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CS210

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Project 2: Pseudocode

Note: Upon writing my code, I will break these into separate files for organization purposes!

FUNCTION DisplayInputPrompt

 PRINT "Welcome to Airgead Banking Investment Calculator!"

 PRINT "Please enter the following information:"

END FUNCTION

FUNCTION CalculateAndDisplayBalances(initialInvestment, monthlyDeposit,
annualInterest, years)

 SET months = years * 12

 SET balanceWithoutDeposits = initialInvestment

 SET balanceWithDeposits = initialInvestment

 PRINT "Year-End Balances Without Monthly Deposits:"

 PRINT "Year\tBalance\t\tEarned Interest"

 FOR year FROM 1 TO years

 SET earnedInterest = 0

 FOR month FROM 1 TO 12

 SET interest = (balanceWithoutDeposits * (annualInterest / 100) / 12)

 balanceWithoutDeposits = balanceWithoutDeposits + interest

 earnedInterest = earnedInterest + interest

END FOR

PRINT year, balanceWithoutDeposits, earnedInterest

END FOR

PRINT "Year-End Balances With Monthly Deposits:"

PRINT "Year\tBalance\t\tEarned Interest"

FOR year FROM 1 TO years

SET earnedInterest = 0

FOR month FROM 1 TO 12

SET total = balanceWithDeposits + monthlyDeposit

SET interest = (total * (annualInterest / 100) / 12)

balanceWithDeposits = balanceWithDeposits + monthlyDeposit + interest

earnedInterest = earnedInterest + interest

END FOR

PRINT year, balanceWithDeposits, earnedInterest

END FOR

PRINT "Press any key to continue..."

END FUNCTION

FUNCTION Main

DECLARE initialInvestment, monthlyDeposit, annualInterest AS REAL

DECLARE years AS INTEGER

CALL DisplayInputPrompt()

PRINT "Initial Investment Amount: "

INPUT initialInvestment

PRINT "Monthly Deposit: "

INPUT monthlyDeposit

PRINT "Annual Interest (Compounded): "

INPUT annualInterest

PRINT "Number of Years: "

INPUT years

IF initialInvestment < 0 OR monthlyDeposit < 0 OR annualInterest < 0 OR years < 0 THEN

 PRINT "All values must be positive real numbers."

 RETURN

END IF

CALL CalculateAndDisplayBalances(initialInvestment, monthlyDeposit, annualInterest,
years)

END FUNCTION

I've written pseudocode before, but I've never truly used it in practice before writing a program. I cannot believe how much easier planning my program is. I feel silly for not actually using it before.