

To: Dr Travis
From: Portable Carrier A
Date: 2/22/2019
Hardware review 1

In the first hardware review, we have completed three main individual parts of our project. The pneumatic cylinder, telescoping hanger and the assembled toy car with motors and tires. The car and pneumatic cylinder need an Arduino to work however, the Arduino work got a little delayed due to unwired solenoid, as mentioned by the vendor, and for the motor we need a motor shield that still didn't arrive. However, most of the codes and the assembly ideas are done, but because we couldn't demonstrate anything with the hardware with the Arduino we didn't bring it as a part of the hardware review. We brought the three parts and we got good feedback by the instructor, Dr Travis. The comments that he made is that we must know the current for our motor to get the right motor shield and that we must test the telescoping hanger to see if it would bare 50 pounds, which is a part of the requirement given by our client, Dr Moghaddam. Overall, he said seemed to be satisfied with our work and told us to keep it up.

The work is divided by all the group members. Abdullah was responsible for assembling the toy-car and make sure it works. Salman was responsible for assembling the pneumatic system and make sure it is assembled properly. Mohammed was responsible of doing the telescoping hanger and make sure it could carry 50 pounds. Saleh was responsible with working with Arduino and writing the codes and learning how to implement them on different parts of the project to make them work remotely. With the work that we have done, it is safe to say that we have already finished around 50 percent of the hardware part of our project.

For the next hardware review we must finish 70 percent of our project so, each member was assigned action items to do and try to finish for the next hardware review. Abdullah will continue to work with the car and improve it especially the tracks to enable them to climb stair, and that calls for a redesign of the car. Mohammad will continue to work on the telescoping hanger by testing and changing the design of the carrying part of the hanger to make sure that it has the strength and capacity to carry five plastic bags and 50 pounds. Salman would continue to work on the pneumatic cylinder by finding a way to store air for the solenoid portably rather than having a compressor that needs to be inserted to an electric outlet in the wall, which would affect mobility. Saleh will continue to work on the Arduino by wiring the solenoid with the Arduino that will enable the pneumatic system to be controlled remotely, and also he will buy the necessary equipment, like the motor shield, that will enable the motor to be controlled by the Arduino remotely.