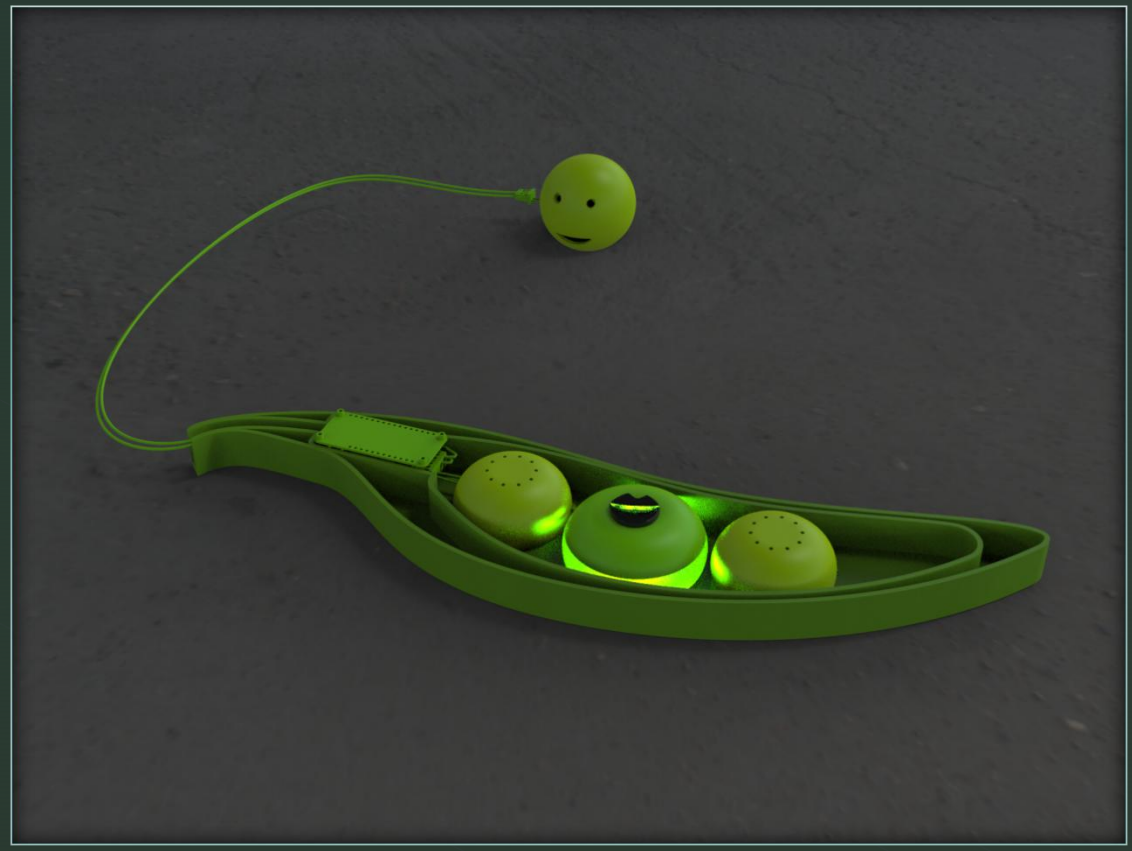
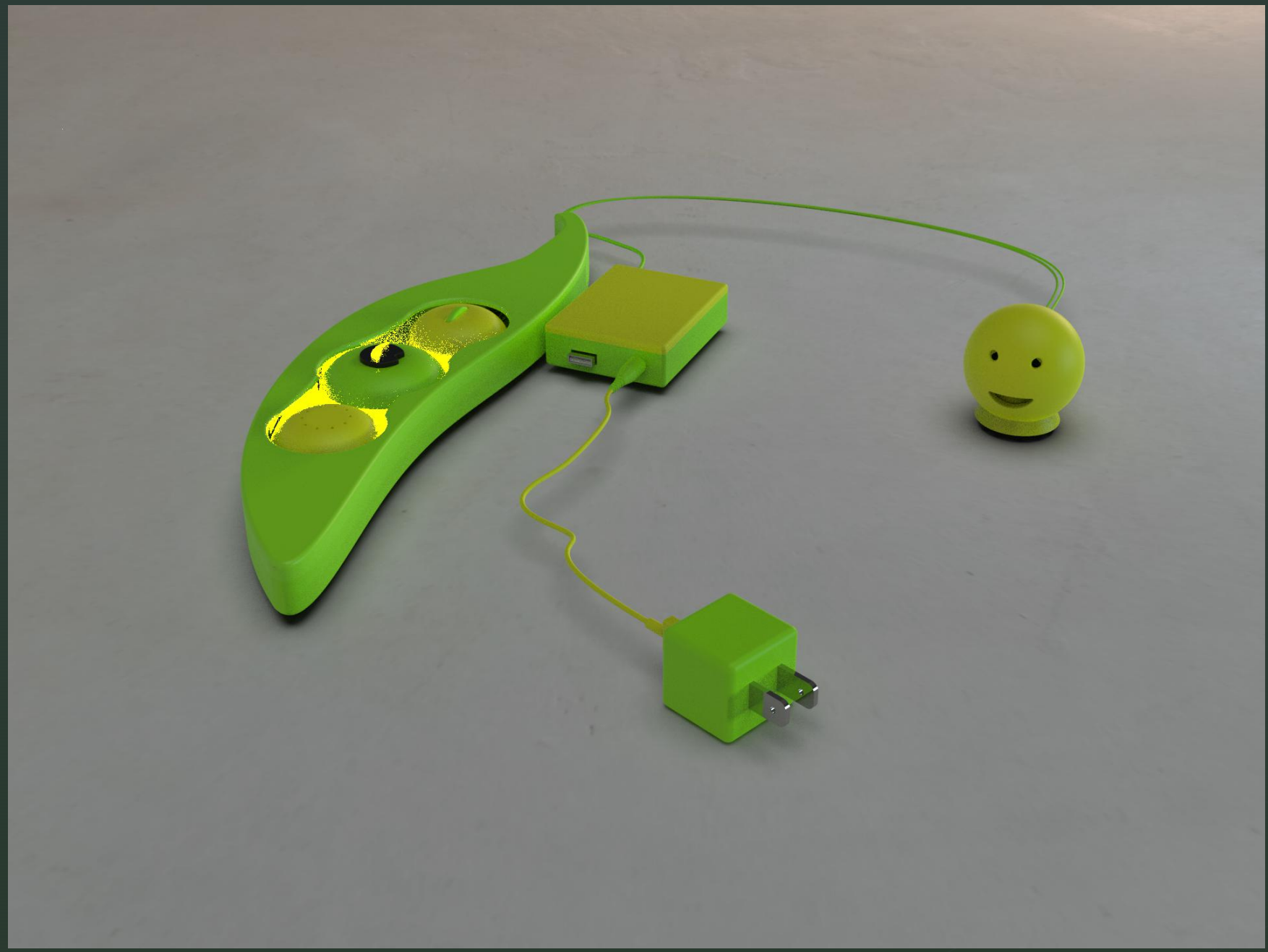
Designed By Yinghao Huang

