Personal CAD Project

Carousel

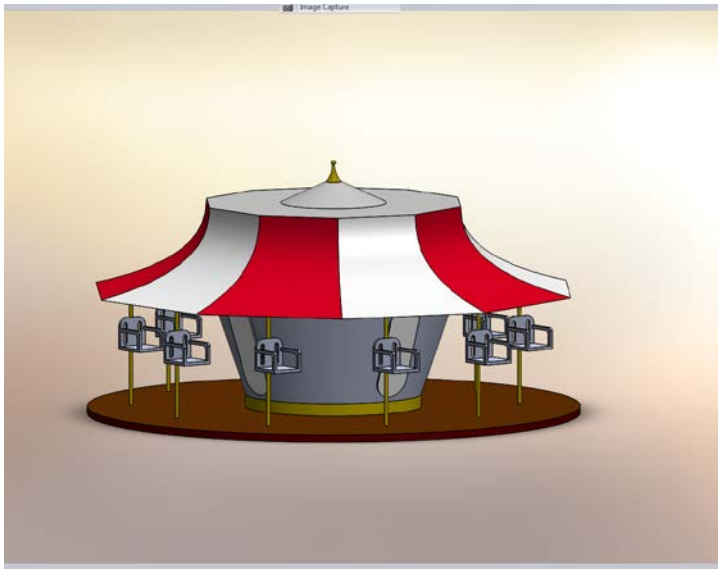

Figure1. Finished Carousel

Ever since I was a little kid, I have enjoyed going to amusement parks and in fact one of my earliest memories is riding a typical carousel. Thus, I thought it would be fun to recreate a part of my childhood. After looking at various images of carousels built with very intricate designs I decided to use Figure 2 as a reference, which was created with AutoCad, a similar software to solidworks.

Figure 2: Carousel designed in AutoCad
Source: http://www.flickriver.com/photos/28673853@N02/2683397423/

As Figure 2 shows, seats in carousels are typically designed as horses yet due to the limited amount of time and level of difficulty I decided to create different seats and used Figure 3 as a reference.

Figure3. Reference for seats

Source: http://grabcad.com/library/wooden-carousel

For this project I used the various tools learnt in class such as extrude, loft and revolve. The most challenging part was making the tent "look right." Throughout I worked without given dimensions and had to constantly adjust the planes and estimate values so that the shapes could resemble the reference image. However, I did try to maintain realistic measurements as shown in Figure 5, where all dimensions are in meters.

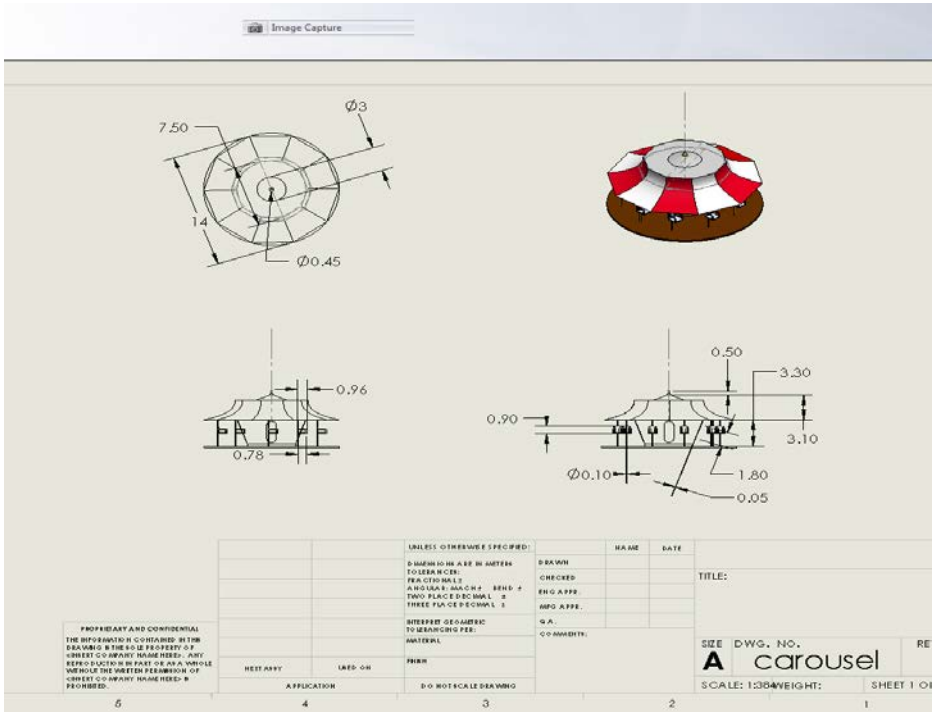

Figure 5: Drawing of the carousel showing the top, front, right and isometric views

Moreover, the assembly was also a challenge I encountered especially with the base and the tent as I wanted the base to rotate and initially only the tent would. Nonetheless, after managing to assemble these two parts all that remained was to place the chairs, which was easily done using the different views.

Overall, with this project I learnt more about the different tools in solid work and made me appreciate solidworks as a great visualization tool. I truly enjoyed working with this software and hope to gain more experience in the future.