BEGIN

FUNCTION getUserInput(OUT initialInvestment, OUT monthlyDeposit, OUT annualInterest, OUT years)

DISPLAY "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

DISPLAY "\*\*\*\*\*\*\*\*\*\* Data Input \*\*\*\*\*\*\*\*\*\*\*\*"

DISPLAY "Initial Investment Amount: "

INPUT initialInvestment

DISPLAY "Monthly Deposit: "

INPUT monthlyDeposit

DISPLAY "Annual Interest: "

INPUT annualInterest

DISPLAY "Number of Years: "

INPUT years

DISPLAY "Press any key to continue..."

WAIT for any key press

END FUNCTION

FUNCTION calculateWithoutDeposits(initialInvestment, annualInterest, years, OUT yearEndBalances, OUT yearEndInterests)

SET balance TO initialInvestment

FOR i FROM 0 TO years - 1

SET interest TO balance \* (annualInterest / 100)

SET balance TO balance + interest

APPEND interest TO yearEndInterests

APPEND balance TO yearEndBalances

END FOR

END FUNCTION

FUNCTION calculateWithDeposits(initialInvestment, monthlyDeposit, annualInterest, years, OUT yearEndBalances, OUT yearEndInterests)

SET balance TO initialInvestment

FOR i FROM 0 TO years - 1

SET yearlyInterest TO 0

FOR j FROM 0 TO 11

SET balance TO balance + monthlyDeposit

SET interest TO balance \* ((annualInterest / 100) / 12)

SET balance TO balance + interest

SET yearlyInterest TO yearlyInterest + interest

END FOR

APPEND yearlyInterest TO yearEndInterests

APPEND balance TO yearEndBalances

END FOR

END FUNCTION

FUNCTION displayReports(balancesNoDeposits, interestsNoDeposits, balancesWithDeposits, interestsWithDeposits)

DISPLAY "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

DISPLAY "\*\*\*\*\*\*\*\*\*\* Annual Report \*\*\*\*\*\*\*\*\*"

DISPLAY "\*\*\*\*\*\*\*\*\*\* No Monthly Deposits \*\*\*\*\*\*\*\*\*\*"

DISPLAY "Year Year End Balance Year End Earned Interest"

DISPLAY "----------------------------------"

FOR i FROM 0 TO SIZE of balancesNoDeposits - 1

DISPLAY i + 1, balancesNoDeposits[i], interestsNoDeposits[i]

END FOR

DISPLAY "\n\*\*\*\*\*\*\*\*\*\* With Monthly Deposits \*\*\*\*\*\*\*\*\*\*"

DISPLAY "Year Year End Balance Year End Earned Interest"

DISPLAY "----------------------------------"

FOR i FROM 0 TO SIZE of balancesWithDeposits - 1

DISPLAY i + 1, balancesWithDeposits[i], interestsWithDeposits[i]

END FOR

END FUNCTION

MAIN

DECLARE initialInvestment, monthlyDeposit, annualInterest, years

CALL getUserInput(initialInvestment, monthlyDeposit, annualInterest, years)

DECLARE yearEndBalancesNoDeposits, yearEndInterestsNoDeposits

CALL calculateWithoutDeposits(initialInvestment, annualInterest, years, yearEndBalancesNoDeposits, yearEndInterestsNoDeposits)

DECLARE yearEndBalancesWithDeposits, yearEndInterestsWithDeposits

CALL calculateWithDeposits(initialInvestment, monthlyDeposit, annualInterest, years, yearEndBalancesWithDeposits, yearEndInterestsWithDeposits)

CALL displayReports(yearEndBalancesNoDeposits, yearEndInterestsNoDeposits, yearEndBalancesWithDeposits, yearEndInterestsWithDeposits)

END MAIN

END