**Date: 11/30/2024**

**Name: Carlos Bracho**

START PROGRAM

INITIALIZE variable

InitialInvestmentAmount (double)

MonthlyDeposit (double)

AnnualInterestRate (double)

NumberOfYears (integer)

DISPLAY welcome message

DISPLAY “Welcome to Airgead Banking Calculator"

DISPLAY Categories for data input

Initial Investment Amount: (positive real number)

Monthly Deposit: (positive real number)

Annual Interest: (percentage, positive real number)

Number of years: (positive integer)

PROMPT user to press any key to continue

PROMPT user to input values

Enter Initial Investment Amount: $

Enter Monthly Deposit: $

Enter Annual Interest: %

Enter Number of Years:

PROMPT user to press any key to continue

DISPLAY Balance and Interest Without Additional Monthly Deposits

Year Year End Balance Year End Earned Interest

SET OpeningBalance = InitialInvestmentAmount

LOOP FOR Year 1 TO NumberOfYears DO

CALCULATE YearlyInterest = OpeningBalance \* ((AnnualInterestRate / 100) / 12) \* 12

CALCULATE ClosingBalance = OpeningBalance + YearlyInterest

DISPLAY Year, ClosingBalance, YearlyInterest

SET OpeningBalance = ClosingBalance

END LOOP

DISPLAY Balance and Interest With Additional Monthly Deposits

Year Year End Balance Year End Earned Interest

SET OpeningBalance = InitialInvestmentAmount

LOOP FOR Year 1 TO NumberOfYears DO

SET YearlyInterest = 0

LOOP FOR Month 1 TO 12 DO

CALCULATE MonthlyInterest = (OpeningBalance + MonthlyDeposit) \* ((AnnualInterestRate / 100) / 12)

CALCULATE OpeningBalance = OpeningBalance + MonthlyDeposit + MonthlyInterest

ADD MonthlyInterest TO YearlyInterest

END LOOP

DISPLAY Year, OpeningBalance, YearlyInterest

END LOOP

ASK user if they want to test different values

DO

DISPLAY “Would you like to test different values? (y/n)”

IF UserChoice is “y” THEN

RESTART PROGRAM

ELSE IF UserChoice is “n” THEN

DISPLAY “Thank you for using Airgead Banking Calculator!”

EXIT PROGRAM

ELSE

DISPLAY “Incorrect option please type “y” for yes or “n” for no

END IF

WHILE UserChoice is not “y” AND UserChoice is not “n”

END PROGRAM