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Class: ECO 32500 - Python for Business Analytics
Date Due: 11/01/2024

HW 6: Load a Dishwasher

Loading a Dishwasher

Note: Never have used a dishwasher so Googled most of this 🙂

1. **Identify the problem, metric, be specific**
    - **Problem:** Dirty dishes need to be cleaned efficiently in a dishwasher (Objective: clean dishes without damage or incomplete washing).
    - **Question:** What is the most effective way to load a dishwasher to maximize space and ensure all items are properly cleaned? (Pots on the bottom, delicate items on top?)
    - **Why the question:** Loading the dishwasher correctly ensures that all dishes are cleaned, prevents overcrowding, and avoids potential damage.
2. **What do I need to know to answer the question?**
    - **Action point:** Understand how different dishes fit and need to be placed for optimal cleaning.
    - **What needs collecting:**
        - Types of dishes (plates, bowls, glasses, utensils).
        - Dishwasher layout (e.g., top rack, bottom rack).
        - Any special cleaning needs (e.g., delicate glassware).
    - **Beginning data:** Sort the dirty dishes by type and remove leftover food.
    - **Collect data for:** Determining the best way to load each item based on size and material.
3. **Identify all things I need to gather before loading**
    - **Budget:** Use dishwasher-safe items only to avoid damage. (Hand Wash expensive dishes)
    - **What raw data:** Amount of dishes, dishwasher space, and any detergent requirements.
    - **Inferences:** Based on the number of items, decide whether multiple loads are needed or if all dishes can fit in one.
4. **Organize the data and decide what I need to collect**
    - **Data Cleaning:** Rinse off any leftover food to prevent clogging or bad smells.
    - **Outliers:** Large or oddly shaped items might need special placement or manual washing.
    - **Make data usable:** Arrange items efficiently, placing larger items on the bottom rack and smaller, delicate ones on the top.
    - **Data Relationships:** Understand how jets shooting water reach different parts of the dishwasher to avoid blocking them with large items.

    - **Apparent vs. Inferred:** Don’t assume all items can be placed anywhere—check for proper spacing and placement. YouTube shows how many jet systems work.
5. **Find and identify the relationships**
    - **Look for:** Connections between item size, rack placement, and cleaning performance.
    - **Outliers:** Some dishes or plastic containers may not withstand high heat and should be placed on the top rack.
    - **Percentage:** Calculate how much space is occupied versus what’s left to avoid overcrowding.
    - **Chart:** Visualize the water flow path to ensure all dishes will be reached during the wash cycle.
    - **Root cause:** Ensure dishes aren’t blocking the spray arms or detergent compartment for optimal cleaning.
6. **Find a solution**
    - **Undo the problem:** If the dishwasher is overloaded, remove some items or rearrange them for better fit and cleaning.
    - **Change the situation:** Use a different wash setting or detergent for heavily soiled dishes if needed.
7. **Presentation/Tell a story**
    - **Opportunities:** By properly loading the dishwasher, you can clean more dishes per cycle, saving water, detergent, and time.
    - Talk about a time using the dishwasher and how it didn’t work because it wasn’t set up properly