MINA BUTTON DESIGN





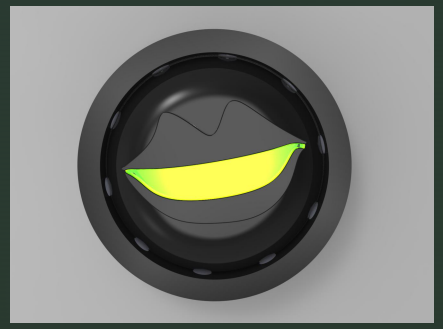
TASK：

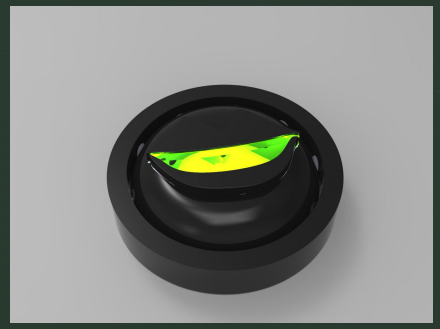
1.the “Mina Button” to be pressed whenever Mina messes up on something.
2. Main enclosure installed inside the office, secondary enclosure installed outside, wires run from a hole drilled through the wall
3. The entire front face should move when pressed
4.A ring of light should be lit up on the front face with the LED. Bonus points for making the
light shine around the side of the button. Hint hint: look up light pipes
5. Assume all connections can be flywired for simplicity
6. Please include all components in the final CAD assembly
7. Design for injection molding

Mina button is a communicate button which can link the team member together, it is a button for task failure or mess up something. So, my design should have some emotional elements like a smiling face or crying face. My mind start go into a face logo design.

- However, with a sorrow face is not a good way to solve task problem in a team. What we need is better communication, so each team member should be connected together as soon as a problem happen. So that we can solve our problem as soon as possible.

- Hence, I bring in a concept, talking in team. We need our mouth to talk with each other. So, I made a decision to design the button as a lip, and the snappea logo can be transfer as the center light in the lip, when the logo light up, it give people a feeling like. We should communicate people with an open mind, don't hide, it makes things better.





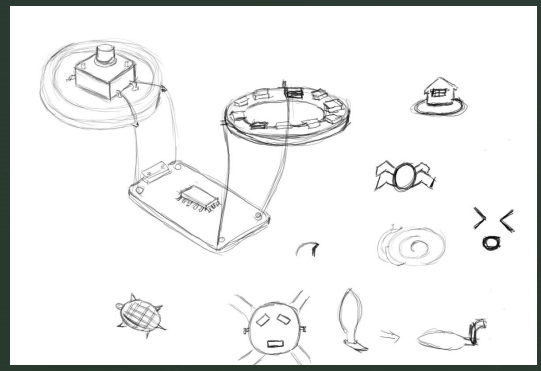
Next step is making things functional, I have few things here, sound board, switch button, speaker x2, LED light ring, controller.

