

Meeting #16 (3/24/23) - 1:30 PM - 2:02 PM

### Meeting Notes:

- What kind of data format to send between Pi & Arduino.
- ↳ Use a Struct on Arduino to store data.
- ↳ Figure out which device to do most work in terms of calculation.
- Get started on creating database hosted on Pi with JP.
- Get started on working w/ 20 kg motor.
- Control motors w/ software for better control over speed.

21

Meeting #17 (3/27/23) - 9:30AM - 11:00AM

### Meeting Notes:

- Read articles in Arduino-pi discord channel.
- PWM doesn't seem to be working on DC motor
  - ↳ Might voltage divide 9V instead.
- Will begin sending 3D designs to ZACH for printing.
- JP started on DBMS.
- Apply for FEDC membership.

Meeting #18 (3/29/23) - 8:00 AM - 11:10 AM

22

### Weekly Meeting Notes:

- Will switch from self 3D printing to using FEDC.

↳ Printing will take minimum 1 week.

↳ Self printing has impurities & takes too long to print. Printer fails too consistently to be viable.

↳ Try to print 2 housings to demo if printing continues to cause problems.

↳ Visit FEDC to check out printing capabilities.

↳ Look into outside TAMU 3D printing services.



Meeting #19 (4/5/23) - 8:00AM - 10:30AM

Weekly Meeting Notes:

- Printing was much faster than we thought.
  - ↳ time no longer an issue.
  - ↳ Be wary towards the end of semester, printing might get backed up.
- Look into Microsoft SQL
  - ↳ DB is connected to frontend.
  - ↳ Make sure it runs on Linux.
- look into libraries for Pi - Arduino Communications.

Meeting #20: 10:00AM-1:00 PM (4/7/23)

- Connected Touch Screen to Pi.
- Acquired more 3D modelings.
  - ↳ Motor housing tolerance is too tight.
- Set up Java on Pi.
  - ↳ Figure out how to use serial comms through Java.
- Pi won't connect to wifi.
  - ↳ Tried different SD chip & it works
  - ↳ Download updated software onto new chip

Meeting #21: 10:00 AM - 12:20 PM (4/10/23)

### TODO:

- Download Java JDK package
- Connect DB & UI to touch screen
- Basic Comms between Pi & Arduino utilizing

UI:

- Download JavaFx on Pi.

### Notes:

- Downloading packages doesn't work on campus wifi
- wifi only needed for downloading.
  - ↳ won't be needed for debugging.
- Fix JavaFx on Pi
  - ↳ won't download properly.



Meeting #21 (4/2/23) - 8:00AM - 12:20PM

### Weekly Meeting Notes:

- Top of housing still needs to be printed
  - ↳ Rest of parts look good.
  - ↳ Will print top today
- Stepper motor is accurate enough for rotating base
  - ↳ Can keep track of position w/o extra identifying bit.
- Will use a sliding door mechanism for connecting housing servo to rest of hardware (Pi & Arduino).
  - ↳ Other idea is to spring-load pins to ensure a connection is made.
- Will begin meeting every class period with prof & TA.

### Progress & Tasks

- Got JavaFX working
  - ↳ UI can be displayed on Pi.
- Work on uploading DB onto Pi
  - ↳ Get DB hosted locally on Pi using Docker.

27

Meeting #22 (4/17/23) - 8:00AM - 9:07AM

### Task List :

- ☒ Convert DB dependant code to memory data types/hard code values
- ☒ Woodwork a base for the device
- ☒ Get Stepper motor working
  - Can now run all types of motors
- ☒ Get all motors running simultaneously
- ☒ Organize hardware in wood frame to fit
- ☒ Fasten Pi to wood frame so it's stable
- ☒ Begin Serial Communication between Pi & Arduino