Interactive Wheel of Fortune

Week 1
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Work Completed

Week one for the senior design started with verifying if the orders parts arrived and matched what we were expecting. While doing this, few errors were found in our order. First, during the beginning of last semester (senior design 1) we thought about ordering the foam plastic for the game base and the wheel. However, at the end of the semester my team member Kristen asked our T.A. Bill not to put in an order for this, but somehow the order was placed. The other problem arrived with the Keyfob remote. Our design consisted of using a one button Keyfob remote, but somehow the part number was wrong and we received a five-switch Keyfob remote. In order to take care of the plastic, Bill has talked to one of his bodies in North Carolina, who will make the base of the wheel for us and we will have to do only one thing to his product in order to finish that part of the product, that is to make eight equal size pie pieces. During the Friday session we decided to use the Foam PVC for this part of the wheel and we sprayed one the boards to see if we can turn them into different colors. This did not work because the paint can be easily scratched of the PVC sheet. So, with our order we have two dilemmas. One is that we need to return the five-switch remote back and order a one-switch remote. The second is that we need to send the foam PVC back and asked them if we can get it in different shades. The other main thing is that if Bill’s friend cannot make what we want him to, then we will have to order additional hard plastic for the base of wheel and the base of the whole game. Lastly, if he does make it we would also get rid of the task of supporting the wheel, because the base of the wheel will already have this in it.
The other main thing that was done during week one was making an overall model for the game. We used one cardboard for the base of the game and one for the wheel. In order to the wheel, we went the machine shop and asked for help because there was not anything in the senior design room to draw a 24 inches circle. During this process few changes were made to our final design.

Figure 1 represents our original design game in which the base of the game is bigger than the wheels diameter.

Figure 2 represents what we thought of doing before making the game model on Friday. In this design, we decided to make the base of the smaller than the wheel with the dimensions of 6”X18”X18” and the wheel of diameter of 24 inches due to the fact that Bill’s friends only manufactures the wheel base in certain diameters.

Figure 3 represents the design we decided at the end of Fridays session. Everything is the same as in figure 2, but the wheel is shifted to one side, which gives us the opportunity to put the clicker at the edge of the game rather than the bottom of the game.
I wrote an email to the support center of the company from whom we order the keyfob remote and the frequency module and asked them to provide additional information regarding how to use the device and I also read part of the SP03 guide which came with the device.

Lastly, I looked at the circuit layout of the Frequency modulus to determine how it is set and how to use it for our purposes. However, it was quite difficult for me to determine how the outputs work understanding that I have not thoroughly research the device.

Future Work:

- Contact the Frequency Module company if I don’t receive an email by the end of this week and ask them how they can us
- Go the ECE department and ask for help on the microcontroller and the circuit. Primarily, I am going to Dr. Fox cause he is the online professor I know who can help me with the microcontroller. Also, ask his if he can help me with the frequency module.
- This week we need work on starting and finishing most of the SP03 requirements. I have read most of the guidelines and few people have already used the devices so it will relatively easy to configure this device
- Confirm if Bill’s friend from North Carolina has sent us the email regarding the dimensions of the device and talk to my team members if that is what we want
- Start playing with the motor and the motion sensors to see if they work and can work well with our design. I am having some doubts about the motor.
- Present in front of Dr. Enderle the weekly reports and ask for his devise on who to go for help for the microcontroller.
- Make sure all of these tasks are done this week so the following I can either complete my circuit or start working on the program.
- Ask Dr. Enderle whether I should consider using Labview program for my device.

Project Review:

Our first week started of with a slow start. Personally, I was not able to put enough hours into the design process. However, we were able to keep up with our timeline. The
planning of the game leads much to the imagination and if time permits extras can be incorporated to further stimulate the adults at the ATCO sheltered workshop.

Hours Worked

Yadverinder- 5 hours