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Edsgn 100 Solidworks
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My Personal Project

http://www.fiddlersgreen.net/models/aircraft/Grumman-Wilcat.html
My Solidworks project was loosely based on the Grumman WWII Navy F4F Wildcat flown by American pilots during World War II. I made a few variations of the design when creating my model in Solidworks. I chose to not put landing gear on the plane. When designing the model I felt it would look better if it was flying and, therefore, without landing gear. I felt that the model looks better this way.

The first part I created was the fuselage. I began by creating four different planes in the front plane. Each plane was different in its design. I then used the loft tool to connect the planes and create the general shape of the fuselage. I cut a hole in the front of it where the engine and the propeller would go. Next, I created a sketch in the right plane of what the cockpit would look like. Then I used the revolve tool to create the cockpit. I also used the fillet tool to make the edges of it look better. For the wings I drew a sketch of what the wings looked like from the top. Then I used the extrude tool to create the depth of the wings. I also the fillet tool to make the edges of the wings curved. I did the same thing with the tail wings and the vertical tail. For both I also used the sketch fillet tool to make the sketches more curved. For the propeller, I created a dome looking object with the extrude tool. I then made the blades with the extrude tool and attached them to the dome to complete the propeller. For the motor I created an object that resembles a cylinder and extruded a smaller cylinder off it where the propeller would attach on to it.

The hardest part of the project was using the mate tool. I created all the parts of the plane individually in parts and had to assembly it at the end. The parts should have easily mated together into one assembly. However, it did not work as simply as planned. Since the sides of the fuselage were curved and the edges of the wings were straight, it was very difficult to mate. Also
making the fuselage was difficult. I struggled a little using the loft tool to connect the different planes.

By completing this project, I feel that I can successfully make almost anything in Solidworks. This may seem very unrealistic but I do feel very confident in my Solidworks abilities. I had to use almost everything we had learned doing the tutorials to make this model. Before this class I had never done any computer designing. I now feel that I have the necessary skills to work in Solidworks.