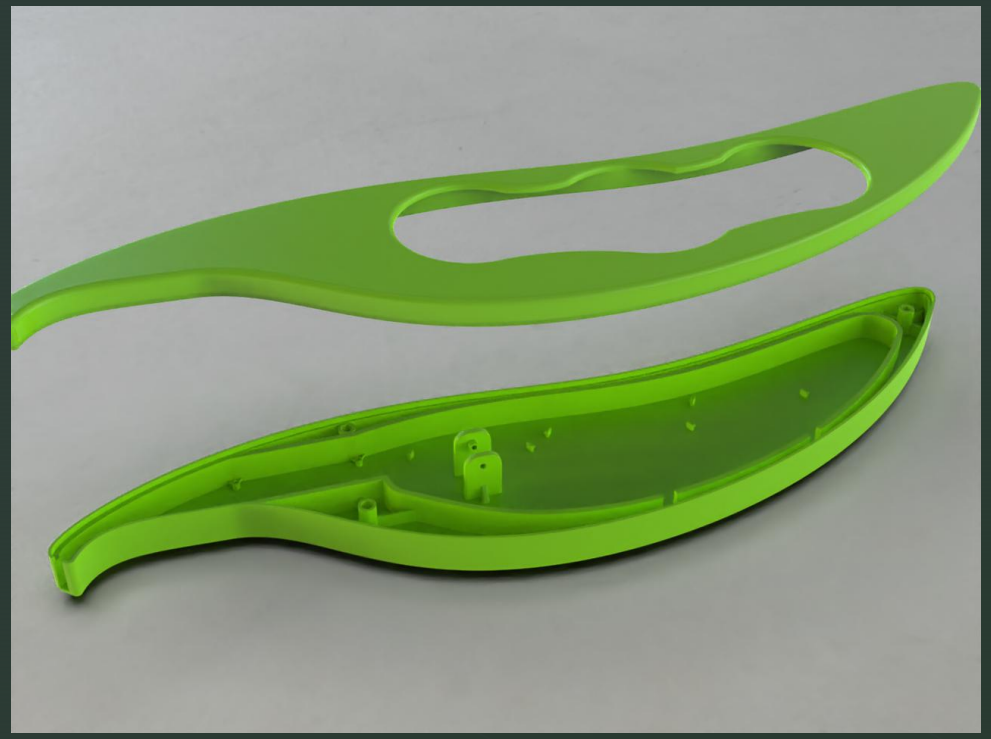
It requires to make a main enclose and second enclose. In order to make things easier to be joined together. I planned to put the switch, one speaker, sound board, controller, LED all together for the main enclose.

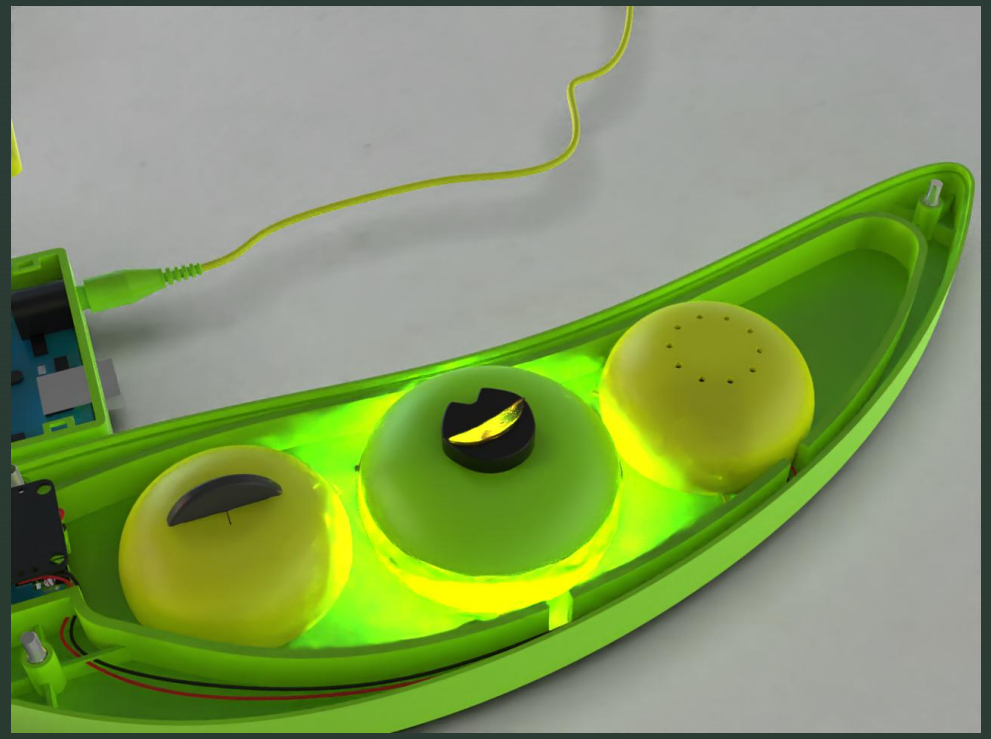
Besides, there is a thing I thought was left is a power supply, so I need to design a case for the power supply.

All the task above should be :

