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CSD380-O307 DevOps (2261-DD)  
Module 5.2 Assignment: **Value Stream Mapping (VSM)**

A diagram of a grocery shopping and meal prep

AI-generated content may be incorrect.

Analyzing Lean Metrics:

Planning: ~30 minutes  
Shopping: ~90 minutes  
Unloading: ~15 minutes  
Meal Prep: ~120 minutes

**Cycle Time = 255 minutes (4h 15 min)**

Optimizing the Process:

* Use a grocery delivery or pickup service to eliminate store walking and checkout time
  + Before: Drive (20) + In-Store (60) + Checkout (10) = 90 min
  + After: Drive (20) + Pickup wait/load (15) + buffer (10) = 45 min
    - Buffer: unpredictable delays like the store running behind on pulling orders, a long line of other cars picking up, or substitutions/missing items
  + **Saved: ~45 min (Shopping drops to 45 minutes)**
* Keep a running grocery list on my phone to skip manual list writing day-of
  + Reduces re-checking stocks, re-writing list
  + **Saved: ~8 min (Planning drops to 22 minutes)**
* Group pantry checks with weekly trash day to make it habit-based
  + Quick top-offs, less need for a full inventory re-check
  + **Saved: ~4 min (Planning drops to 18 minutes)**
* Pre-chop veggies when I get home, batch cook proteins once for multiple meals
  + Consolidates setup/cleanup; fewer knife/board cycles
  + **Saved: ~30 min (Meal prep drops to 90 minutes)**
* Standardize containers with labels for days of the week
  + Faster portioning, fewer decisions
  + **Saved: ~5 min (Meal prep drops to 85 minutes)**
* Unload with zones (fridge/pantry/freezer staging)
  + One-touch flow, no backtracking
  + **Saved: ~5 min (Unloading drops to 10 minutes)**

**Estimated time saved: 97 minutes**

After optimization (new weekly process):

Planning: ~18 minutes  
 Shopping (curbside): ~45 minutes  
 Unloading: ~10 minutes  
 Meal Prep: ~85 minutes  
 **New Cycle Time: 158 minutes (2h 38min)**

**Net improvement:** -97 min/week (~38% faster)