

Project Synopsis

Name: Sneha Vasudevan

Project Name: Database GUI Project

Title: Employee Data Survey Entry System.

Introduction:

The Employee Data Entry System is a database-driven application developed using Python to streamline the process of storing, and managing employee information in the database server. This system is designed to enhance the accuracy and efficiency of employee record management by providing a user-friendly interface and robust backend integration with a database.

Objective:

The primary objective of the project is to automate employee data entry, eliminate redundant manual processes, and ensure data consistency across the organization. It also provides a secure and scalable solution for handling large volumes of employee data.

Features:

1. Data Entry:

Enter employee details, such as ID, name, age, phone number, email-id, city, designation, salary, and job type information.

2. Validation:

Built-in validation to prevent empty or incorrect data entries.

3. Database Integration:

Seamless integration with relational databases MySQL for secure and efficient data storage.

Technology Stack:

- **Programming Language:** Python
- **Database:** MySQL
- **Libraries/Frameworks:**
 - Tkinter for GUI.
 - PyMySQL for database interaction.

Implementation Details:

1. **Front-end:** A Python-based interface for data input and navigation, utilizing libraries like Tkinter for a simple GUI.
2. **Back-end:** A relational database that stores structured employee information, ensuring quick access and data integrity.
3. **Integration:** Python scripts connect the front-end and database, implementing storing the data in the databases.

Expected Outcomes:

The system aims to:

- Minimize errors in employee data entry.
- Enhance data accessibility and retrieval speed.
- Provide a scalable and secure solution for employee record management.

Screen shots:

1. All fields are mandatory to be filled:

The screenshot shows a web application window titled "Employer Data Survey Entry System". The form contains the following fields:

- Enter employer's ID number:
- Enter employer's Name:
- Enter employer's Age:
- Enter employer's Phone number:
- Enter employer's Email-id:
- Enter employer's City:
- Enter employer's
- Enter employer's
- Enter employer's

An "Invalid Input" dialog box is displayed over the form, containing the message "Please fill all mandatory fields" and an "OK" button. A green "Submit" button is located at the bottom of the form.

2. Validation is checked on each field. Empty fields are not accepted.

Employer Data Survey Entry System

Enter employer's ID number: 100

Enter employer's Name: Pavan B T

Enter employer's Age: 35

Enter employer's Phone number: 9103476890

Enter employer's Email-id: btpavan@gmail.com

Enter employer's City:

