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CS210

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**Project 2 Pseudocode**

**Step 1: Display Input Screen**

1. **Display**: "Initial Investment Amount: "
2. **Input**: initialInvestment
3. **Display**: "Monthly Deposit: "
4. **Input**: monthlyDeposit
5. **Display**: "Annual Interest (Compounded): "
6. **Input**: annualInterest
7. **Display**: "Number of Years: "
8. **Input**: numberOfYears
9. **Display**: "Press any key to continue..."

**Step 2: Calculate Year-End Balances Without Additional Monthly Deposits**

1. **Initialize**: openingAmount = initialInvestment
2. **For** each year from 1 to numberOfYears:
   * **Initialize**: yearEndBalance = openingAmount
   * **Initialize**: yearEndInterest = 0
   * **For** each month from 1 to 12:
     + **Calculate**: interest = (openingAmount \* (annualInterest / 100) / 12)
     + **Add**: yearEndInterest += interest
     + **Add**: openingAmount += interest
   * **Display**: "Year [year]: Year End Balance = [yearEndBalance], Year End Earned Interest = [yearEndInterest]"

**Step 3: Calculate Year-End Balances With Additional Monthly Deposits**

1. **Initialize**: openingAmount = initialInvestment
2. **For** each year from 1 to numberOfYears:
   * **Initialize**: yearEndBalance = openingAmount
   * **Initialize**: yearEndInterest = 0
   * **For** each month from 1 to 12:
     + **Calculate**: total = openingAmount + monthlyDeposit
     + **Calculate**: interest = (total \* (annualInterest / 100) / 12)
     + **Add**: yearEndInterest += interest
     + **Add**: openingAmount = total + interest
   * **Display**: "Year [year]: Year End Balance = [yearEndBalance], Year End Earned Interest = [yearEndInterest]"

**Step 4: Allow User to Test Different Values**

1. **Display**: "Do you want to test different values? (yes/no)"
2. **Input**: userResponse
3. **If** userResponse == "yes":
   * **Repeat** steps 1 to 3