Project Identity:
Assistive Robotic Arm
Week 9
Michael Khalil

Work Completed:

For the microprocessor we have a novel solution to 5 servo control. It contains 10 case switch structure utilized with timer0 to output 5 nested PWM signals. Allows for calculation and output for five PWM signals without nested loops or messy programming XY algorithm easily integrated.

Figure 1: Microprocessor in Proto-board.

Figure 2: Digital Joystick Operating the Pan/Tilt Mechanism.
We also worked on reconstructing the forearm bracket which is now held but a thick rectangular piece on top of the linear actuator as opposed to the previous design with hose clamps.

Figure 3: Elbow Bracket.

**Future Work:**

The next stage of the design is to build a bracket that connects the Pan/Tilt system to the Forearm. Also on the construction side we need to build the Base for the Robot Arm. Although the microprocessor is capable of powering the 5 servo motors we still need to incorporate the XY program for the shoulder-elbow compensation.