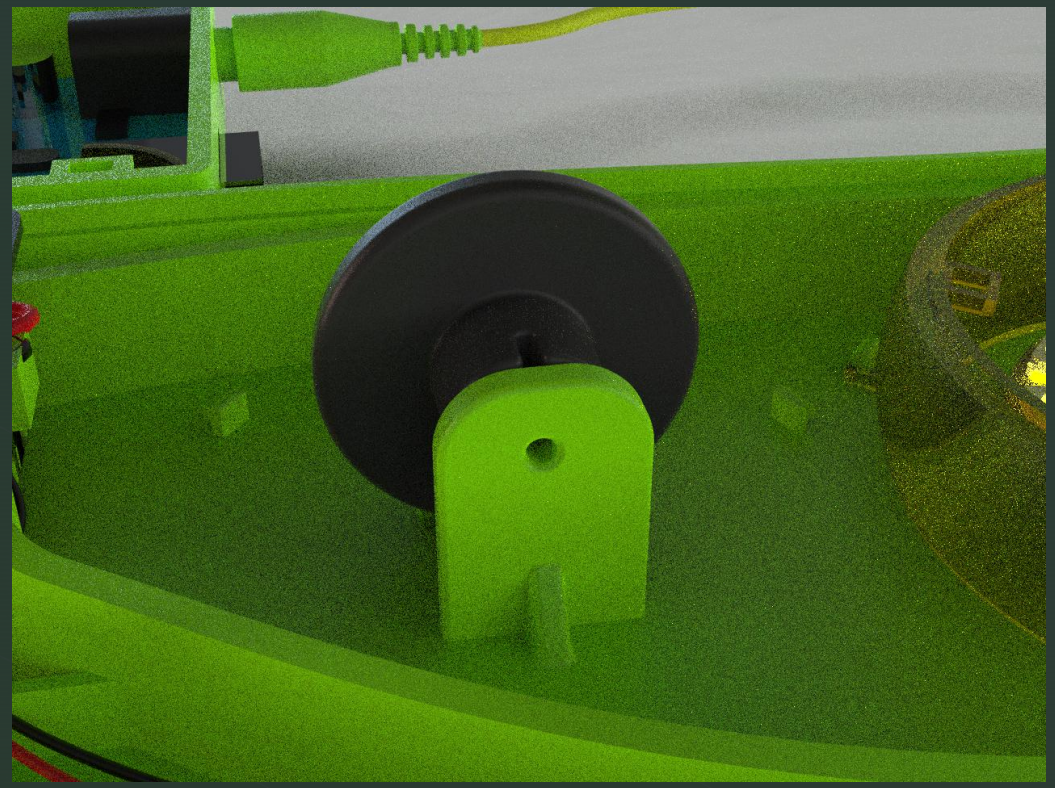
1. Plastics parts for the button switch, (need translucent material for going though the light)
2. Plastis case for the main enclose (including the circuit board, button and LED ring)
4. Plastics case for second enclose (only speaker)
5. The case for the power supply circuit board, cable stuff)



