Project Synopsis

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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.

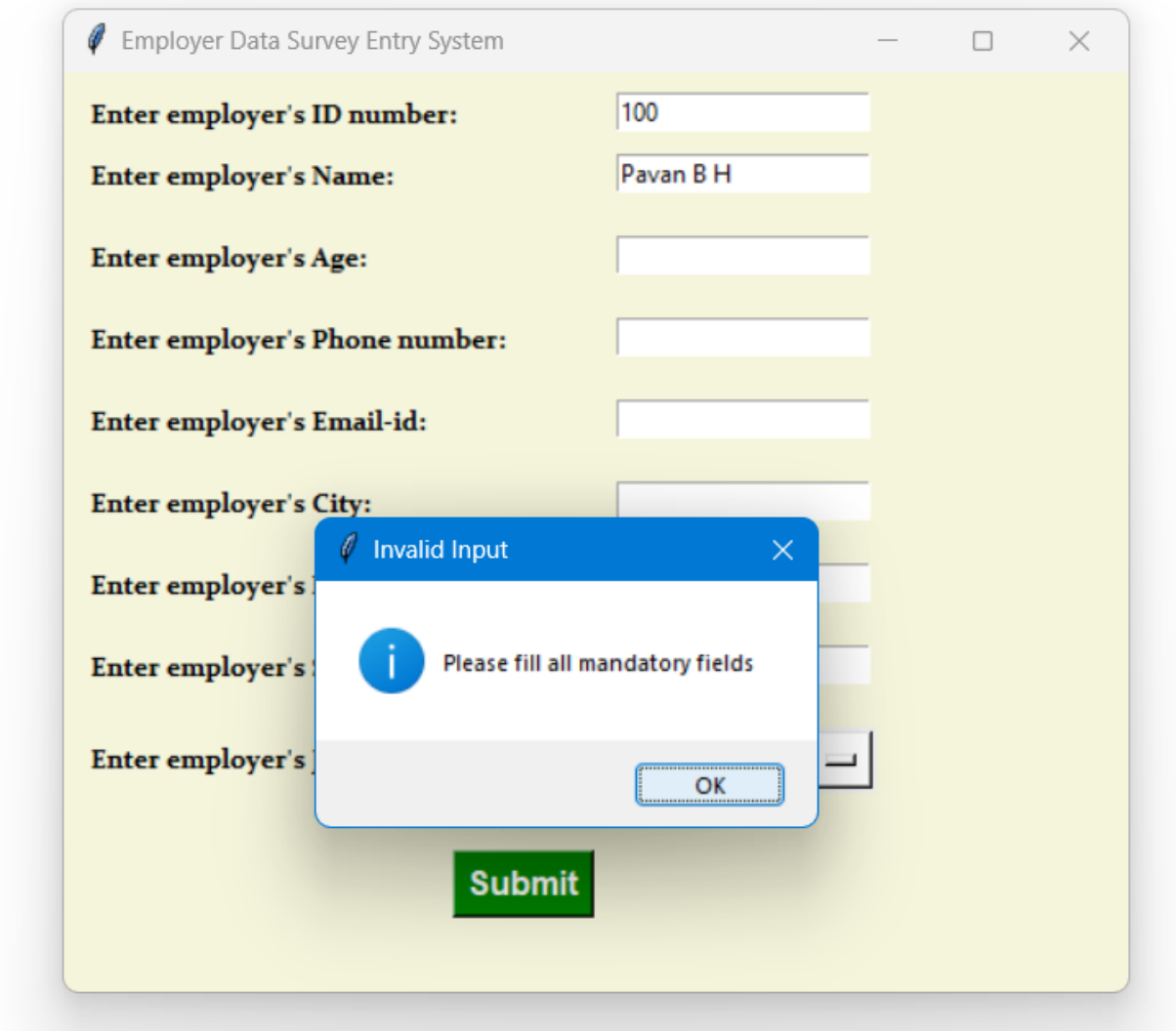
Expected Outcomes:

The system aims to:

