**Coding Conclusion Questions**

**3.1.1**

1. Describe how these motors and sensors may be used.

These motors and sensors can be used for a variety of different functions, as there is a variety of them. They can be used for turning a wheel, sensing whether a room is dark or bright, how far away an object is, how much an object rotates, and many other functions

2. Describe scenarios where the motors or sensors did not respond as you would predict.

 While the servo motor, is considered a motor, it doesn’t behave as one. Instead of turning the speed at which you put in, it turns to a certain position. Also, the light sensors value goes down when more light is picked up by it, which I thought would be the opposite of that.

**3.1.2**

1. Describe any challenges that you encountered while developing the program.

 This was probably the easiest program to develop, and I didn’t really encounter any problems.

2. Describe how these outputs might be used in an application.

 When some sort of complex machine has more than one engine, and they need to move at the same time, this sort of program and outputs would be very beneficial.

**3.1.3**

1. Describe any challenges that you encountered while developing the program.

 Nothing was too crazy yet, but using the different sensors and trying to find the correct numbers and values to make them perform the way you wanted them to was difficult at times.

2. Describe three applications for the use of sensors that you worked with in this activity.

 1. The light sensors could be used to see if a room’s light is turned on or off (Line follower sensor)

 2. Wait for a car alarm to go off when a person is within 20 cm of it (sonar)

 3. Create a mini sentry/ stationary gun that can rotate 270 degrees (potentiometer)

**3.1.4**

1. Describe any challenges that you encountered while developing the programs.

 These were very hard to make. You often had to use the SensorValue function, and managing the “If Then” statements was hard, especially with the large amounts of brackets you had to use. I had to often compile many times to see what was wrong, and try fixing it with my very little amounts of knowledge about coding, but as I progressed through this activity I got better and by the end was able to with ease.

2. Describe one application each for While loops and If-Else structures.

 One application could be while a motor is running (in a car, for example), if the light sensor shows it is dark outside, the lights automatically turn on. If it reads it is daytime, the lights turn off.