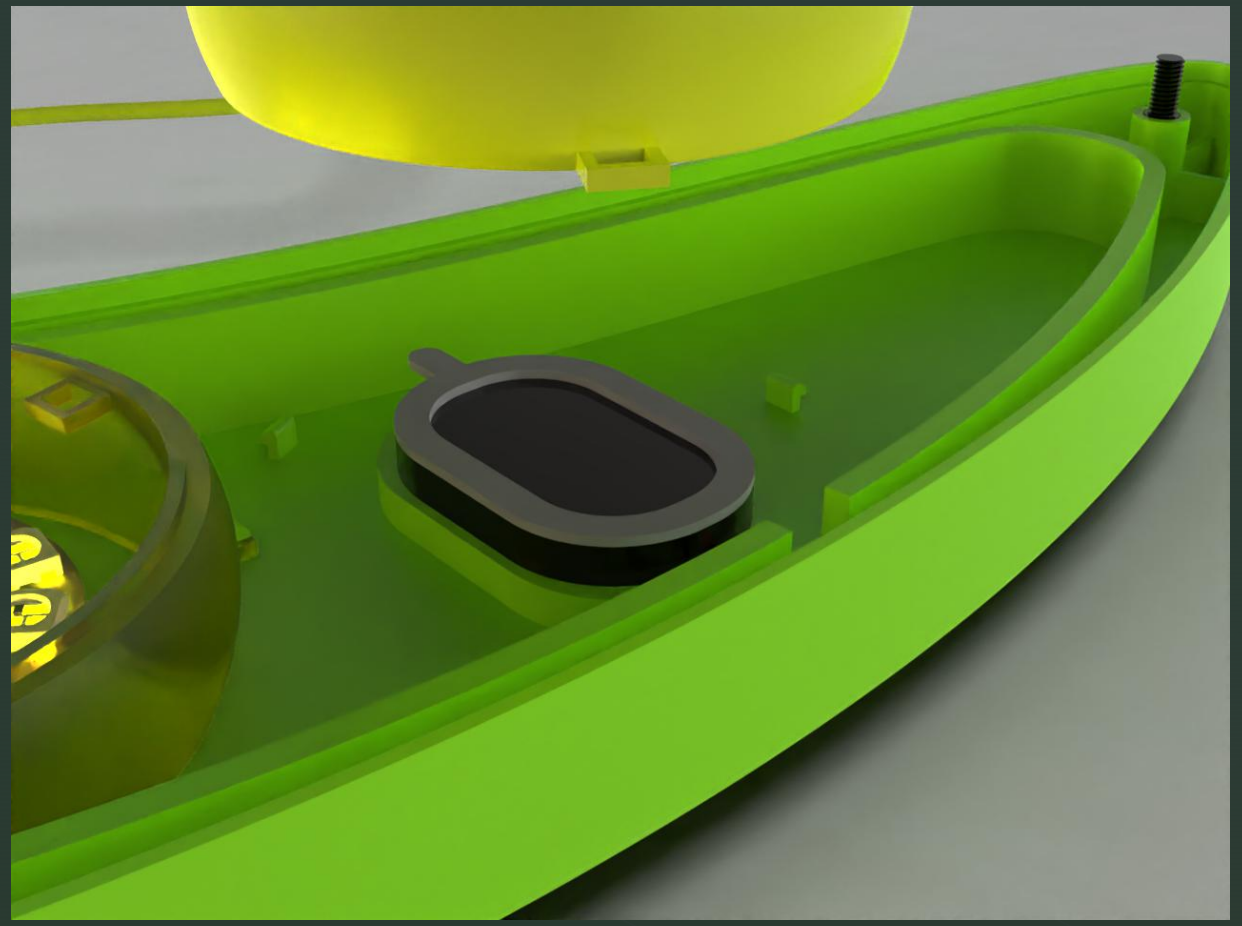




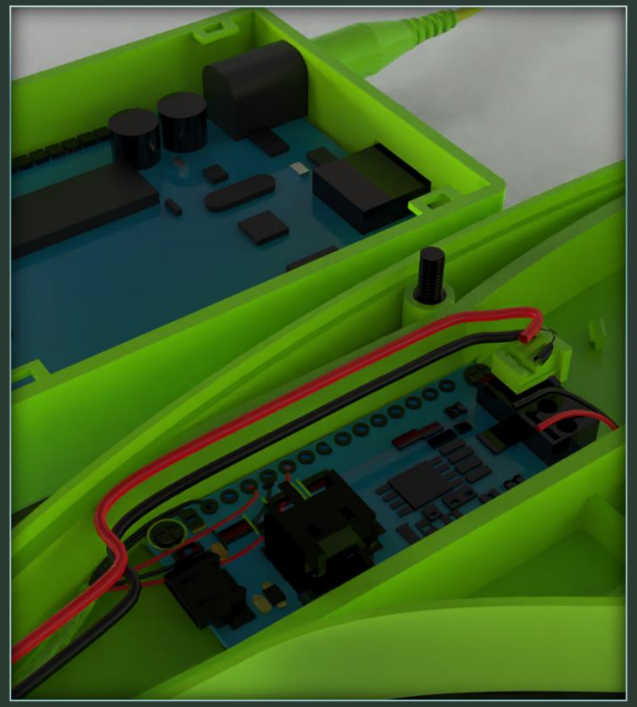
My main enclose design as a snap bean, the button is in the main place, and the left side is designed as a cable roller, the right side is the place for speaker, the collection between the base case and the button plastics parts use plastic faster structure. When the button has been pressed down, the switch will control the light bright up. The plastic case of button consists of four part the lip plastics , spring, upper case and down translucent material case, they are designed connect with faster.



