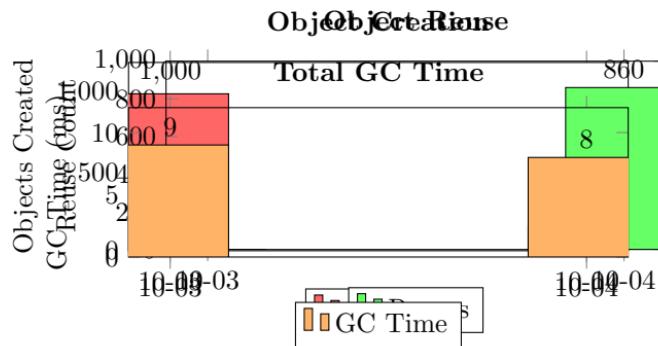


# GC Performance Comparison

Branch 10-03 vs 10-04 (50 seconds gameplay)



## Memory Pattern:

### 10-03 (No Pool):

Continuous allocate/free cycles  
→ GC pressure increases over time

### 10-04 (With Pool):

One-time allocation at startup  
→ Zero GC pressure during gameplay

**Key Insight:** Even though GC time difference is small (9ms vs 8ms) in this demo, the **pattern** matters!

10-03 creates 1000+ objects (scales badly), 10-04 creates 150 then reuses 860+ times (scales well).