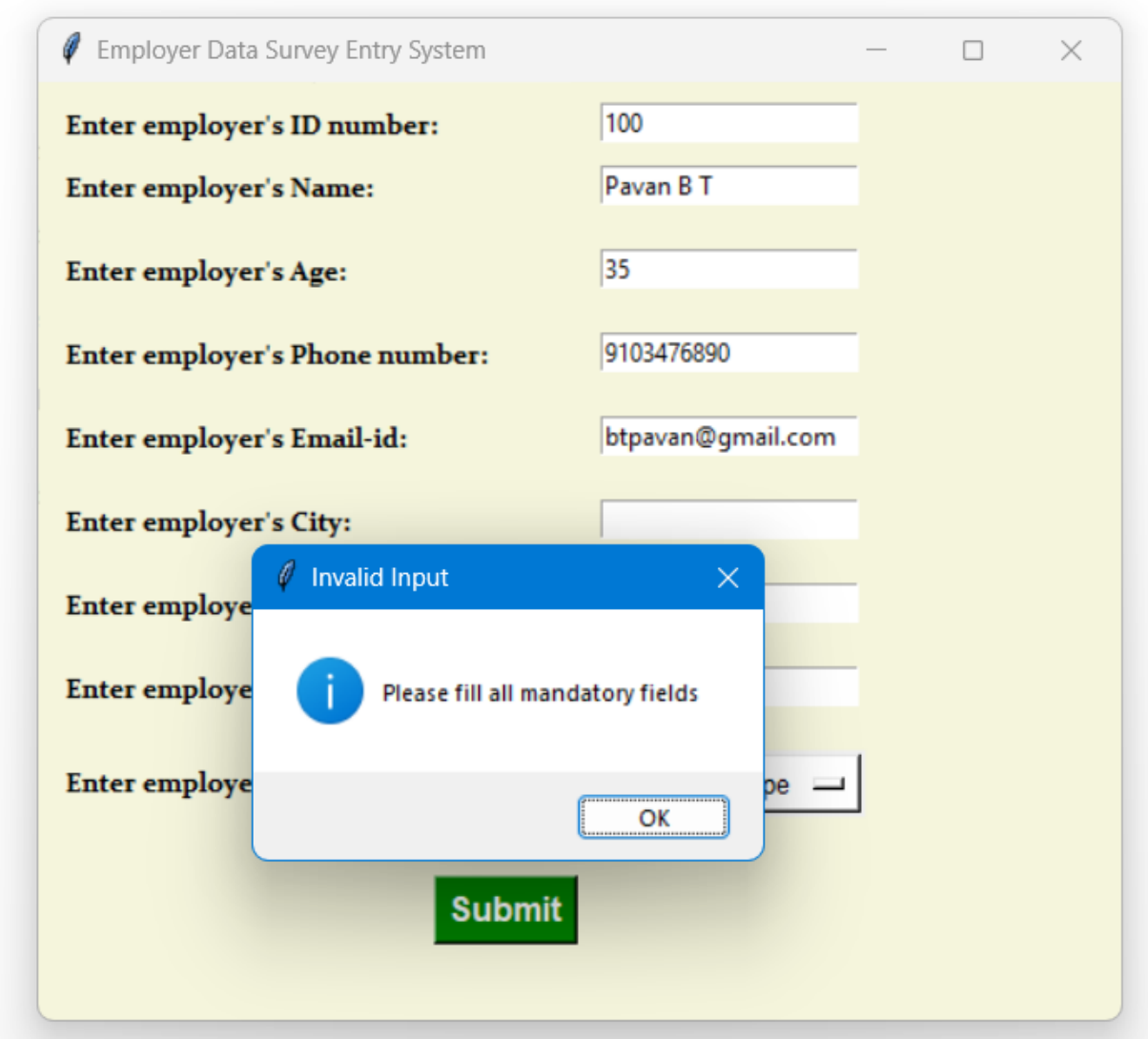
- Minimize errors in employee data entry.
- Enhance data accessibility and retrieval speed.
- Provide a scalable and secure solution for employee record management.

