

Motivation

- In 2022, about 1 in 10 babies born in the U.S. were premature.
- 25% of term infants and up to 80% of preterm issues are known to suffer from feeding issues.

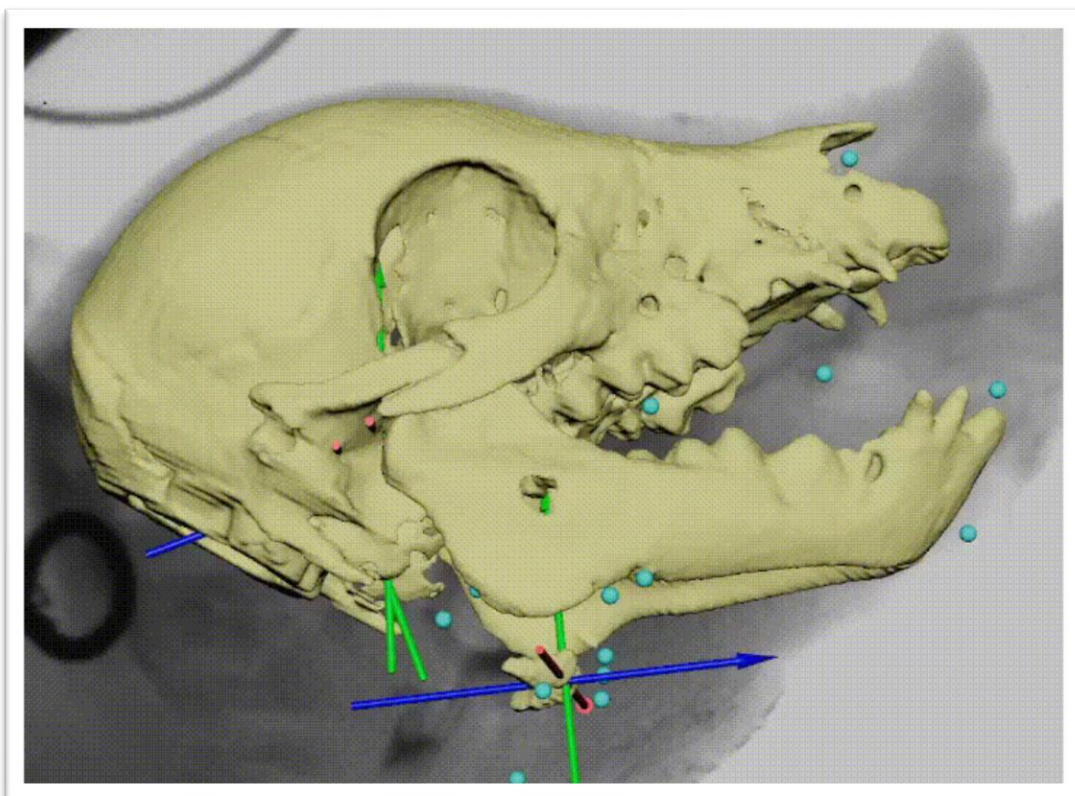


Figure 1: Lab Xray of infant pig