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**Que Project Kickoff Summary and Discussion**

**Introduction**

This document outlines concerns and considerations to be discussed before the start of work on the Que Aromatherapy Project by Tyler Hight (beyond senior design).

**What I’ll Do**

* Make pendant marketable and manufacturable
* Integrate smaller, more effective, and more power-efficient parts
  + Power consumption calculations
  + Designing aesthetically pleasing and small pendants
* PCB design
* Firmware
* App
* Statistics-based testing
* Create several pendants for user-testing before manufacturing

**Current Design Ideas**

* 3D print TPU for child pendant (non-toxic, flexible, and durable; may withstand chewing)
* Non-electric diaphragm/flaps/etc that open from air pressure generated by pump/fan/etc

**Documentation**

* All documents and code will be uploaded to GitHub.
* Plans and past progress will be recorded in regular A3 reports, with a minimum frequency of 2 weeks.
* Purchases will be kept on an Excel sheet and receipts will be recorded.

**Manufacturing Considerations**

* Keep close contact with the manufacturers to ensure that the design will be cheap to manufacture.
* Focus on simplicity without overly compromising on functionality to make manufacturing easier and cheaper.

**Main Feasibility Concerns and Points of Research**

* PCB cost, design, and manufacturability
* Firmware programming on microcontroller
  + Bluetooth
    - Direct connection to watch so that app isn’t mandatory
  + App communication
* Size of pendant – parts need to be found that makes the pendant appealingly small
* Ensuring cheap and scalable manufacturability