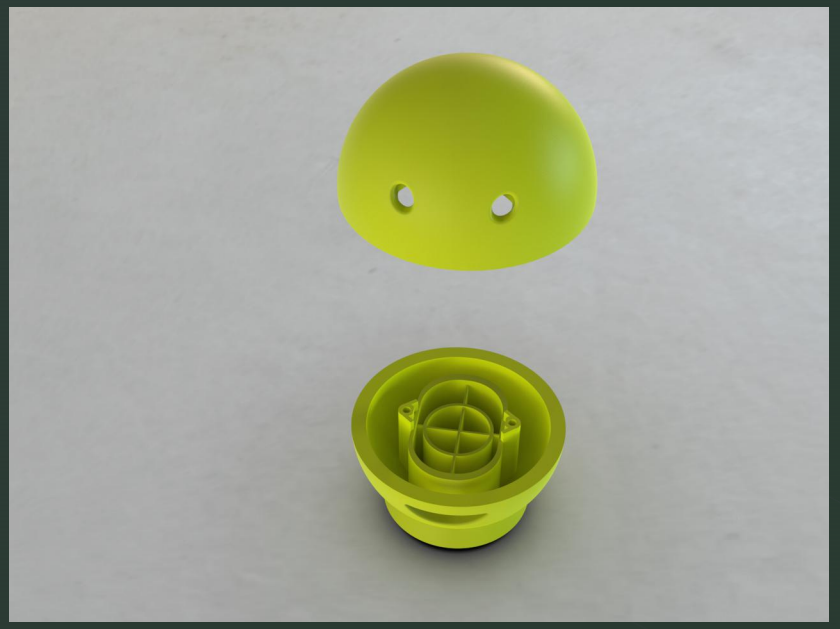
Roller design for the cable collection

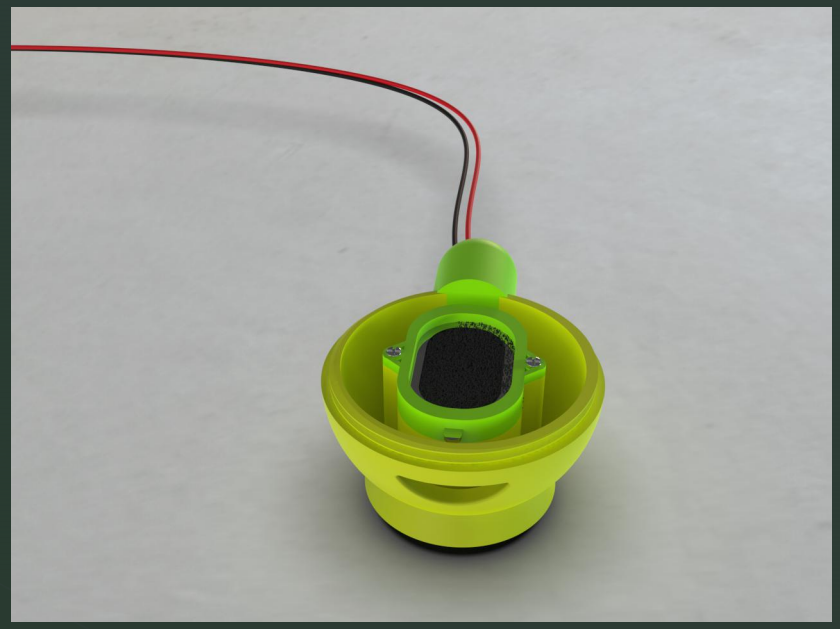


Main enclose speaker installation design

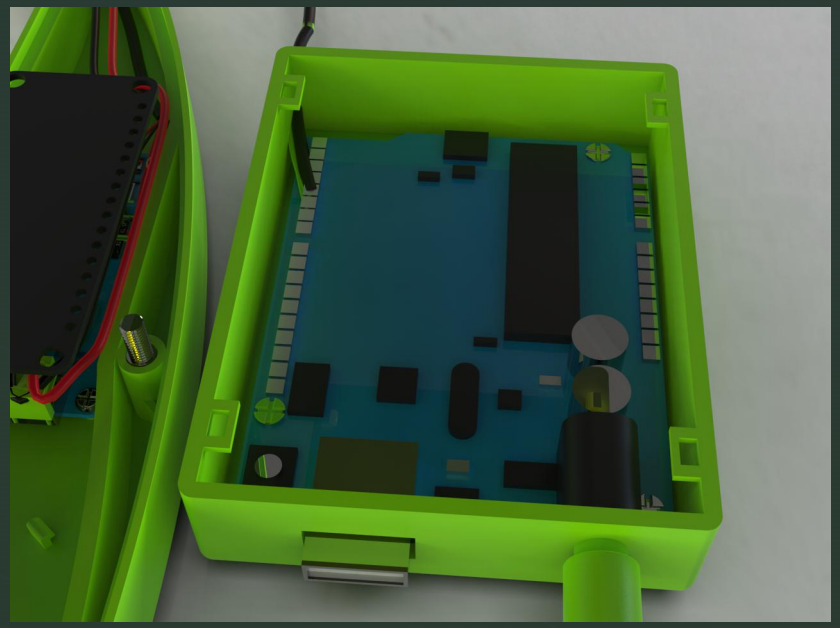


Sound board will be fixed at the down case, and the controller will be fixed at the upper case,





Design of the second enclose , which is place in the office, I design as a smiling face, and some plastics strength net structure for the installation area， use flat head screw and a plastic cap to fix the speaker.

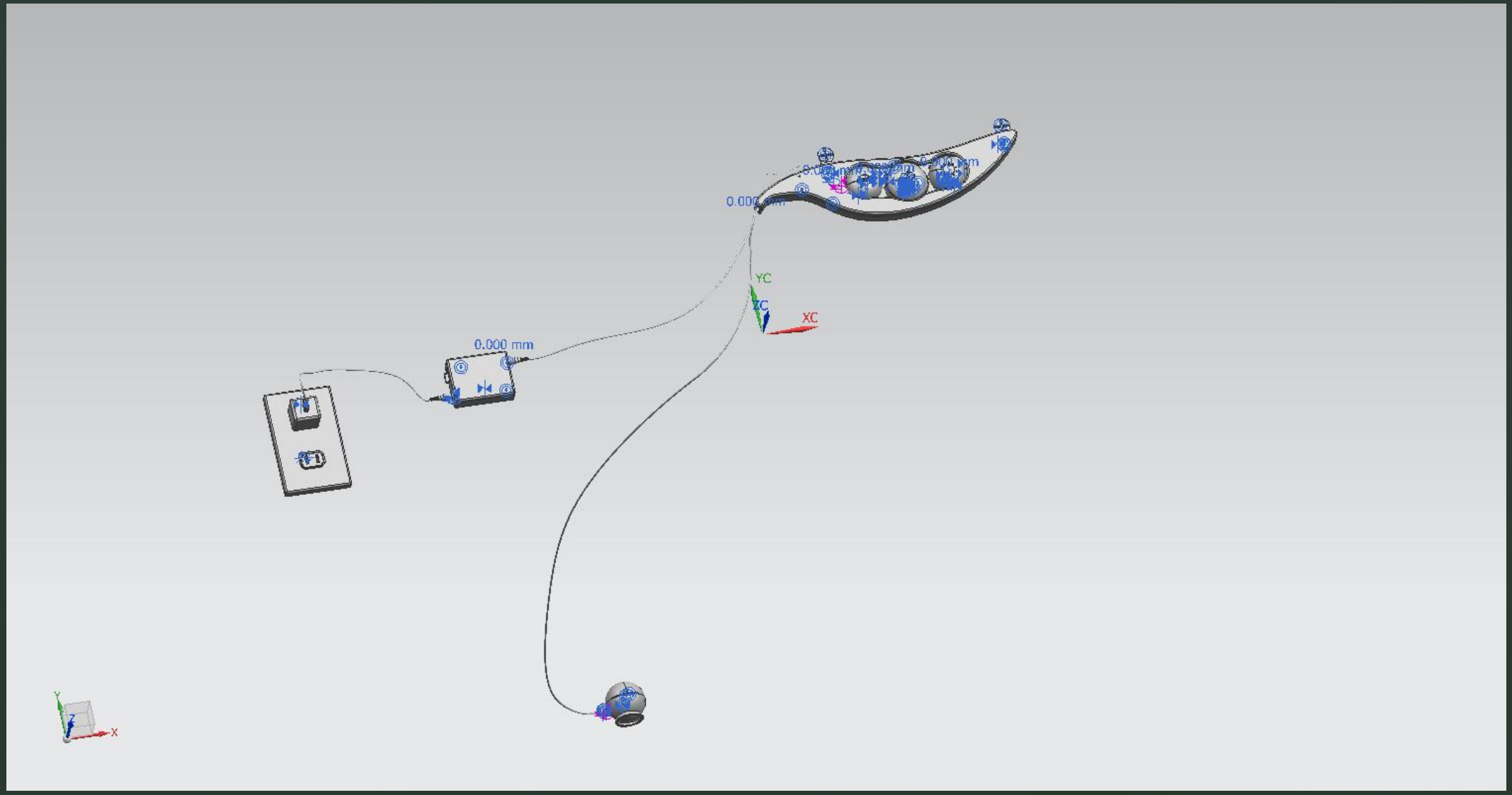


The power supply case I have design out of the main enclose to avoid the overheat problem, and the size of the power control board is too big , so I design it as hanging outsid the main enclose.

