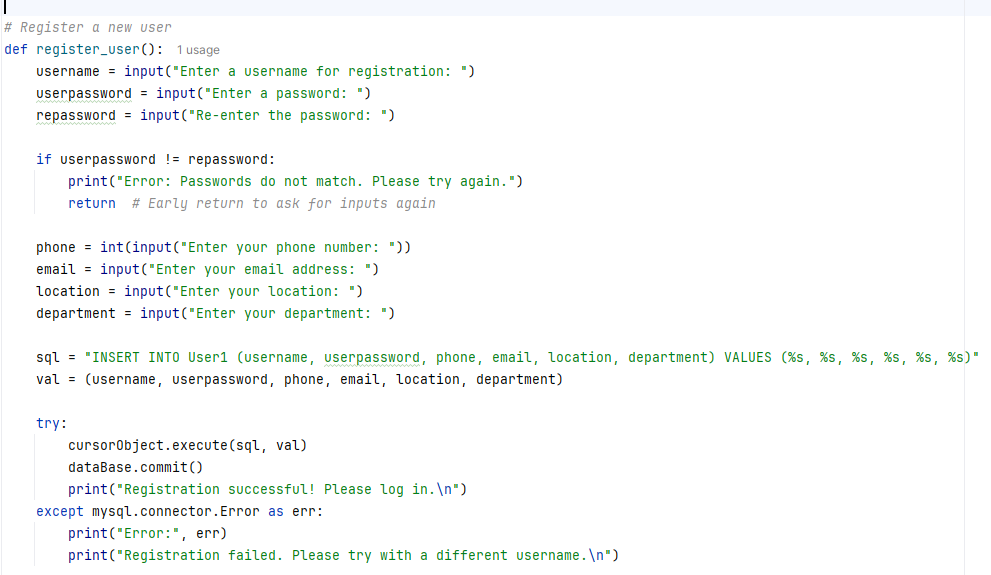
**For Employee Table**



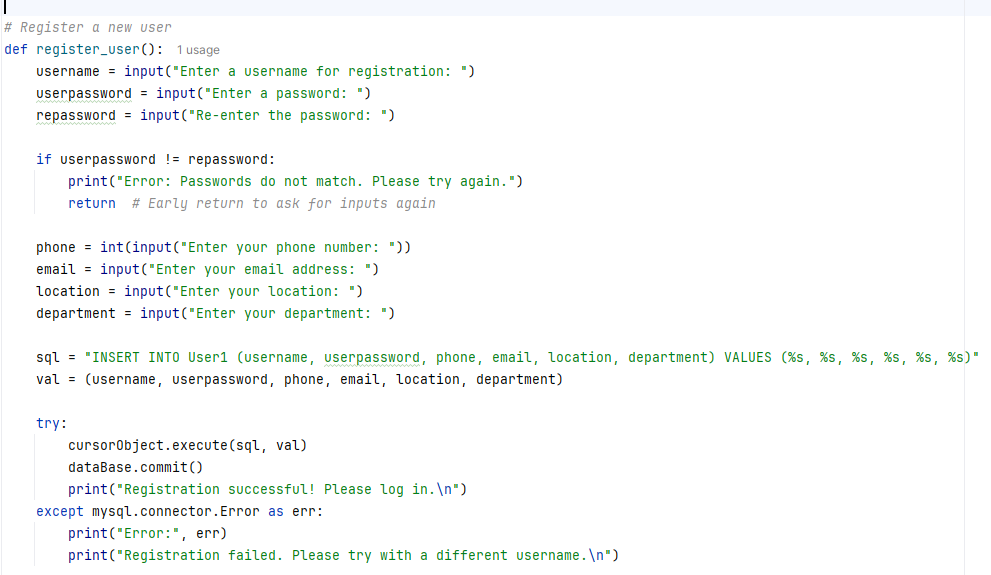


**Code Structure**

**Main Modules:**

**1.** register\_user()  
  
****

Output

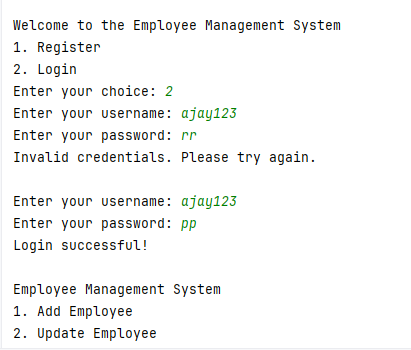
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**2.** login\_user(): Authenticates existing users.