drinking from a bottle

Prototype Overview

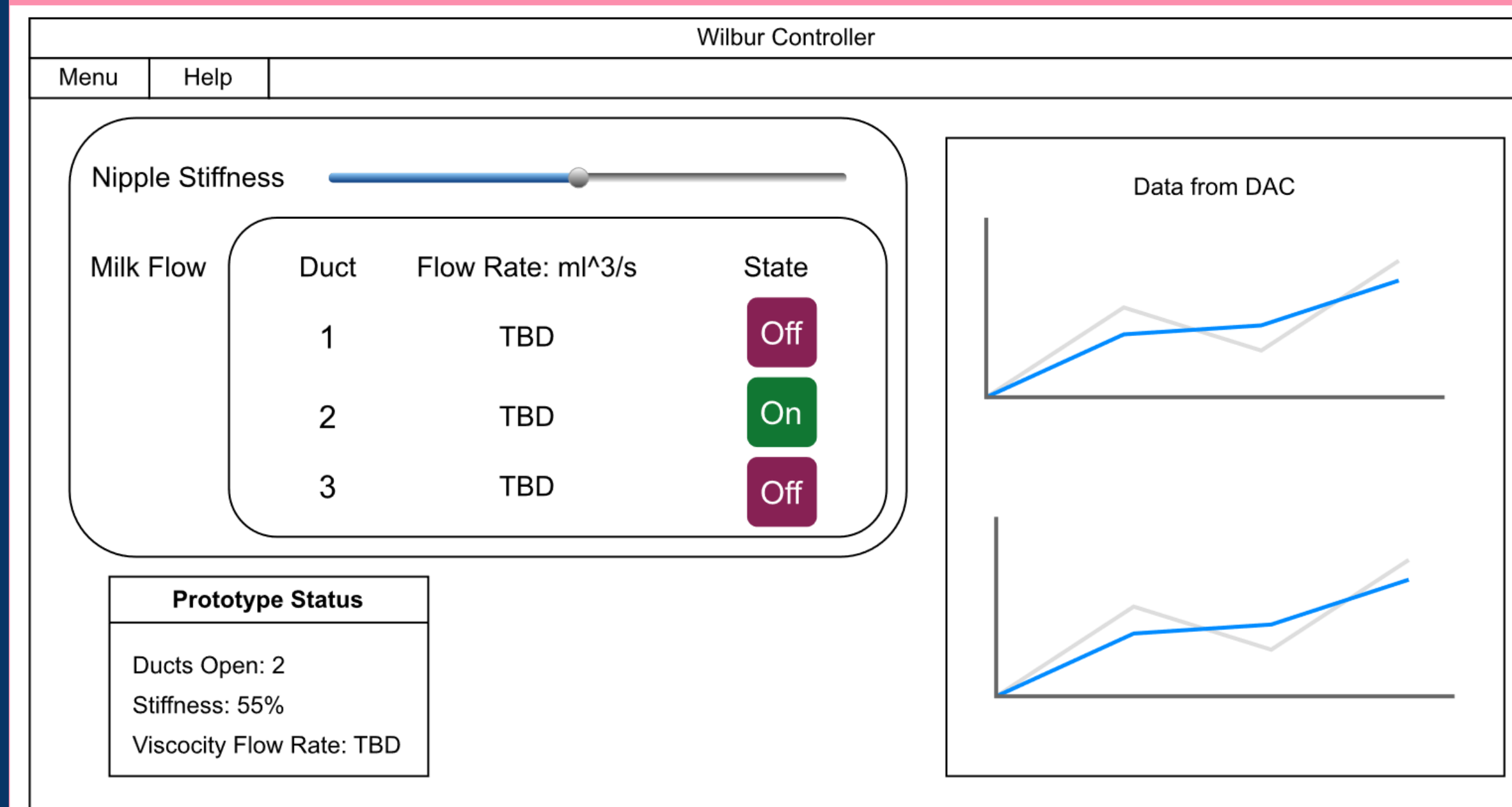
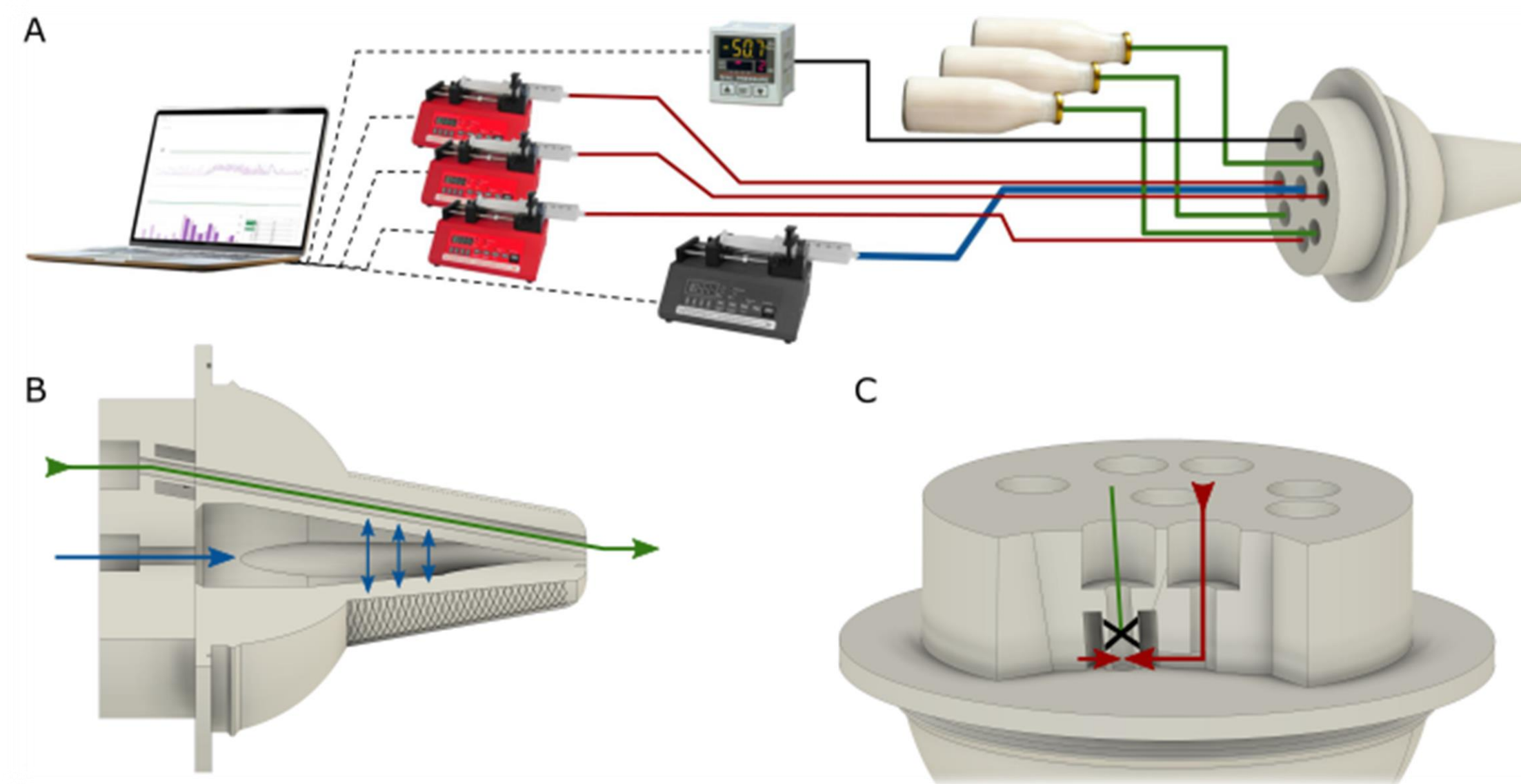


