

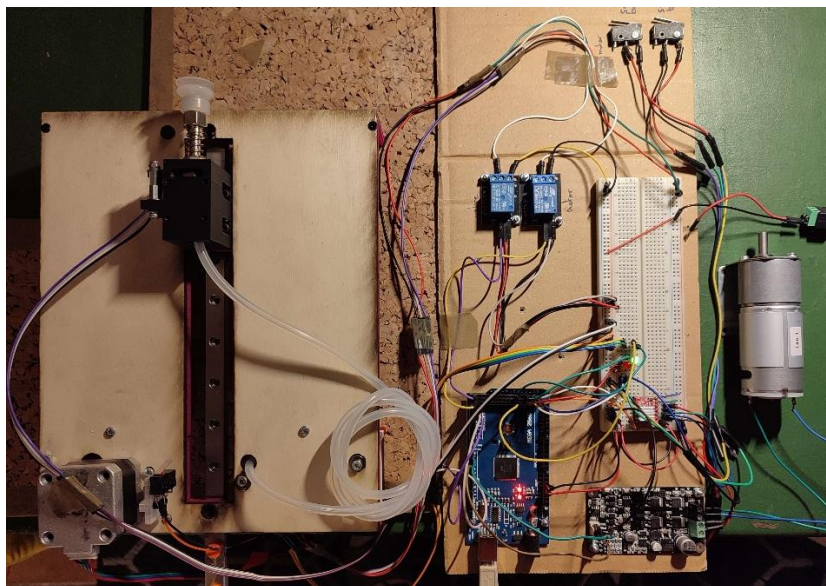
Session report 5

Before the session:

I continued assembling the last parts of the platform and did some testing on the lattice because they were moving a lot. I Added the limit switches of the slider and laser distance captor on the slider, connected all the components to the Arduino Mega. After that I started testing all the components separately but on the same file, I now have one function to test every component. When they were all working, I started making multiple components work together. EX: the limit switches from the slider and the vacuum system: if the front switch is closed it starts the pump for 2 seconds and when the back switch is closed it open the electro-valve.

During the session:

There was one thing on the platform that I couldn't test before, it was the belt driven by the stepper because I didn't have the M2 screws from the right length. I had ordered a box of screws that was now arrived. During this session I correctly attached the belt and tried to drive IT with the 28BYJ stepper. I rapidly realized that the stepper wasn't adapted, even with a light load the stepper couldn't turn. I replaced it with the one I was before using to lift the platform (the NEMA17) that has much more power and run correctly. I was also planning on replacing the NEMA17 driving the lift because it wasn't strong enough, so I picked a 30W DC motor, his H-bridge and support. For now, I only had time to attach the wires and test without any code and it runs well. The next step is to adapt this motor to the lift and test it in real conditions.



On the picture above we can see the motor I was talking about completely on the right, the nema17 stepper at the bottom left corner from the platform and a limit switch next to it.