Spartan Sword and Sheath

My personal SolidWorks project was designed to be a Spartan Sword and Sheath. Below is an image of what I reproduced in SolidWorks.

I chose this object because I enjoyed the movie 300, based upon the Battle of Thermopylae. King Leonidas of Sparta lead an army of only 300 Spartans to fight the Persian army, numbering over 100,000 men. Even though the Spartans faced certain death, they fought until the end.

In order to complete my project, I had to utilize a variety of SolidWorks tools. For the handle, I used the revolve tool. The guard -- the part that is between the handle and the blade -- was produced by using extrusions and fillets. The blade was the most difficult part of my model to complete. I made the blade from a series of lofts and tapered extrusions. After first completing it, I had to make several adjustments in order to fit it into the assembly.

The sheath was much easier to complete than the sword. It only took an extrusion and a shell to create most of the sheath. The metal decoration on the sheath was not exceptionally difficult, however it did require a multitude of tools to produce. In order to make it, I was required to make an extrusion, a shell, several fillets, and two sweeps.

I learned several things from SolidWorks this semester. The first thing I learned was how useful SolidWorks can be. Since engineering is the design and production of objects, being able to create three dimensional models is an extremely valuable asset. Also, I learned basic SolidWorks skills that allow me to create models of many different objects. Lastly, I gained an appreciation for the work of engineers.
Three dimensional modelling can be difficult and it takes a lot of hard work and knowledge to complete a project.
Sheath decoration

Bolt