Figure 2: User Interface Design

Figure 3: Robotic Nipple Prototype Design



Architecture

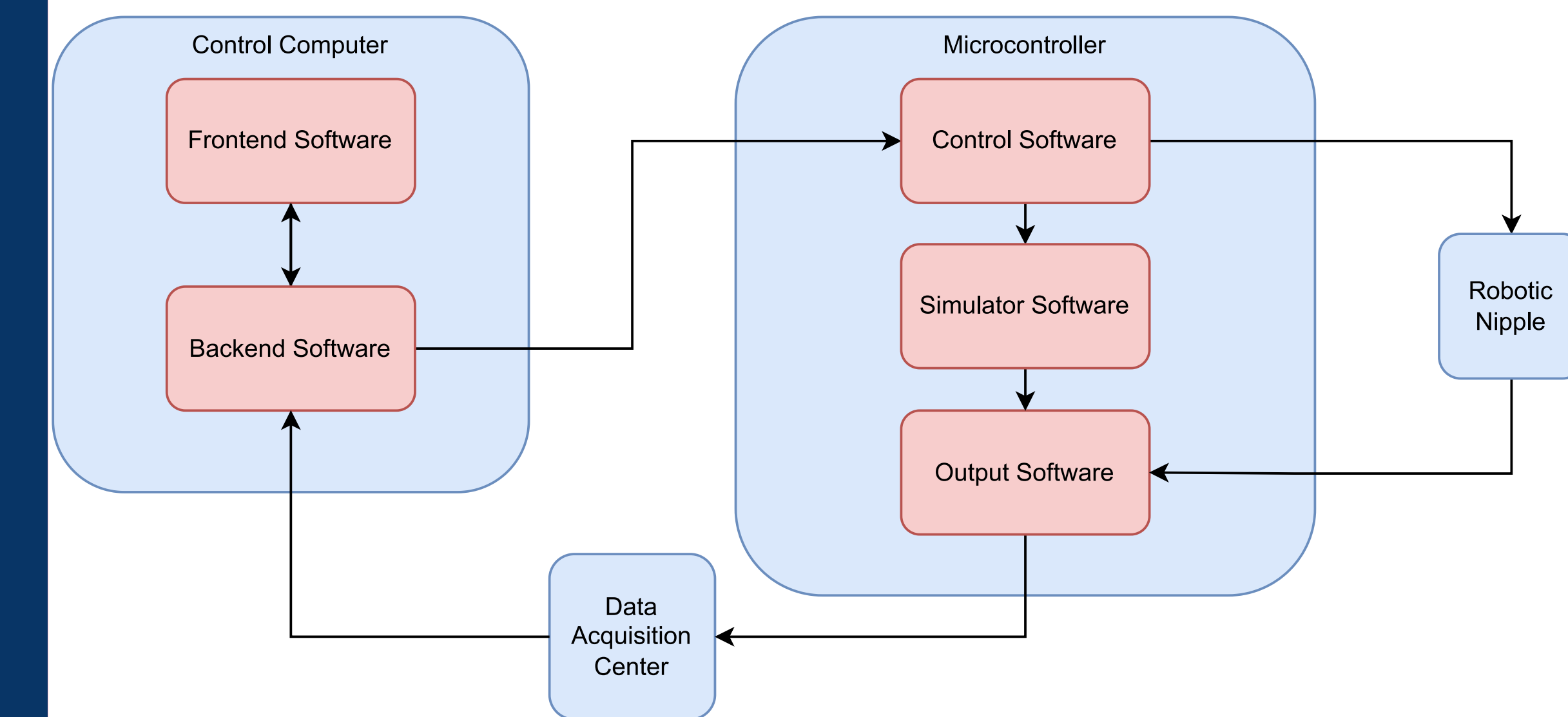
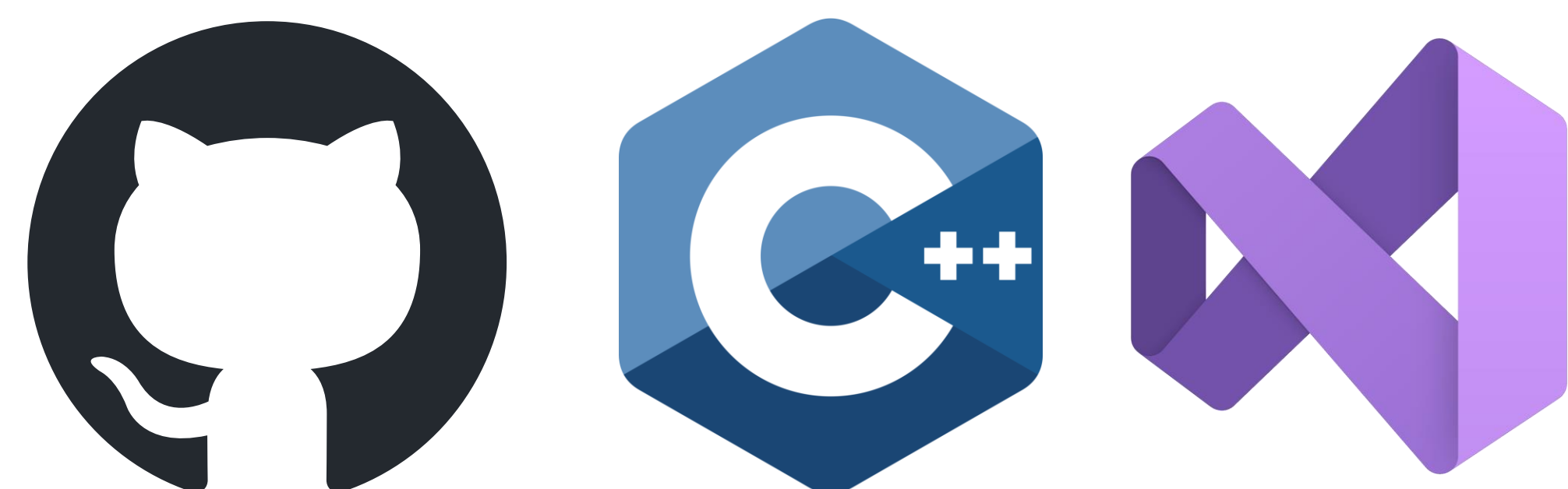


