**ForecastFusion Analyzing Adoption and Revenue Dynamics**

**Part I: The Bass Diffusion Model**

1. **Forecast Sales & Cumulative Sales (Scenario 1)**
   * Parameters: p=0.03p = 0.03p=0.03, q=0.4q = 0.4q=0.4.
   * Tasks:
     + Forecast sales and cumulative sales for 20 years (market size = 25MM).
     + Plot sales and cumulative sales on the same graph.
     + Calculate the share of sales due to innovators and imitators.
2. **Forecast Sales & Cumulative Sales (Scenario 2)**
   * Parameters: p=0.4p = 0.4p=0.4, q=0.03q = 0.03q=0.03.
   * Tasks:
     + Forecast sales and cumulative sales for 20 years (market size = 25MM).
     + Plot sales and cumulative sales on the same graph.
     + Calculate the share of sales due to innovators and imitators.

**Part II: Forecasting Apple Sales Revenues**

1. **Moving Average (MA) and Exponential Smoothing**
   * Tasks:
     + Compute a two-period moving average (MA) forecast (one quarter ahead).
     + Compute an exponentially smoothed forecast with optimal alpha.
     + Graph actual revenues vs. MA and exponentially smoothed forecasts.
2. **Dynamic Level, Trend, and Seasonality Model (Holt-Winters)**
   * Tasks:
     + Use the first 8 observations (2 years) to initialize level, trend, and seasonality (quarterly dummies sum to zero).
     + Initialize smoothing parameters (α,β,γ\alpha, \beta, \gammaα,β,γ) to 0.5.
     + Use Solver to minimize the sum of squared errors (SSE), ensuring 0≤α,β,γ≤10 \leq \alpha, \beta, \gamma \leq 10≤α,β,γ≤1.
     + Graph actual revenues vs. one-step forecasts from the model.
3. **Forecast for Four Future Quarters**
   * Tasks:
     + Use the dynamic level, trend, and seasonality model to forecast revenues for the four quarters following the last observation.