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Turning On:

1. Ensure files are in order
2. Ensure the acquisition plunger is all the way down
3. Ensure the y gears are aligned for the horizontal movement
4. Turn on the pis
5. Remove the cap from the pH sensor
6. Manually move pH sensor to full up
7. Place the base and wells into position
   1. Pushed all the way back against the corner farthest from the buttons
   2. Wells with notch in upper left corner
8. Calibrate pH sensor up/down using manual.py
   1. Ensure correct environment
   2. Ensure connection to Linksys
9. Fill the acid, base, and clean wells and place them into position
10. Place pH standards in the correct wells
    1. Calibration is done within the code (check the code has the correct wells for the standards)
    2. A close-up of a lab

       Description automatically generated
11. Ensure the pH sensor is full up before running

Manual

1. Ensure manual.py has the correct file directory for cellmap.txt
2. Connect to linksys
3. Run manual.py
4. Reset servers
5. Connect via config
6. Send home
7. (can do rest of calibrations)
   1. For pH full down go until the sensor clicks against the bottom of the well
8. File > export
   1. Click on old config file
9. Just x out of manual to close
10. Files Needed:
    1. core.py
    2. utils.py
    3. config.yaml
       1. contains calibrations for stage (acid, base, clean, blot), volume, device offset, pH device, syringe z, stage x offset, stage y offset
    4. cellmap.txt
       1. contains calibrations for the wells
    5. manual.py (for calibration)
11. Environment:
    1. Legolas\_2024
       1. In anaconda prompt: “conda activate Legolas\_2024”
12. Most recent full run file:
    1. LEGOLASGP.py
    2. LegolasDemo.ipynb
       1. Remember to set kernel in jupyter notebooks
       2. Legolas\_2024-kernel
       3. A screenshot of a computer

          Description automatically generatedA screenshot of a computer

          Description automatically generated
13. IP addresses:
    1. 192.168.1.11 (horizontal)
    2. 192.168.1.14 (vertical)
14. Username:
    1. greenleaf
15. Password:
    1. raspberry

Turning off

1. Ensure the plunger is fully down
2. Remove the base
3. Place the cap on the pH sensor
   1. Make sure there is 3.3M KCL with the pH sensor tip fully submerged
4. Turn off the pis