Enter employee

Enter employee

Enter employee

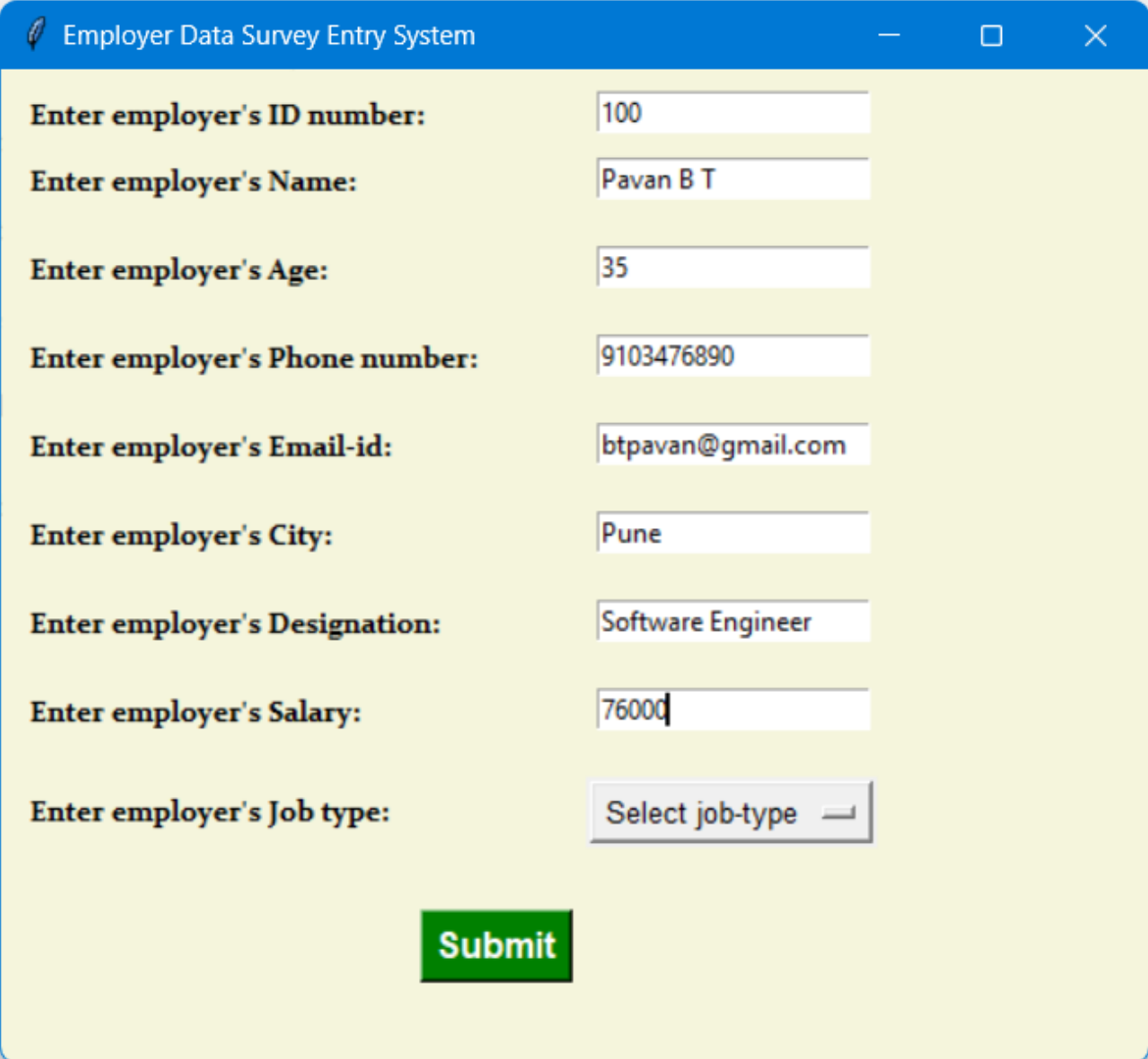
Invalid Input

Please fill all mandatory fields

OK

Submit

3. Drop-down list used on the job-type.



The screenshot displays a web application window titled "Employer Data Survey Entry System". The window contains a form with the following fields and values:

Field Label	Value
Enter employer's ID number:	100
Enter employer's Name:	Pavan B T
Enter employer's Age:	35
Enter employer's Phone number:	9103476890
Enter employer's Email-id:	btpavan@gmail.com
Enter employer's City:	Pune
Enter employer's Designation:	Software Engineer
Enter employer's Salary:	76000
Enter employer's Job type:	Select job-type

At the bottom center of the form is a green "Submit" button.