Screen shots:

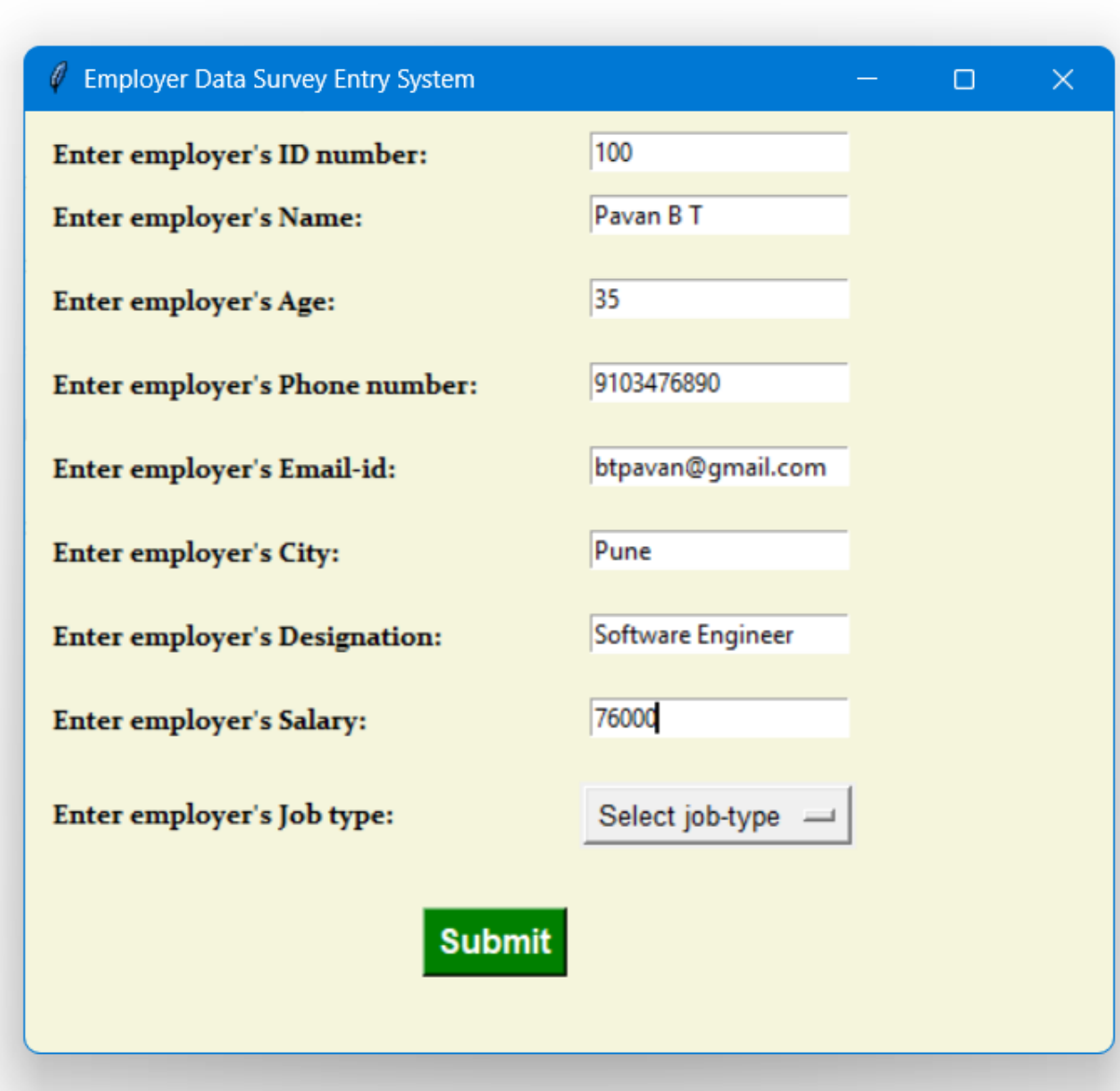
1. **All fields are mandatory to be filled:**



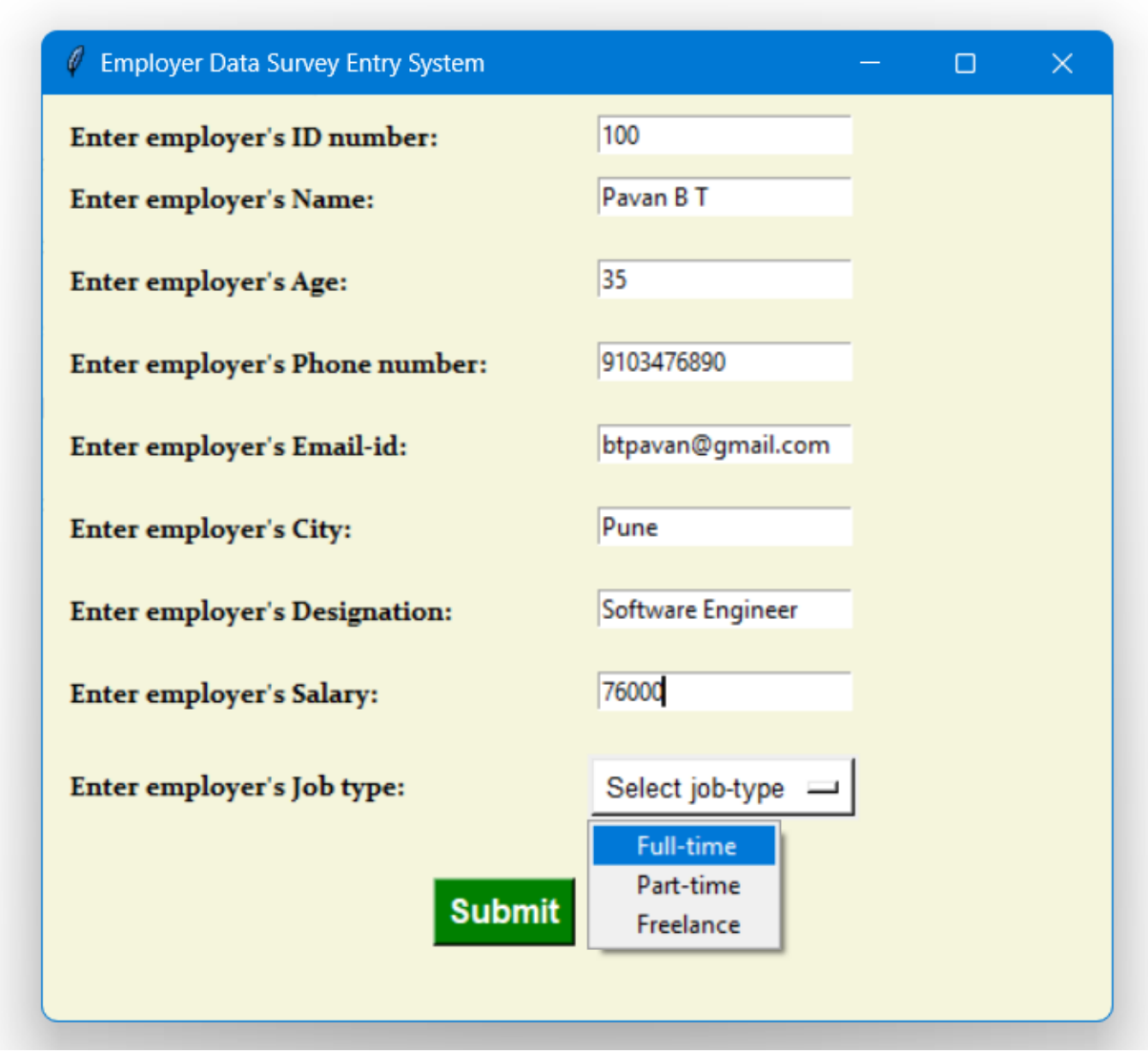
2. **Validation is checked on each field. Empty fields are not accepted.**



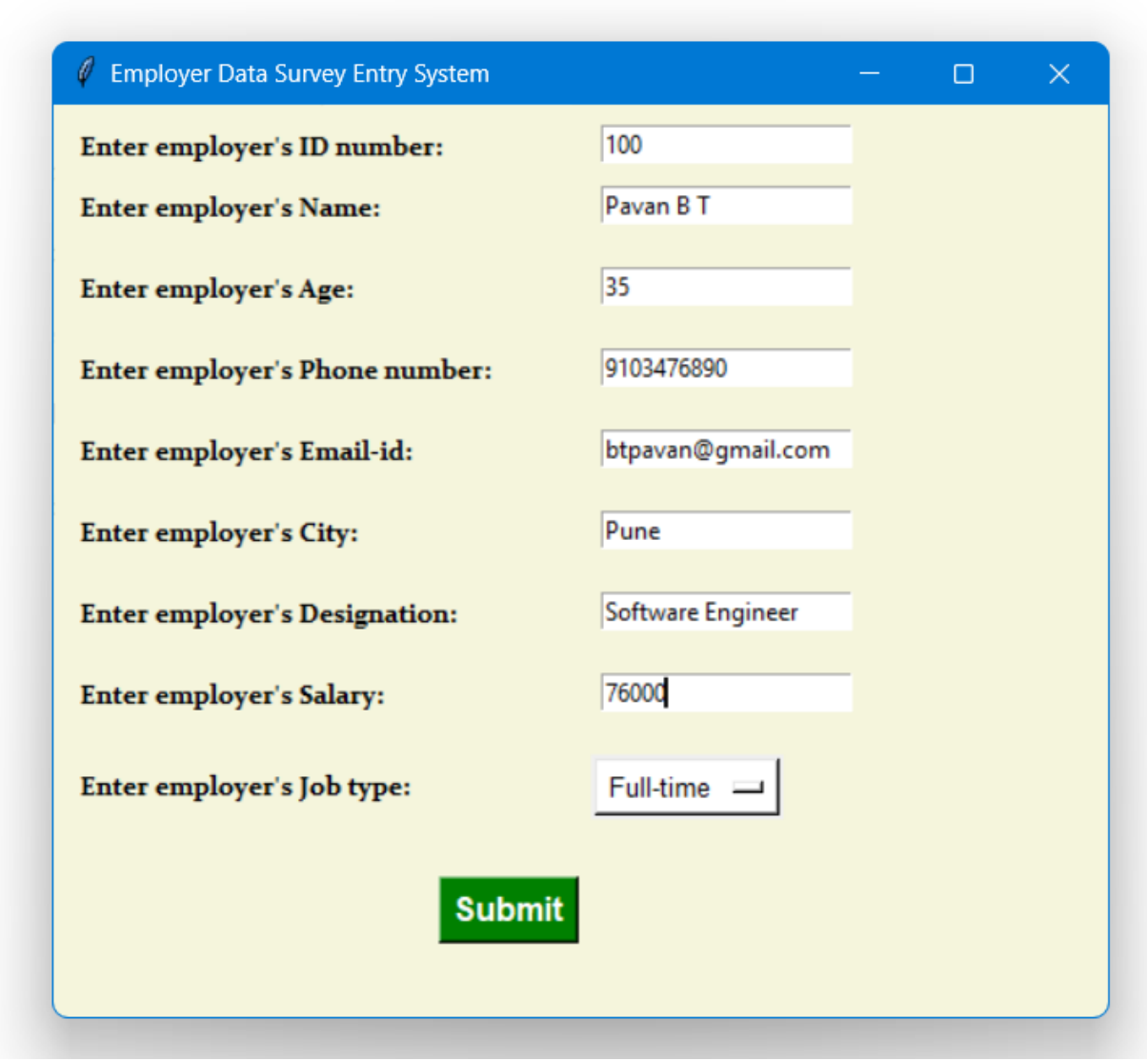
3. **Drop-down list used on the job-type.**



