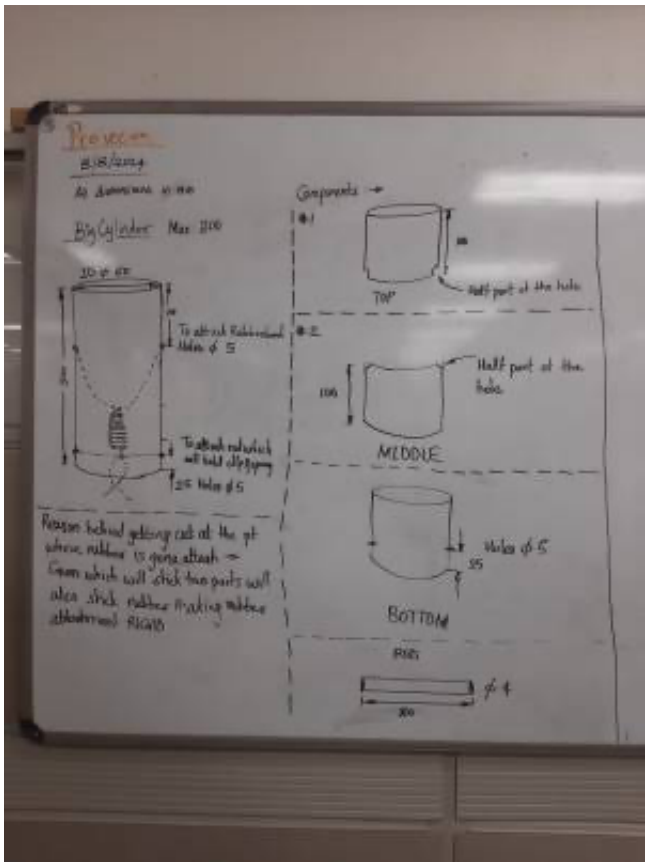
DASL Wiki

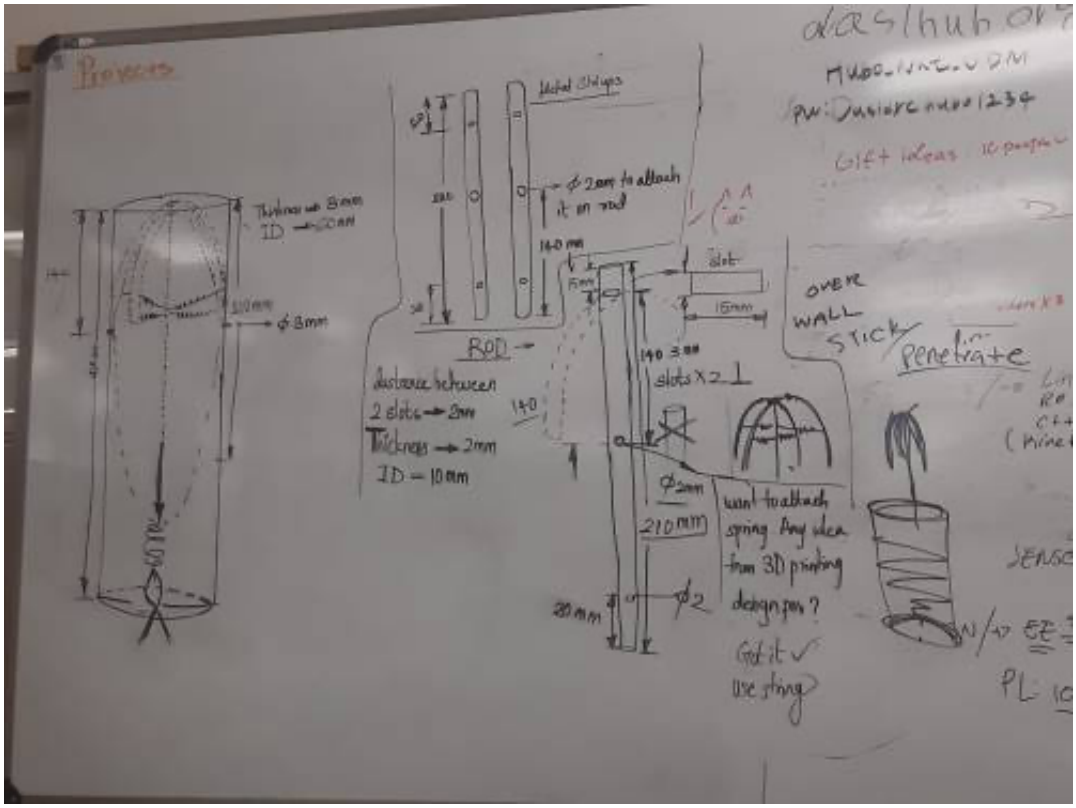
Week 3 : Solve until you get it !

Photo of the week :

Touching the hardware, getting friendly with it, knowing about its minute details was all new to me. First time I handled the hardware named Raspberry pi. In my engineering school I have heard about this a lot many times from my seniors but never worked with it practically.In my end effector , I have to control the motors as I want.Thus I need to incorporate Raspberry pi on my end effector. To start handling raspberry pi , I need to have strong fundamentals in ROS. as I mentioned in my earlier blog it was all new to me. I got stickup multiple times in between while setting up the raspberry pi. Francis helped me to install OS on Raspberry pi.

Projectile launcher





Another part was projectile launcher. I redesigned it completely. After redesigning , as usual created 3D CAD models in Fusion360 and sent it for 3D printing, but alas !! Dimensions were too big to big to get printed. hence I redesigned it and made its separate parts. I wanted to learn about how to get stuff 3D printed, that is how to send drawing's G-code and M-code to respective machine, how to start 3D printing. Tommy taught me hoe to do all these things. I first downloaded the OrcaSlicer app. We have to import .stl files of fusion360 model to it. Tommy helped me to set up two 3D printers in my app, Zig-zag and Pacman. He said that paceman gives precision but Zig -zag saves time. It was all fun and here is my 3D printer printing my stuff ….

Manipulating configuration of motors using ROS

I took help of Zahir to solve the error. after visiting the code, baud rate mentioned in the code was mismatched with the actual baud rate of the motor. similar case was with the IDs. My motor IDs were 2 and 5 but mistakenly motor ID 10 was mentioned. After editing all these stuff I finally was able to manipulate configurations. Initially I played with only one motor and tried changing its speed. After that I wrote a code in python which asks input to user about the motor ID and then asks the required speed. I was super happy after doing this.

Classes

Our C++ class was ended but Zahir gave us some problems to solve, those were quite hard to solve. CNC class started after that . On the day one we learnt about the CNC milling. Day 2 of the class was much more interesting. We learnt about wooden cutting CNC machine Shapoko ! We actually gave one drawing means its G-code and M-code to the Shapoko and got one small piece carved ! I enjoyed a lot !

Unwinding

International Office of UNLV planned one two days one night trip to Arizona . First we went to Zion national park. It was just an awesome experiment. Walking into the water and diving inside it was the cherry on the cake ! After that we visited Horseshoe belt. It was just eye pleasing. Natures beauty was mesmerizing. We had a wonderful dinner with the Korea students. Mixing with them, knowing there culture and participating with them in each and every activity was fun !Day two was devoted to Lower Antelope Canyon, Grand Canyon and then Route 66. Grand Canyon was the highlight ! I learnt one new word which means Incredible. We had a great time together making awesome meaningful connections !

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