**High-Level Executive Summary**

**Test Plan Overview:**  
Performance testing was conducted using Apache JMeter 5.6.3 to evaluate the Advantage Online Shopping APIs. The goal was to assess stability, responsiveness, and reliability under varying load conditions. Key metrics included response times, throughput, and error rates for critical user transactions.

**Test Plan Objective:**The primary objective was to ensure the application meets the SLA:

* Response time under **3 seconds** for key transactions.
* Error rate below **1%**.  
  Correlation and assertion checks were used to validate dynamic data and response accuracy, while end-to-end transaction readings provided insights into application behavior under load.

**Test Plan Name:**

* *AdvantageOnlineShopping*

**Test Execution Details:**

* **Start Time:** 2/5/25, 4:25 PM
* **End Time:** 2/5/25, 4:57 PM
* **Source File:** results.csv

**Thread Groups Configuration:**  
The test plan includes the following thread groups designed to simulate concurrent user interactions:

1. **Thread Group:**
   * **Number of Threads (Users):** 3
   * **Ramp-Up Time:** 1 second

**Samplers Executed:**  
The test plan incorporates multiple HTTP Samplers to evaluate different API endpoints:

* **Sampler 1:**  LOGINUSER
  + **Method:** POST
  + **URL Path:** */accountservice/ws/AccountLoginRequest*
* **Sampler 2:** SelectProduct
  + **Method:** POST
  + **URL Path:**/order/api/v1/carts/${userID}/product/20/color/414141?quantity=1

**Sampler 3:** AddToCart

* + **Method:** GET
  + **URL Path:** /order/api/v1/carts/${userID}
* **Sampler 4:** AddPaymentDetails
  + **Method:** POST
  + **URL Path:** /accountservice/ws/AddMasterCreditMethodRequest
* **Sampler 5:** OrderPlaced
  + **Method:** POST
  + **URL Path:** /order/api/v1/orders/users/${userID}

**Listeners and Result Collection:**  
Performance metrics were captured using various listeners to analyze response times, throughput, and error rates:

* Summary Report
* Aggregate Report
* View Results Tree
* Response Time Graph
* Index.html Report

**Key Observations:**

* Total Request Samples: **135**
* Overall Average **Response Time:** 2.8 seconds
* **Throughput:** 5.4 requests per minute
* **Error Rate:** 0.00% (No errors encountered)

**Conclusion:**  
The performance testing successfully validated that the Advantage Online Shopping APIs meet the defined SLA, with key transactions achieving a response time of under 3 seconds and an error rate below 1%. Through correlation and assertion checks, dynamic data handling and response accuracy were confirmed. Additionally, end-to-end transaction readings provided valuable insights into the application's behavior under load, ensuring stability, responsiveness, and reliability.