

GTS123 Lab Final Quiz 1/2023

Q1

Write a Python program that simulates a savings calculator. The program should prompt the user to enter the following information:

- The initial deposit amount
- The annual interest rate
- The number of years to save

The program should then calculate the total amount saved after the specified number of years, considering the annual interest rate. The program should use a while loop to iterate through the years and accumulate the savings.

Example 1 (user inputs are in *italics*)

```
Enter the initial deposit amount: 1200.00
Enter the annual interest rate: 0.25
Enter the number of years to save: 5
-----
Year 1: Total savings = 1203.00
Year 2: Total savings = 1206.01
Year 3: Total savings = 1209.02
Year 4: Total savings = 1212.05
Year 5: Total savings = 1215.08

After 5 years, the total amount saved will be: 1215.08
```

Example 2 (user inputs are in *italics*)

```
Enter the initial deposit amount: -1000
Please enter a positive number.
Enter the initial deposit amount: 1000
Enter the annual interest rate: 0
Please enter a positive number.
Enter the annual interest rate: 0.10
Enter the number of years to save: -2
Please enter a number greater than 0.
Enter the number of years to save: 2
-----
Year 1: Total savings = 1001.00
Year 2: Total savings = 1002.00

After 2 years, the total amount saved will be: 1002.0
```