Figure 6: System Overview Diagram

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Technologies



Challenges

- User Interface Design
- Develop Microprocessor and Back End code
- Integrate product with existing technology

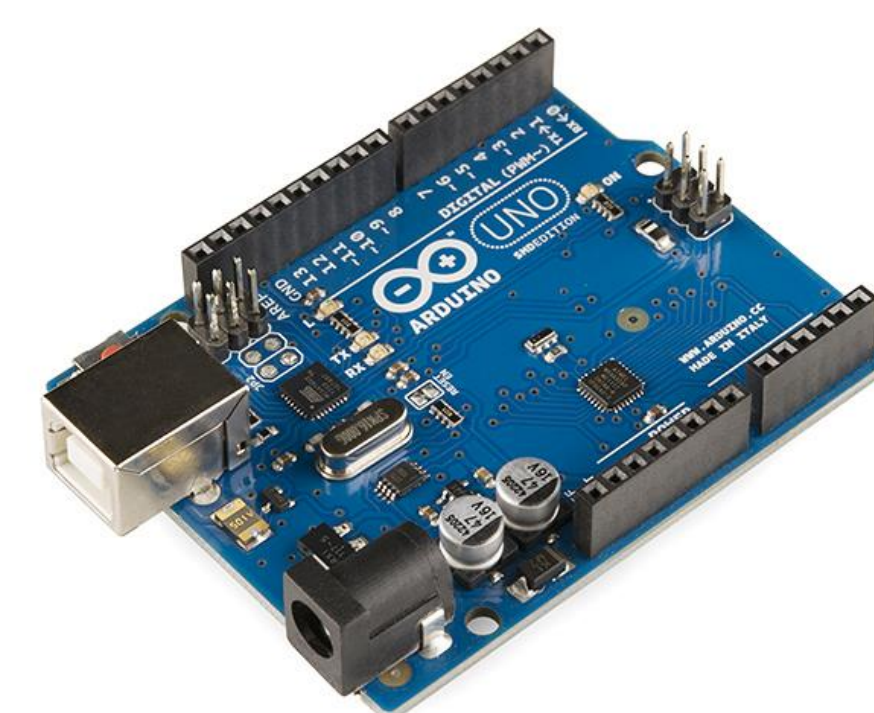


Figure 4: Arduino device

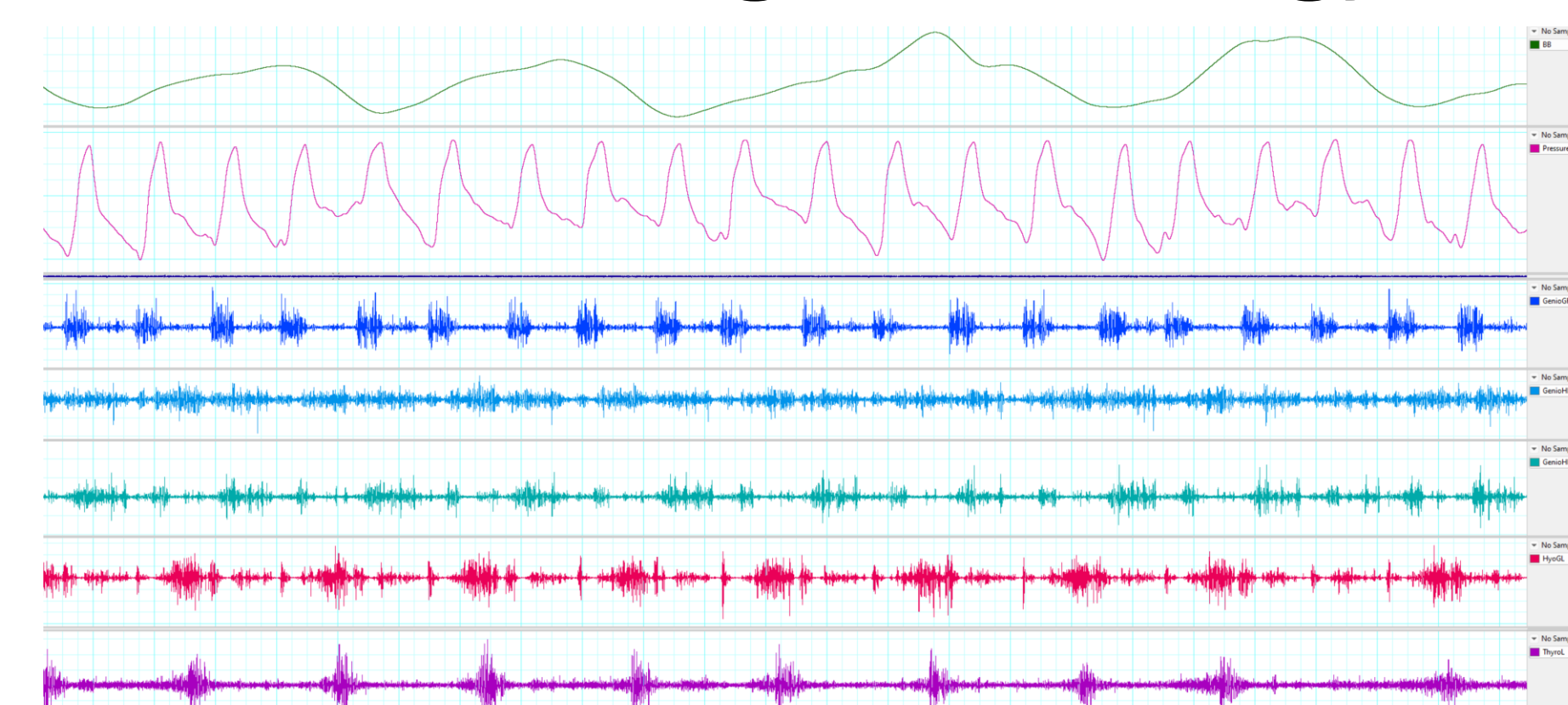


Figure 5: PowerLab output display

Next Steps

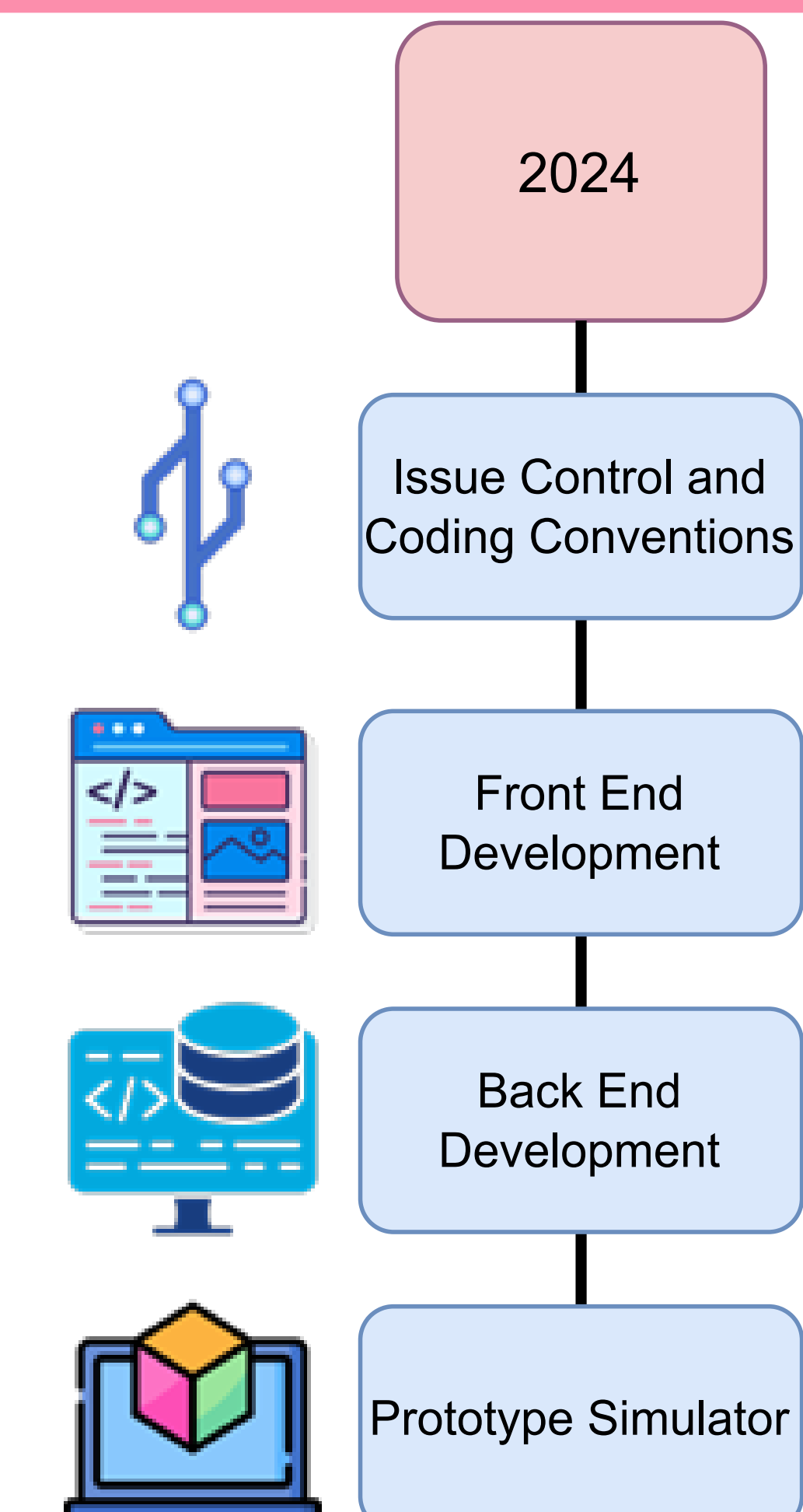


Figure 7: Second Semester Timeline