I. Backpack Lever Arm System

Work Completed:

During this week, the team focused on altering the new Servo Motor (HSR-5995TG) because it is only capable of rotating 140 degrees. After modifying the internal resistance, the new motor was able to rotate the desired 270 degrees. Then we mounted it onto the lever arm. The old motor that was used for 270 degrees (HS-785HB) is now used to rotate limb three 90 degrees. With the new motor mounted, the lever arm system is basically completed.

Figure 1. Servo Motor (HSR-5995TG)
The team tested the finished lever arm with a backpack on a chair, and the arm successfully brought the backpack from the back of the chair to the front.

We also finished the PCB and schematic for the control circuit and is currently being approved by the TA.

**Future Work:**
During next week, the PCB will be ordered and some refinements will be made to the device to ensure safety.

**Project Review:**
The team is on tract with this project, and will finish on time.

**Hours Worked:** 4

II. **Shampoo & Conditioner Identification Device**

**Work Completed**

During this week, the team focused on insulation of the device because the iPod holder has holes and openings which would cause water to leak in and touch circuit components. We placed a thin layer cover over the front and sewed it down to ensure safety.

Figure 2. Insulated iPod holder
I tested the device in the iPod holder with running water, and it was definitely loud enough for the client to distinguish between the shampoo and conditioner. I also finished the PCB and schematic for the amplification circuit which are currently being approved by the TA.

**Future Work:**

Next week, the PCB will be ordered and I will continue working on insulating the circuit to make sure that the device is waterproof.

**Project Review:**

The team is moving forward with this project, and will finish by the deadline.

**Hours Worked:** 10