## **📝 Performance Analysis Report – BlazeDemo (100 Users)**

### **1. Test Summary**

This performance test simulated **100 concurrent users** interacting with the BlazeDemo flight booking application. The goal was to evaluate system responsiveness, stability, and detect any bottlenecks under high load.

### **2. Test Configuration**

* **Application**:<https://www.blazedemo.com>
* **Tool Used**: Apache JMeter
* **Users Simulated**: 100
* **Ramp-Up Time**: 20 seconds
* **Loop Count**: 1
* **Total Requests (Samples)**: 400
* **Listeners Used**:  
  + View Results Tree
  + Summary Report
  + Aggregate Report
  + Graph Results

### **3. Performance Overview**

| **Metric** | **Result** |
| --- | --- |
| Avg Response Time | 490 ms ✅ |
| Max Response Time | 1023 ms ✅ |
| Throughput | 18.4 requests/sec ✅ |
| Error Rate | 0.00% ✅ |
| Standard Deviation | 87 ms ⚠️ Moderate |
| Assertion Results | 100% Passed ✅ |

### **4. Bottleneck Analysis**

* **Homepage**:  
  + Highest average (616 ms) and max time (1023 ms).
  + Could be due to heavier initial load resources.
  + ✅ *No failures, but slightly slower than other steps.*
* **Booking Confirmation**:  
  + Max: 996 ms, 99th percentile: 667 ms.
  + Indicates backend logic or DB interaction.
  + ✅ Still well within acceptable limits (< 2s).
* **Overall**:  
  + Excellent performance.
  + Only slight variability in response times (standard deviation 87 ms).
  + No rate limiting or HTTP 429 errors — the 20-second ramp-up helped distribute load smoothly.

### **5. Visual Insights (Insert These in Word):**

* 📸 View Results Tree → All green checkmarks (100% pass)
* 📸 Summary Report → All transactions < 1.1s, throughput steady
* 📸 Aggregate Report → No errors, smooth averages
* 📸 Graph Results → Stable average/median lines, controlled deviation, rising throughput

### **6. Conclusion**

The BlazeDemo application handled 100 concurrent users **smoothly and successfully**.  
 There were:

* **No errors**
* **No HTTP failures**
* **Consistent performance under pressure**