**Shang Jing:** Jeremy, I have a girl I like, but I don’t know what I can do to make her notice me. What should I do?

**Jeremy:** Why don’t you water her plant using PlanThing?

**Shang Jing:** What is PlanThing? (walks off stage)

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Good afternoon Prof Datta and classmates.

\*click\*

Our project, PlanThing, aims to incentivise green behaviour of a community through the use of a communal smart garden. Many people like to own plants, but often forget to take care of them. Our solution is an interactive “live” wall that allows people to take care of each other’s plants and provides detailed statistics for each plant.

\*click\*

The current solutions for smart gardens consists of smart gardening kits, or small hydroponic plant pots. We found that these solutions do not always cater to the specific needs of plants, and do not do a good job at incentivizing and promoting green behaviour.

\*click\*

We propose a solution for promoting communal and green behaviour. Members of the community are responsible for the planting, harvesting and adding of fertiliser to the plants.

PlanThing is a vertical farming wall consisting of modular plant pots. PlanThing will make use of light, humidity, and temperature sensors to track the surroundings. It will keep track of the individual statistics of each plant, and calculate how much water or nutrients each plant requires based on the conditions of the surroundings.

PlanThing will make use of a frame built out of wood. The main components are a water bath, fertiliser stash, and tubes that bring these to the individual plants.

\*click\*

We will make use of a Raspberry Pi to control the system. This keeps track of the data of all plants in the system and provides indicators for the needs for each plant. Users are able to name a plant when adding them, and the owner of each plant is indicated. This GUI will be implemented in Kivy and displayed on the Raspberry Pi Touch Screen provided.

\*click\*

The tools that we intend to make use of for this project are as shown. Notably, we will be purchasing humidity, light, and temperature sensors, as well as water pumps for water and fertiliser. For the frame, we will be making use of varnished wood to provide an aesthetically pleasing and waterproof finish for the frame.

\*click\*

After researching on the prices of the individual components online, we came up with a list of locations to purchase these items which are linked in the slides. We will be purchasing our sensors from Taobao, and our relay and electronics sensors will be recycled from our previous design projects in order to recycle and reduce e-waste. Our budget for the entire project comes up to approximately $35.

\*click\*

For the allocation of work, our group will be tackling all the tasks together, but individual members will be in charge of the tasks. Shang Jing and Samuel will be in charge of the prototype, while Caleb and Pei Zhang will be in charge of the poster. Jing Yu will be in charge of the code. These members will be in charge of managing the deadlines and of allocating work for each tasks.

Our group has laid out tasks for each week as shown. We will be starting prototype of the physical components this week and the next. Once our electronics arrive in week 8, we will start prototype of the main system and begin coding. Finally, in weeks 11 to 13, we will be working on our poster, as well as test and polish our system.

That concludes our presentation. Thank you all for your attention.