Grinder test application

Brief

Develop a C# WPF application that simulates the automated system that you designed a flow chart for during your interview:

> *Draw a flow diagram to design the main process for an automated system that holds 96 input samples and 288 empty output vials. The system grinds the sample material in the input vials and then dispenses the ground material to 3 output vials. The robot arm in the system can only hold a single vial at a time and is used to transport the vials between the racks, grind station and dispense station.*

System Specification:

- Vials are manually loaded into the system prior to starting a process run.
- The system has the following capacity:
  - 1 input rack containing 96 vials
  - 3 output racks each containing 96 vials (total: 288)
- Robot arm - used to transport input and output vials between the vial racks and system stations. The robot arm can only transport a single vial at a time.
- Grinder station – grinds the sample material held in the input vials into a fine powder that can then be dispensed. The grinder station can only grind a single input vial at a time
- Dispense station – Dispenses ground material from an input vial into an output vial. The dispense station can only dispense to one output vial at a time.
- Balance - In the dispense station the output vial is placed on a balance so that the actual quantity of material dispensed can be recorded.

User Interface Requirements:

- Start Button – Starts the robot process running.
- Stop Button – Stops the robot process running after completing the current operation.
- User data entry to allow the target dispense weight to be specified.
- Display the status and location of the input & output vials.
- Display output vial weights after dispensing (simulated weight).
- Export button – Saves results to a csv output file.
- Anything else that you think will be useful & nice!