PC Program Flow

Robot Available? — No →

Yes ↓

Update station occupancy details in LabVIEW

No →

Items available in Queue?

Yes ↓

Read one element from FIFO

↓

New Part (or) Test result?

— Test Result Arrived → ... New Part →

Test Result?

— Fail → ... Pass →

Part failed more than one time?

— Yes → ... No →

Write to PLC
1. New Part = FALSE
2. Test Result = FAIL
3. Station # to unload

Write to PLC
1. New Part = FALSE
2. Rerun = TRUE
3. Station # to rerun

Write to PLC
1. New Part = FALSE
2. Test Result =PASS
3. Station # to unload

Write to PLC
1. New Part = TRUE
2. Part Adapt. Plate. Size
3. Part Disp. Size
4. Station # to load
5. Flange Size

Write "Task Available for Robot = TRUE"

No →

Robot Unavailable?

Yes ↓

Write "Task Available for Robot = FALSE"

This acts as acknowledgement for the given data

When robot becomes available, and then becomes unavailable, it means that, robot has received the commands and started acting for the commands.