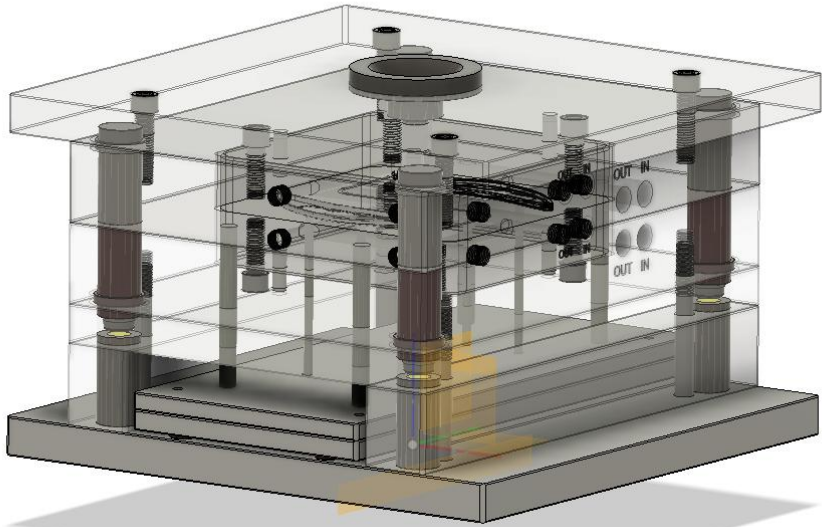
Main enclose environment scene render

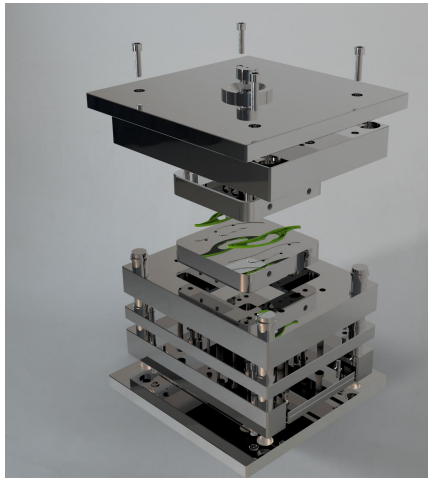
Second enclose environment scene render

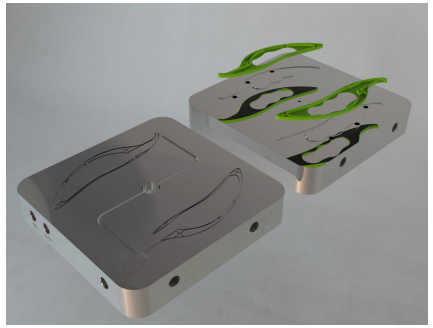
Fully Assembled with Constraint



INJECTION MOLDING DESIGN







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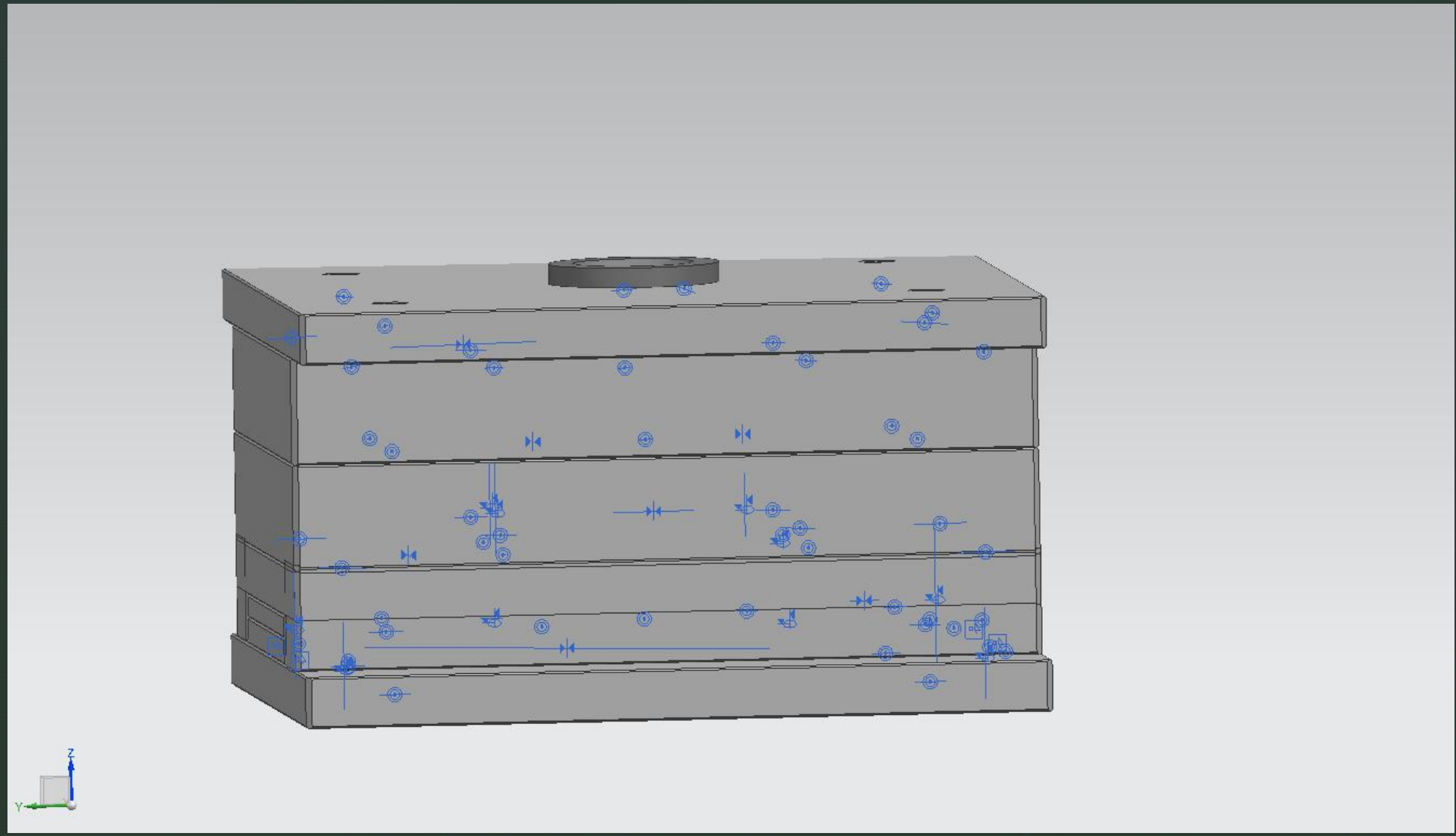