4. Job-type is selected from the list.

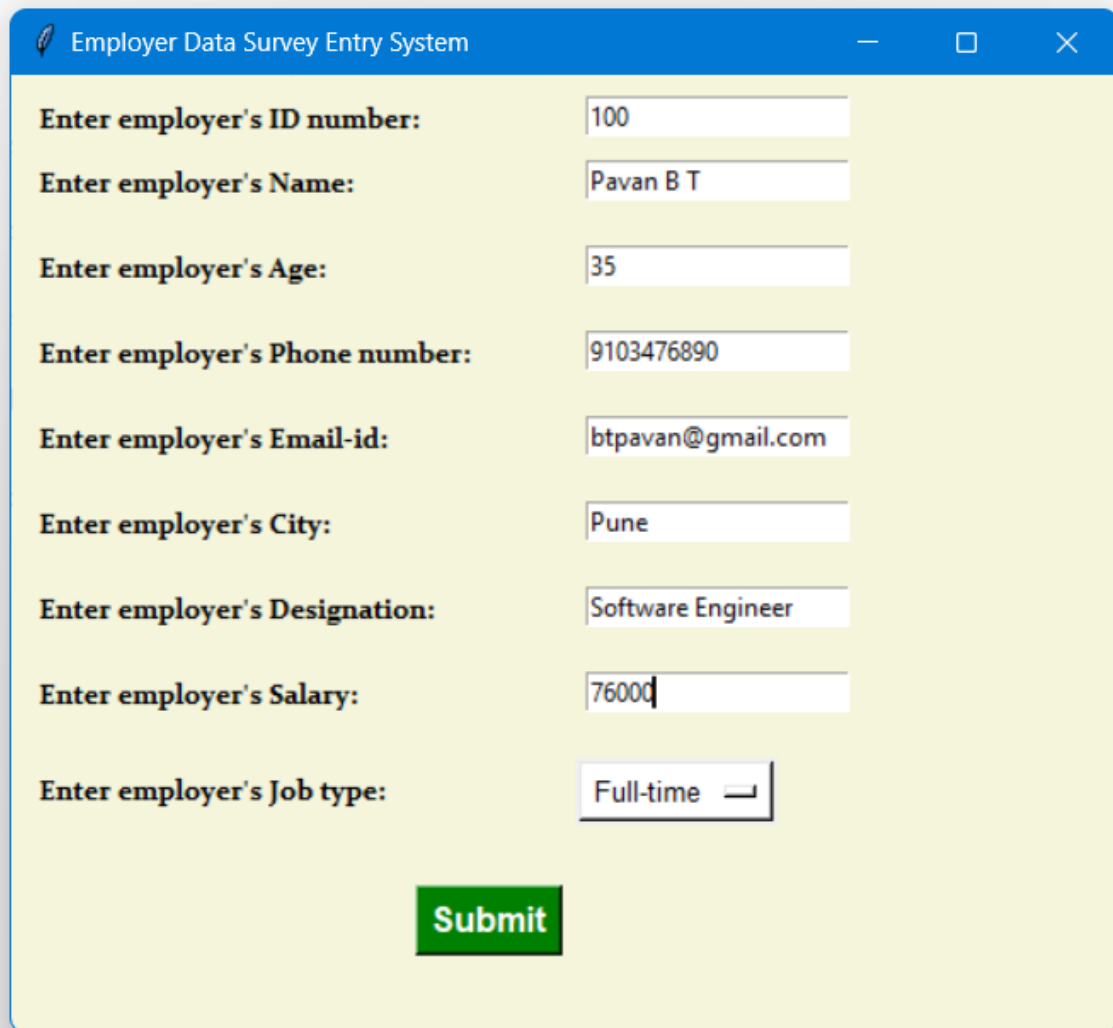
The screenshot shows a window titled "Employer Data Survey Entry System". Inside the window, there is a form with the following fields and values:

Field Label	Value
Enter employer's ID number:	100
Enter employer's Name:	Pavan B T
Enter employer's Age:	35
Enter employer's Phone number:	9103476890
Enter employer's Email-id:	btpavan@gmail.com
Enter employer's City:	Pune
Enter employer's Designation:	Software Engineer
Enter employer's Salary:	76000
Enter employer's Job type:	Full-time (selected)

Below the form fields, there is a green "Submit" button and a dropdown menu for "Job type" with the following options:

- Full-time
- Part-time
- Freelance

5. Click on submit button:



The screenshot shows a window titled "Employer Data Survey Entry System". The window contains a form with the following fields and values:

Field Label	Value
Enter employer's ID number:	100
Enter employer's Name:	Pavan B T
Enter employer's Age:	35
Enter employer's Phone number:	9103476890
Enter employer's Email-id:	btpavan@gmail.com
Enter employer's City:	Pune
Enter employer's Designation:	Software Engineer
Enter employer's Salary:	76000
Enter employer's Job type:	Full-time

At the bottom center of the form is a green button labeled "Submit".

The screenshot displays the 'Employer Data Survey Entry System' window. The form contains the following fields and values:

Field Label	Value
Enter employer's ID number:	100
Enter employer's Name:	Pavan B T
Enter employer's Age:	35
Enter employer's Phone number:	9103476890
Enter employer's Email-id:	btpavan@gmail.com
Enter employer's City:	
Enter employer's Designation:	
Enter employer's Salary:	
Enter employer's Job type:	Full-time

A green 'Submit' button is located at the bottom center. An 'Employee Details' dialog box is overlaid on the form, displaying the message: 'Data inserted successfully' with an 'OK' button.

```
mysql> select * from employer_data;
```

emp_id	emp_name	emp_age	emp_phone	emp_email	emp_city	emp_designation	emp_salary	emp_job_type
100	Pavan B T	35	9103476890	btpavan@gmail.com	Pune	Software Engineer	76000	Full-time

```
1 row in set (0.00 sec)
```

```
mysql>
```


Conclusion:

The Employee Data Entry System is a practical application that leverages Python's capabilities and database management principles to address organizational needs for efficient employee data handling. The project underscores the importance of automation in reducing manual effort and improving storing the details of the employers and maintaining their records securely in the database.