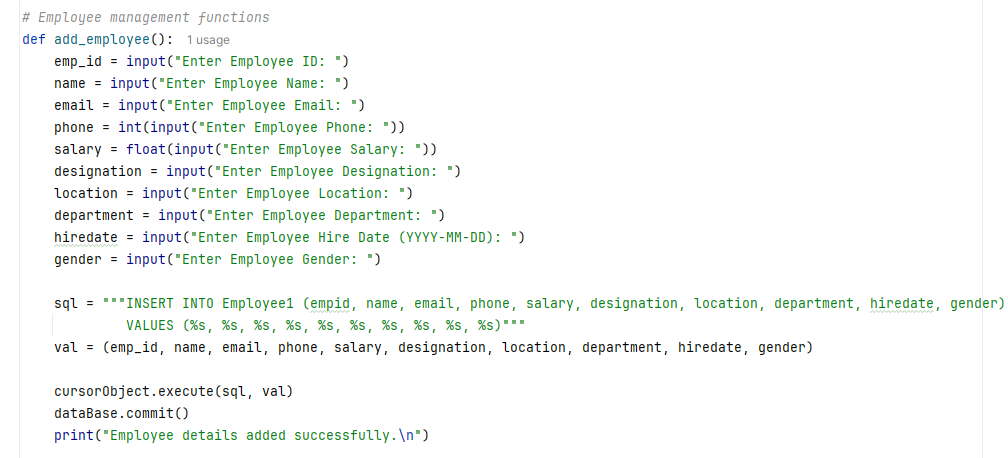


Output





**3**. add\_employee()

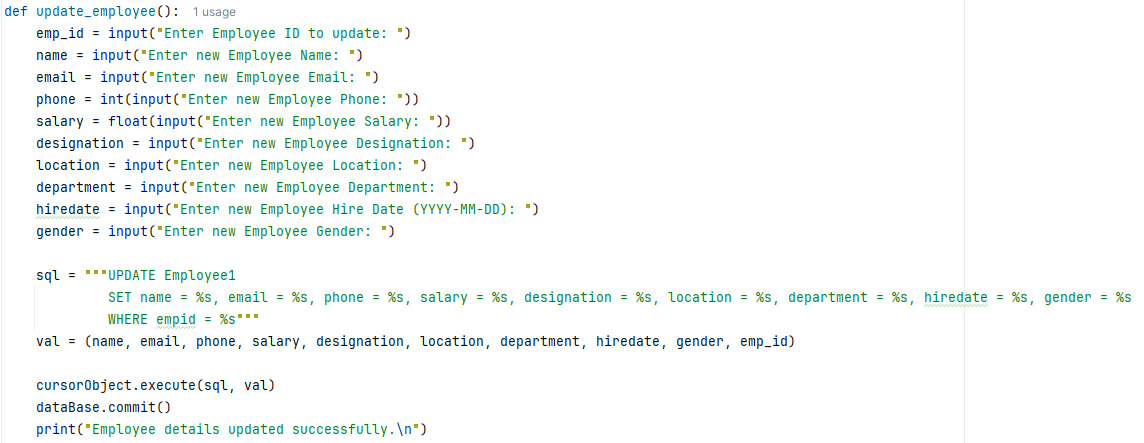


Output

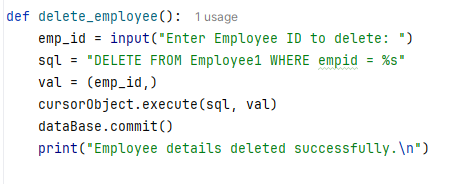




**4.** update\_employee()

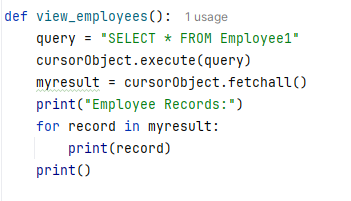
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**5. delete\_employee()**



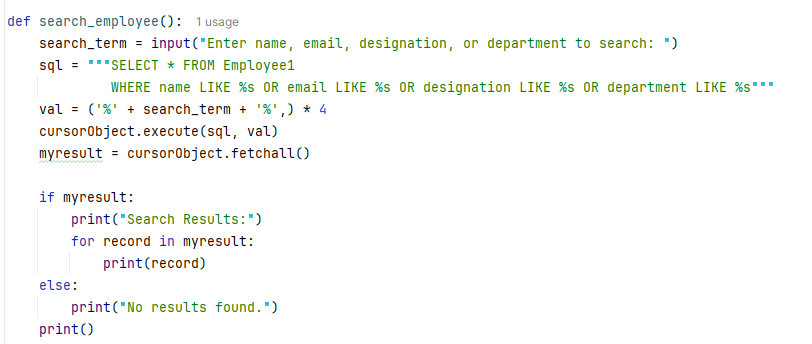


**6. view\_employees()**



**Supporting Functions**

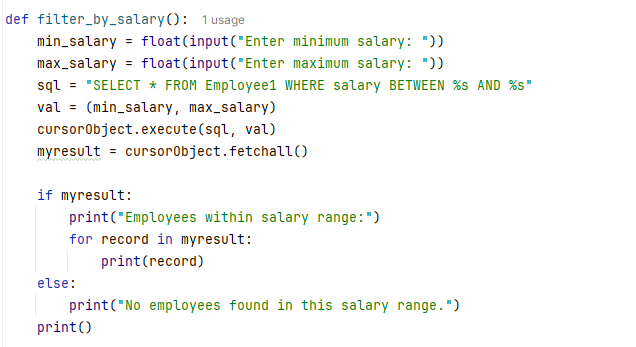
**1.** search\_employee()