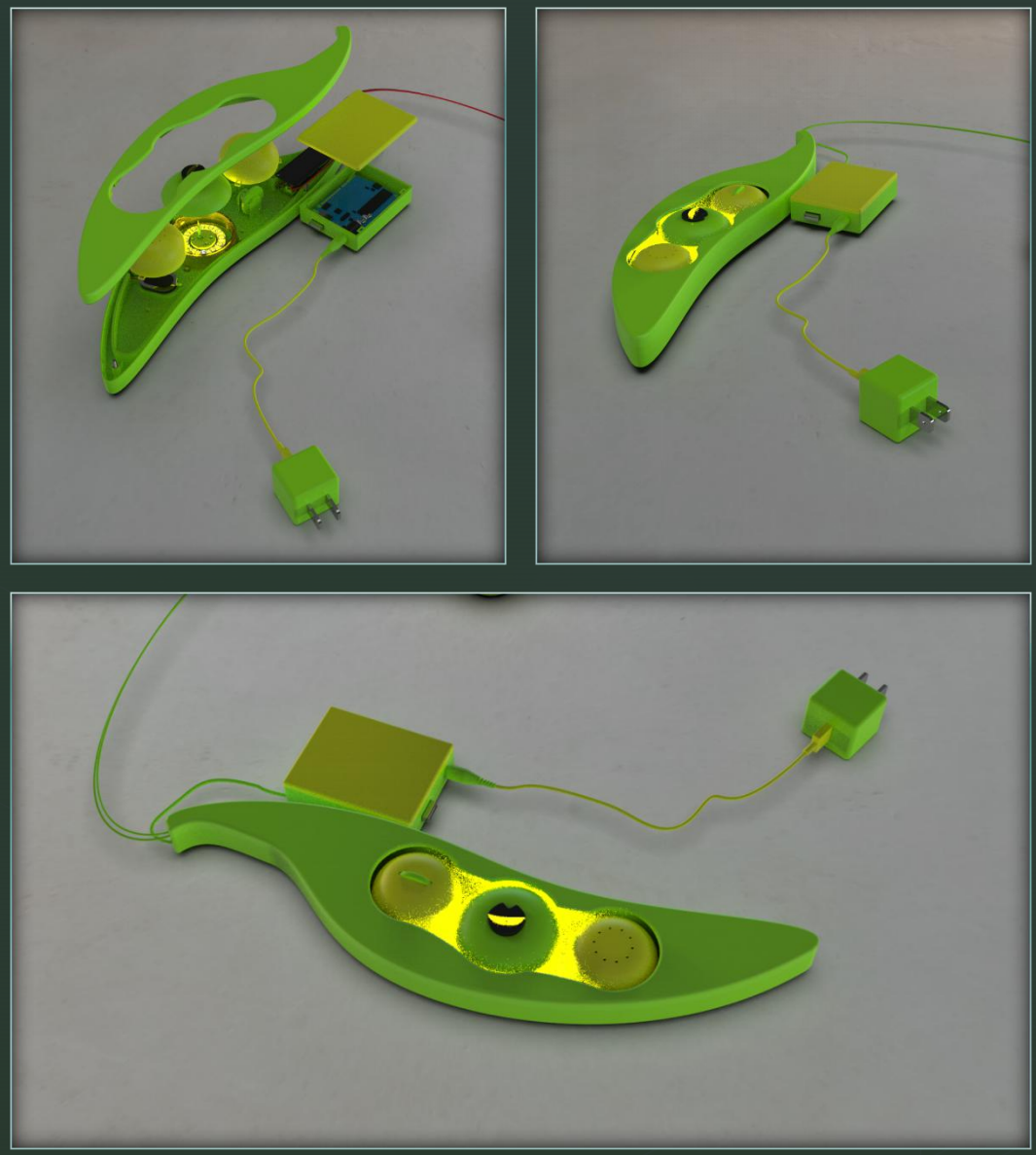


Final Vision

Mina Button, makes team member highly connected and communicate at one, button in the middle represent the important of communication, press it will light up, and the message can be sent to the slack channel at once.



Thanks for watching!

----Yinghao Huang