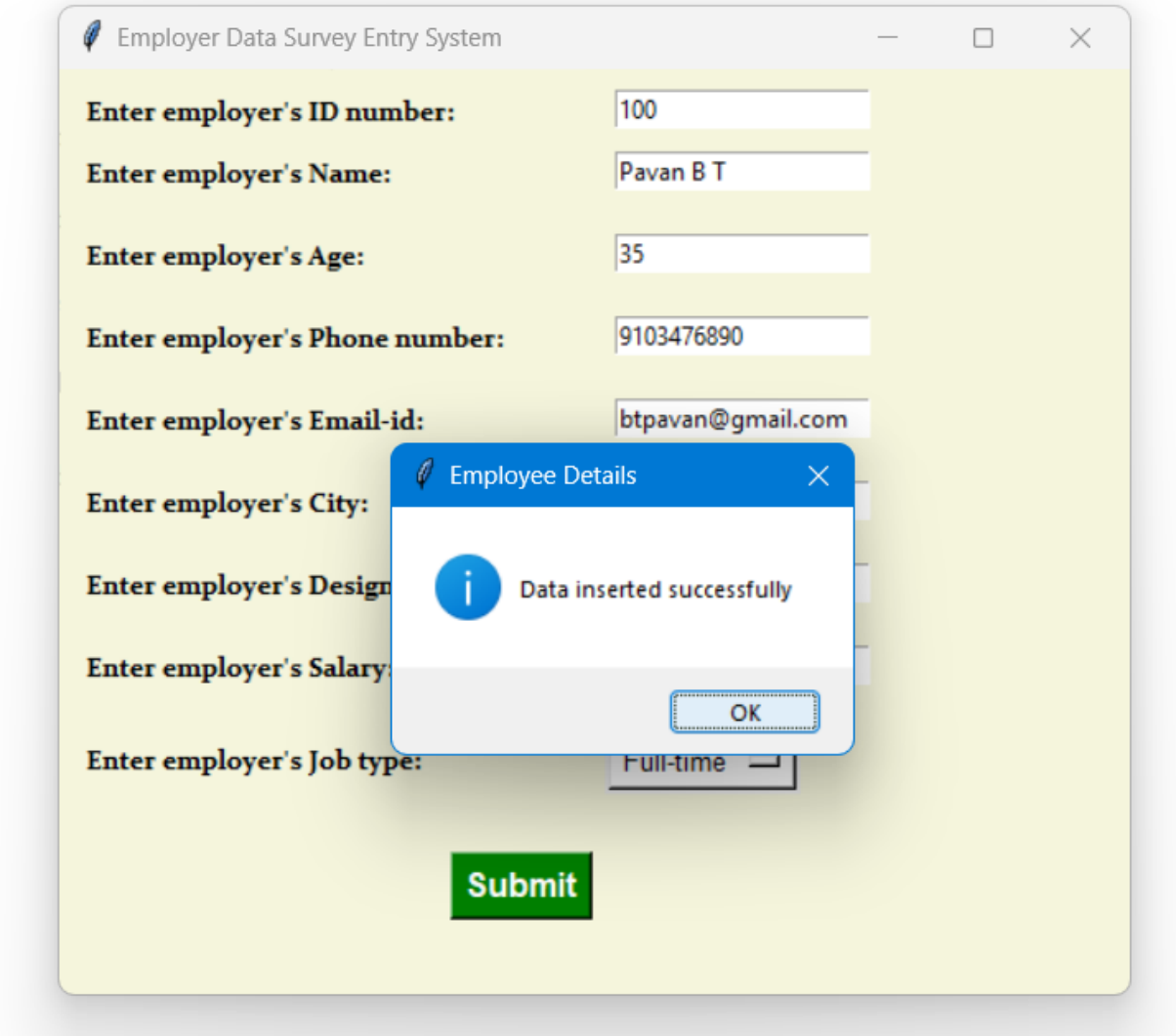
4. **Job-type is selected from the list.**



5. **Click on submit button:**



6. **Data Inserted successfully in the database.**



7. **Data is stored in the MySql database.**

```
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.