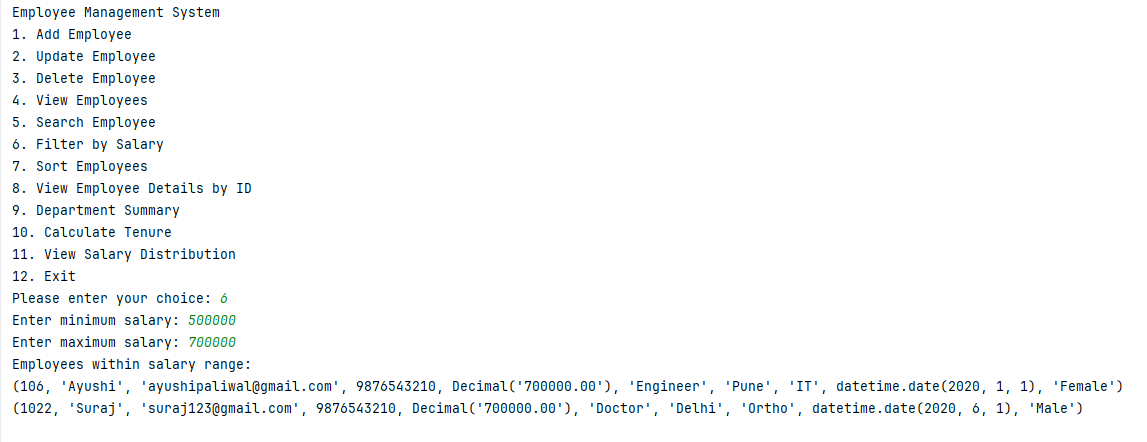
Output



2. filter\_by\_salary()

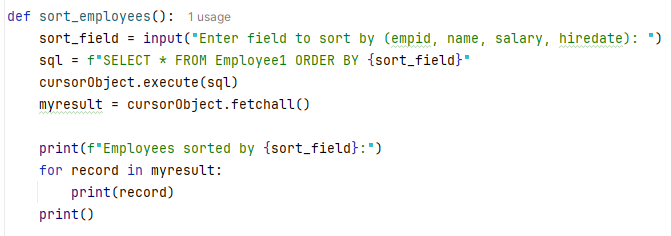


Output

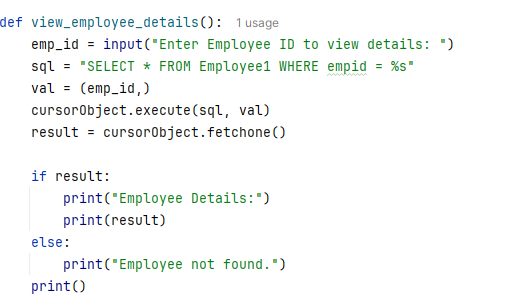




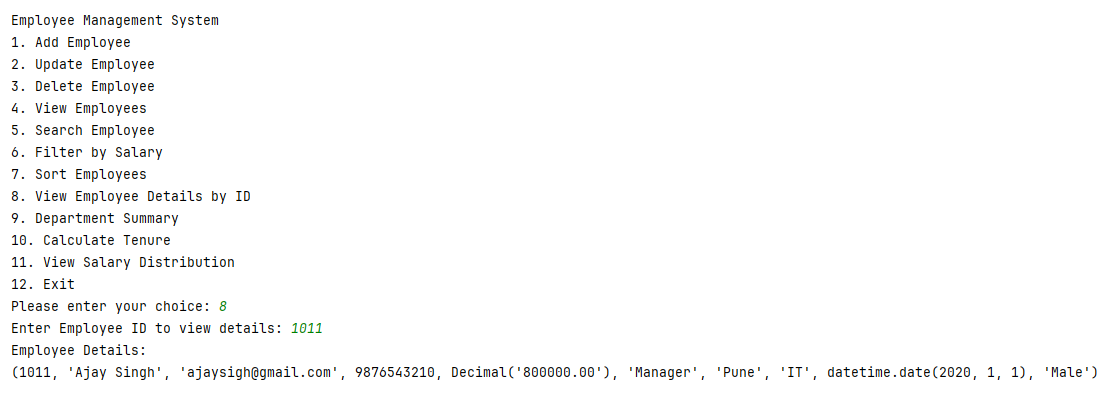
3. sort\_employees()



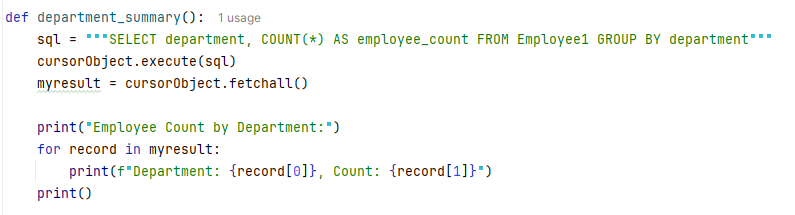
4. view\_employee\_details()



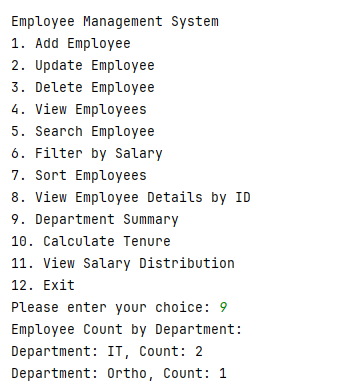
Output



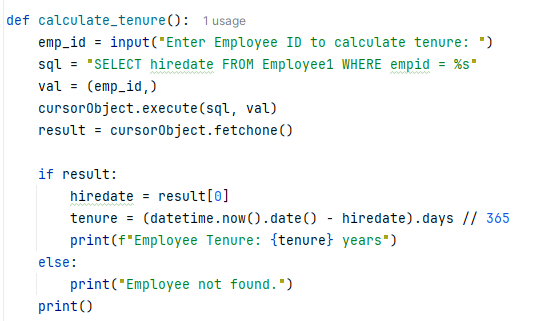
5. department\_summary()



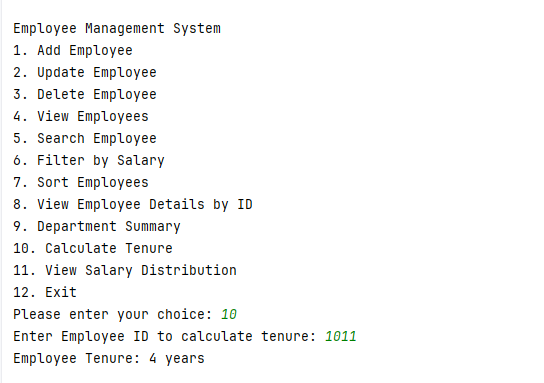
Output



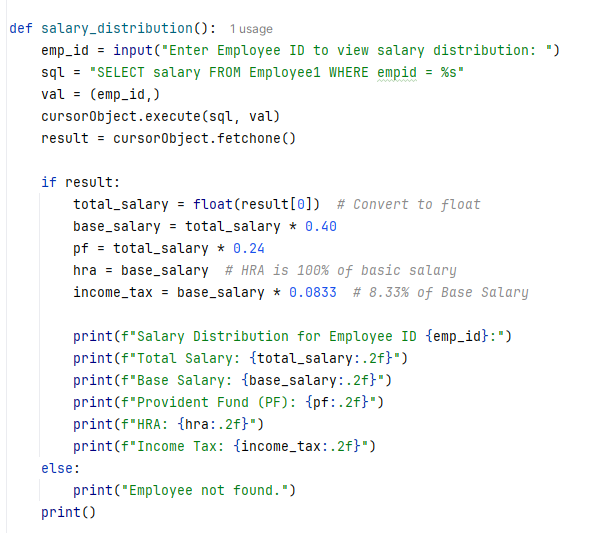
6. calculate\_tenure()



Output

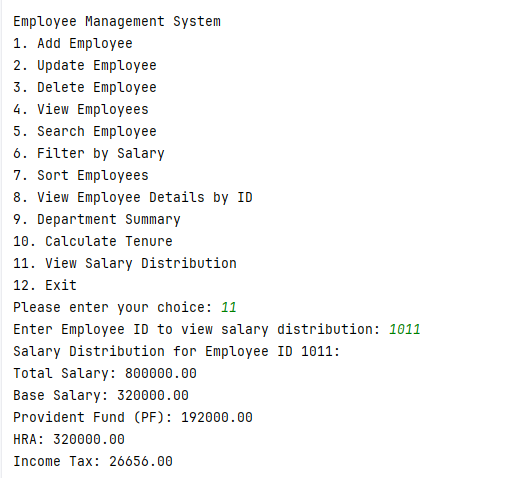


7. salary\_distribution()





Output



**Driver Code**

