**DEMO: Savings Goal Calculator using Loops and Logical Conditions**

* **Task**: Create a **savings goal calculator** that calculates how many months it will take to reach a savings goal based on the monthly deposit and interest rate.
  + Input:
    - The savings goal (target amount). 10000000000000
    - The initial balance (starting amount saved). 1000
    - The monthly deposit. 5
    - The interest rate (as a percentage). 10
  + The program should calculate the total balance at the end of each month by adding the monthly deposit and applying the interest to the current balance.
  + Use a loop to continue the calculation until the savings goal is met.
  + If at any point the monthly deposit is too low (due to a very high savings goal or low interest), notify the user that the goal cannot be reached in a realistic timeframe.

**Instructions**:

* + Use a **while loop** to calculate the balance each month, considering the interest and monthly deposit.
  + Implement logic to handle cases where the savings goal might be unrealistic given the monthly deposit and interest rate.
  + Print the balance at the end of each month and the number of months it took to reach the goal.

**Example Output**:

Enter savings goal: 100000

Enter initial balance: 10000

Enter monthly deposit: 4000

Enter interest rate (annual %): 4

Month 1: Total savings = 14133

Month 2: Total savings = 18300

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Goal achieved in 20 months.

**Practice Assignment 1: Vacation Fund Calculator using Loops and Logical Conditions**

* **Task**: Create a **vacation fund calculator** that calculates how many months it will take to save enough money for a vacation based on the initial balance, monthly savings, and annual interest rate.
  + **Input**:
    - The vacation fund target amount (goal).
    - The initial amount saved.
    - The monthly savings contribution.
    - The annual interest rate (as a percentage).
  + The program should calculate the total fund balance at the end of each month by adding the monthly savings and applying the interest to the current balance.
  + Use a loop to continue the calculation until the vacation fund target is reached.
  + If at any point the monthly savings are too low (e.g., due to a high target amount or low interest rate), notify the user that the goal cannot realistically be met in the given conditions.

**Instructions**:

* + Use a **while loop** to calculate the fund balance each month, factoring in interest and monthly savings.
  + Implement logic to check if the savings plan is realistic given the goal, monthly savings, and interest rate.
  + Print out the balance at the end of each month and the number of months it took to reach the vacation fund target.

**Example Output**:

Enter vacation fund target: 50000

Enter initial balance: 5000

Enter monthly savings: 2000

Enter interest rate (annual %): 4

Month 1: Current fund balance = 7083.33

Month 2: Current fund balance = 9170.14

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Goal achieved in 18 months.