PERSONAL CAD: TENNIS RACQUET

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EDSGN 100

Submitted to Mr. Wallace Catanach

I had chosen to make a tennis racquet as my personal CAD project because tennis is my hobby and one of my favorite sports as well. I took inspiration from my current racquet, HEAD YouTek IG Radical MP L4. This was one of the most difficult CAD project I had to do in class in the whole semester as it involved every bit of Solidworks information I had learned in previous CAD projects in class.

The assembly of the racquet consists of a frame, handle and a rubber grip. One of the toughest things for me to make was the strings for the frame of the racquet. They were extruded bosses, one for the 29 vertical and one for the 41 horizontal. The extra strings left out of the frame was cut off using an extruded cut around the frame. The handle was the extruded part of an ellipse of certain perimeter and area. The frame was also one of the difficult things to do. I had to first make one side of the frame including the half-cut of the V-shape and then mirror the features. The rubber grip was easy to make as it was an ellipse with certain dimensions slightly bigger than the handle and then extruded. The edges of the final assembly, that is with the frame and handle and the rubber grip, has been edited with fillet feature to make the racquet more realistic.

Overall, I believe this project was fun and is perfectly suited way to end the course of Engineering Design 100. Through this project, I learned that we can create anything from scratch if we have the necessary desire and work hard.

The image of the model which you can see below is done using Final Render in Render Tools in PhotoView 360.
HEAD YouTek IG Radical MP L4: