

Employee Management System

A Comprehensive Solution for Managing Employee Data

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Introduction

1 What is the EMS?

The **Employee Management System** is a software solution designed to help businesses manage employee data efficiently.

2 Key Objectives

It allows organizations to add, update, delete, and view employee information in a centralized MySQL database, ensuring data accuracy and efficiency.



Key Features

Employee Registration

Employees can register by providing personal details, and the system automatically generates secure passwords.

Employee Login

Employees securely log in using their assigned ID and password, ensuring authorized access to their information.

View Employees

The system allows viewing all employee records or retrieving specific details based on their ID.

Update/Delete Employees

Employee details can be easily modified or removed from the system as needed.

Technologies Used

Backend

- MySQL: Secure and reliable database for storing employee records.
- Python: Used for application logic and operations, interacting with the MySQL database using mysql-connector-python library.

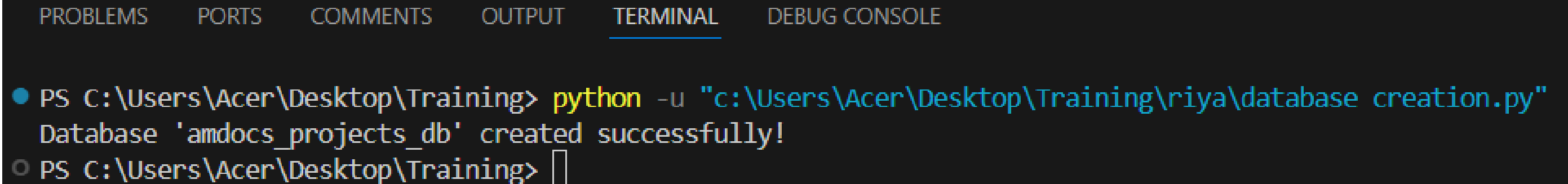
User Interface

The system currently utilizes a Command-Line Interface (CLI), providing a text-based interaction for user input and output.

Database Creation

```
cursorObject.execute("CREATE DATABASE  
amdocs_projects_db")
```

The database is created using a SQL query executed through the Python connector. The output message confirms successful database creation.



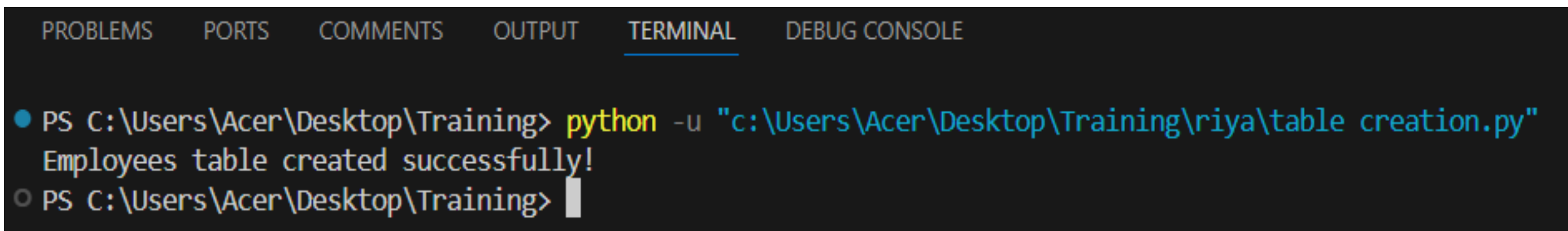
The screenshot shows a code editor interface with a dark theme. At the top, there are tabs for 'PROBLEMS', 'PORTS', 'COMMENTS', 'OUTPUT', 'TERMINAL' (which is selected and underlined), and 'DEBUG CONSOLE'. Below the tabs, the terminal displays the following text:

- PS C:\Users\Acer\Desktop\Training> python -u "c:\Users\Acer\Desktop\Training\riya\database creation.py"
Database 'amdocs_projects_db' created successfully!
- PS C:\Users\Acer\Desktop\Training>

Employee Table Creation

```
employeeRecord = """CREATE TABLE EMPLOYEES( ID INT  
AUTO_INCREMENT PRIMARY KEY, FIRST_NAME VARCHAR(45)  
NOT NULL, LAST_NAME VARCHAR(45) NOT NULL,  
DATE_OF_BIRTH DATE NOT NULL, ADDRESS VARCHAR(255),  
CONTACT VARCHAR(15), PASSWORD VARCHAR(20))"""
```

The EMPLOYEES table is created with columns for employee ID, name, date of birth, address, contact, and password. The table is designed to store essential employee information.



```
PROBLEMS  PORTS  COMMENTS  OUTPUT  TERMINAL  DEBUG CONSOLE
```

```
● PS C:\Users\Acer\Desktop\Training> python -u "c:\Users\Acer\Desktop\Training\riya\table creation.py"  
Employees table created successfully!  
○ PS C:\Users\Acer\Desktop\Training> |
```

Project Menu

```
PROBLEMS  PORTS  COMMENTS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS C:\Users\Acer\Desktop\Training> python -u "c:\Users\Acer\Desktop\Training\riya\project.py"

----- Employee Management System -----
1. Register New Employee
2. Login
3. View All Employees
4. View Employee By ID
5. Update Employee
6. Delete Employee
7. Exit
Enter your choice: █
```

Registration & Login

1

Registration

New employees provide their personal information during registration. The system automatically generates a unique and secure password.

2

Login

Registered employees can log in using their unique ID and password, granting them access to their data and system functionalities.

PROBLEMS PORTS COMMENTS OUTPUT TERMINAL DEBUG CONSOLE

```
Enter your choice: 1
```

```
----- REGISTRATION -----
```

```
Enter your first name: Riya
```

```
Enter your last name: Garg
```

```
Enter your date of birth (YYYY-MM-DD): 1999-09-02
```

```
Enter your address: 123 MG Road, New Delhi, Delhi
```

```
Enter your contact number: 9876543210
```

```
Hi Riya Garg. You are registered successfully!
```

```
Your employee ID is 2, and your password is 25
```

```
Enter your choice: 2
```

```
----- LOGIN -----
```

```
Enter your Employee ID: 3
```

```
Enter your password: 35
```

```
Login successful! Welcome Priya Verma.
```


View Employees

View All Employees

Displays a list of all registered employees, including formatted date of birth.

```
Enter your choice: 3
```

```
----- VIEW EMPLOYEE DATA -----
```

```
(2, 'Riya', 'Garg', '02-09-99', '123 MG Road, New Delhi, Delhi', '9876543210')
```

```
(3, 'Priya', 'Verma', '12-05-86', '456 Park Street, Kolkata, West Bengal', '9123456789')
```

```
Total no. of employees: 2
```

View Employee By ID

View by ID

Retrieves and displays specific employee details based on their unique ID.

```
Enter your choice: 4

----- VIEW EMPLOYEE DATA BY ID -----
Enter your Employee ID: 2
ID: 2
First Name: Riya
Last Name: Garg
Date of Birth: 02-09-99
Address: 123 MG Road, New Delhi, Delhi
Contact: 9876543210
```

Update and Delete Employees



Update Details

Employee information can be modified, such as changing their address or contact details.



Delete Employee

Employees can be removed from the system using their ID, ensuring data integrity and accuracy.

Update and Delete Employees

Update Details

```
Enter your choice: 5

----- UPDATE EMPLOYEE DETAILS -----
Enter the employee id of the record you want to update: 2
Enter the new first name (leave blank if no change:)
Enter the new last name (leave blank if no change:)
Enter the new date of birth (YYYY-MM-DD, leave blank if no change):
Enter the new address (leave blank if no change): 11/12 Vikaspuri, New Delhi, Delhi
Enter the new contact number (leave blank if no change):
Enter the new password (leave blank if no change):
Employee with ID 2 has been updated successfully!
```

Delete Employee

```
6. Delete Employee
7. Exit
Enter your choice: 6

----- DELETE EMPLOYEE DATA-----
Enter the employee id of the record you want to delete: 2
Are you sure you want to delete? (Y/N): y
Employee with ID 2 has been deleted successfully!
```

Thank You!