I planned to choose a life-related object as the model of my personal SolidWorks project. One day, when I was calling my mother and complaining the cold weather in Penn State, she told me that they are still using an electric fan at home. I was suddenly inspired and thought it was a great idea to make my own “electric fan”. I found some pictures of electric fans with different styles and tried to build a suitable model.
I used different features of SolidWorks to complete my whole project. For example, I used Reference Geometry to create different planes, Linear Sketch Patterns to create 5 fan blades (see Figure 3) and 28 meshes (see Figure 4). Also, I used Revolved Boss/Base to create the main body of the electric fan (see Figure 5). For the edges, I used Fillet to make them softer. Moreover, I used Extrude Boss/Base, Extrude Cut and Shell to build the turbine (see Figure 6), and back box of the electric fan.
The hardest part of this object was to mate all the single parts. At the beginning, I made a shelled cylinder as the back box (see Figure 7). But it failed to mate with both the body and the turbine. So I then recreated a shelled cuboid (see Figure 8) to replace it. Also, it is also hard to make the meshes. I then tried to find a similar tutorial from YouTube to help me get the main idea.

The most important thing I learnt besides the skills is to be patient. When I got in trouble with those small parts, I felt stressed and could not calm down to resolve them. By doing this project, I think I really understand how important patient is to finish a complicated project and also to ask for other’s help if you need.
References:

   
   <http://www.dreamstime.com/stock-photography-electric-fan-image25913132>

   
   <https://www.youtube.com/watch?v=a0vilbbeUsk>. 