

```

public class CompoundInterestCont {
    public Decimal principal { get; set; }
    public Decimal rate { get; set; }
    public Decimal duration { get; set; } // Renamed from 'time'
    public Integer n { get; set; }
    public Decimal compoundInterest { get; set; }
    public Decimal amount { get; set; }

    public void calculate() {
        if(principal > 0 && rate > 0 && duration > 0 && n > 0) {
            Double P = (Double) principal;
            Double r = (Double) (rate / 100);
            Double t = (Double) duration;
            Double nt = n * t;
            Double baseVal = 1 + (r / n);
            Double A = P * Math.pow(baseVal, nt);
            amount = (Decimal) A;
            compoundInterest = amount - principal;
        } else {
            amount = 0;
            compoundInterest = 0;
        }
    }
}

```

```

<apex:page controller="CompoundInterestCont">
  <h2>Compound Interest Calculator</h2>
  <apex:form>
    <apex:pageBlock title="Enter Values">
      <apex:pageBlockSection>
        <apex:inputText value="{!principal}" label="Principal (P)"/>
        <apex:inputText value="{!rate}" label="Rate (%) (r)"/>
        <apex:inputText value="{!duration}" label="Time (Years) (t)"/>
        <apex:inputText value="{!n}" label="Compounded Times/Year (n)"/>
      </apex:pageBlockSection>

      <apex:pageBlockSection>
        <apex:commandButton value="Calculate" action="{!calculate}"/>
      </apex:pageBlockSection>

      <apex:pageBlockSection rendered="{!NOT(ISNULL(compoundInterest))}">
        <apex:outputText value="Total Amount (A): ₹{!amount}"/><br/>
        <apex:outputText value="Compound Interest: ₹{!compoundInterest}"/>
      </apex:pageBlockSection>
    </apex:pageBlock>
  </apex:form>
</apex:page>

```

```
CompoundInterestCont c = new CompoundInterestCont();
c.principal = 10000; // ₹10,000
c.rate = 5;         // 5% interest rate
c.duration = 2;     // 2 years
c.n = 4;            // Compounded quarterly

c.calculate();

System.debug('Total Amount (A): ₹' + c.amount);
System.debug('Compound Interest: ₹' + c.compoundInterest);
```