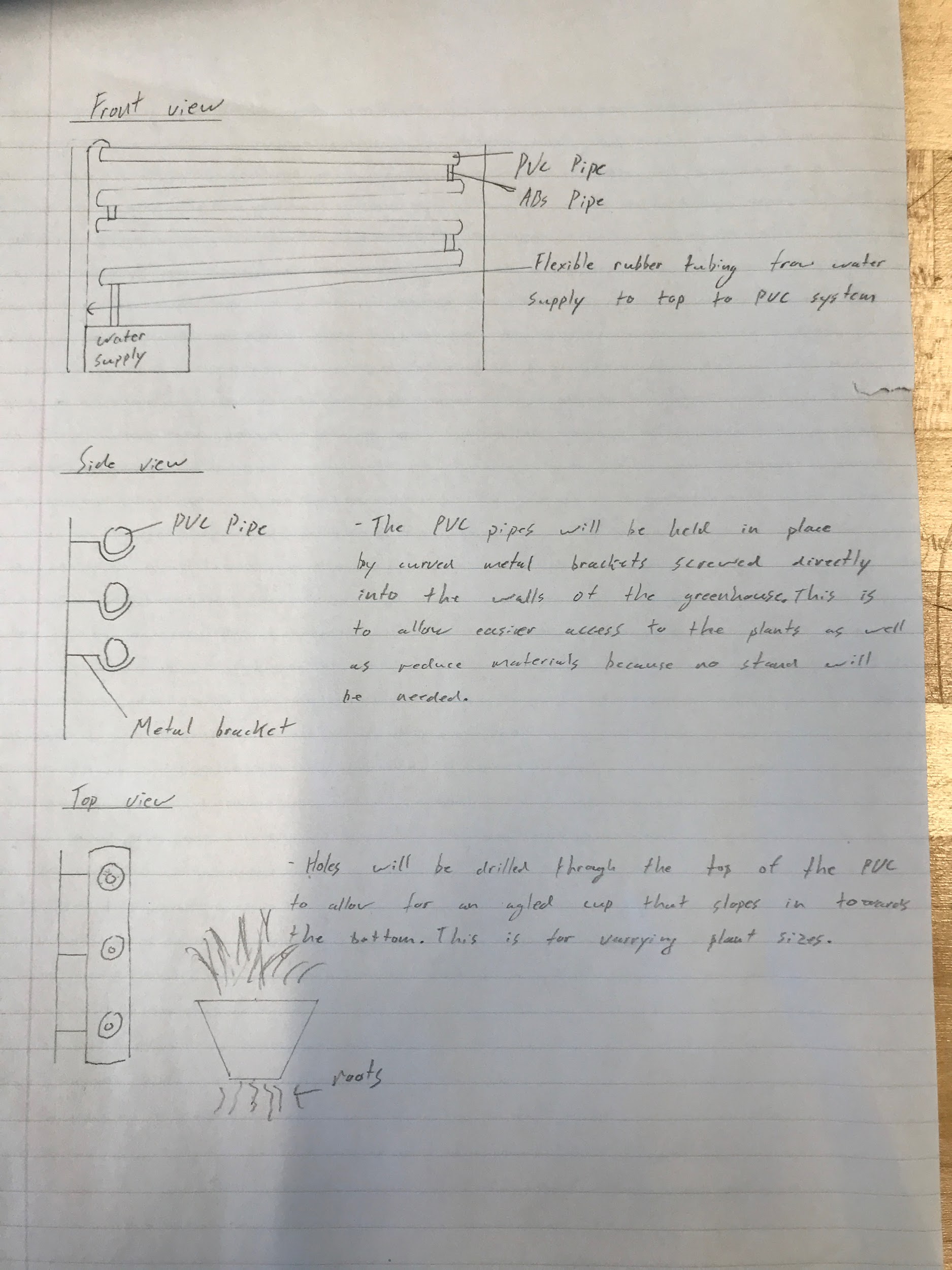
Deliverable F - Prototype 1 and customer feedback

**Original Prototype**



* The sketch to the left is a detailed image of our first proposed prototype heading into the client meeting. We decided upon this design that featured three pvc pipes fixed directly to the wall of the greenhouse to save on the cost and time of building a stand as well as maximizing the space in the greenhouse for the best access to the plants and leaves the client space for storage. On either side of the greenhouse we will install this system of three pipes to allow for 18 plants having 3 holes per pipe. The plants will be held in the holes by cheap plastic cups with perforated bottoms to allow the roots to reach the nutrient filled water. The cups will slant inwards towards the bottom to allow for various sizes of plants. The piping system will be secured to the walls using two metal clamps per pipe. The water supplied to the system will be held by a plastic storage bin and pump through flexible rubber tubing by a 12 volt pump. The same tubing will be used to connect each pvc pipe and used to send the water back to the storage bin. The water will be supplied by the runoff rainwater from the roof and collected by gutters and sent to the storage bin using flexible rubber tubing.

**Client Feedback**

* After meeting with the client we found that many of our ideas and overall design were very good. Despite this the client did raise a few questions about our proposed hydroponics system. The first issue was our source of power. We had suggested using a car battery or something similar but the issue of price and sustainability of a battery ment looking elsewhere for power. Because the greenhouse would have to use its own power source this ment our only option is to speak with professor Majeed about using solar panels. The second concern the client had was nutrition for plants. At the time of the meeting we had not been informed that we would be selecting what would be grown in the greenhouse. We did not have a clear plan for what fertilizer to use and how much. We then began researching fertilizer for growing lettuce.