

# **First Semester Project: Automating Accounting Procedures for a Business(Individual Project)**

## **Project Overview:**

A local retail business, dealing with a variety of products, aims to streamline and automate its accounting procedures. The business operates two shifts per day with one worker on each shift. The primary goal is to create a Python project that assists in automating essential accounting tasks, including calculating total sales, worker salaries, profit, tips, and total tips for the day.

## **Key Features:**

1. Calculate Total Sales for the Day: from sales data for morning and evening shifts, produce total sales for the day.
2. Calculate Worker's Salary: given hourly rate and hours worked by a worker. retrieve the worker's salary.
3. Calculate Profit: given a list of numbers representing total sales and total cost of items sold, find the profit.(or loss if negative)
4. Calculate Tips for a Shift: from sales data for a specific shift, workers get tipped for the shift (2% of shift sales).
5. Calculate Total Tips for the Day: with sales data for morning and evening shifts, return total tips for the day (sum of tips from both shifts).

Think of your shift sales as a list.

### **User Interface:**

- Create a user-friendly interface that displays a menu of available operations.
- Accept user input to choose the desired operation (1-5) or exit (6).

### **Input Handling:**

- Prompt the user to enter numbers for each operation.
- Ensure that the program handles invalid inputs gracefully (e.g., non-numeric inputs).

### **Result Display:**

- Display the result of the selected operation clearly to the user.

### **Program Loop:**

- Implement a loop that allows the user to perform multiple calculations until choosing to exit.

### **Project Structure:**

- Organize your code into functions to encapsulate specific operations.
- Maintain a clear separation between function definitions and the main program.

### **Error Handling:**

- Include error handling for scenarios such as division by zero.

### **Exiting the Program:**

- Provide an option for users to exit the program.

### Submission:

Submit your project as a well-organized Python script (automation.py) with comments explaining each function. Discuss the challenges you encountered while working on this. Ensure that your code is readable, and use meaningful variable names.

[Submission Link](#)

### Tips:

- Test your program thoroughly with various inputs to ensure it works correctly.
- Structure your code in a way that makes it easy to understand and maintain.
- Experiment with additional features if you're comfortable, but focus on meeting the basic requirements first.