Record Player
ESDGN 100 Personal Project
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Rendered final assembly.
Rendered image of the record disc.

Rendered image of the turntable.
Exploded view displaying all of the components.
SolidWorks Drawing of Record Player.
Design inspiration based off of this model.

When I first entered this class, I knew a bit about 3D modeling, as I had previously worked with a similar program called Inventor throughout high school. As I heard about this personal project, I tried to think of something that required many parts to make. It was difficult to decide on the object of my choice, but I eventually came down to choosing a record player. Although this doesn’t really relate to my interests as I don’t own one nor play records, I was able to picture how to go about each part during the process. I knew it was going to take a while to build involving several frustrating and awkward figures, but I was up for the challenge.

Designing the record player required me to use several parts. These were: record player base, record, rod, rod end piece, bottom and top covers, and a latch to close it with success. The overall dimensions were 14.70in x 12.50in x 3.50in, as I researched the general size of a typical record player. I extruded a rectangular sketch, while filleting the sides to produce the base and bottom and top covers. As for the rod and rod end pieces, I used the Flex tool along with creating planes to eventually get the shape I wanted. For the latch I used the Swept Base tool to construct an interlocking piece to keep the record player shut. Out of these tools, the Flex tool was the one I was the most unfamiliar with, as it was new to me. This made the rod and rod end piece both the most difficult parts to make.

Although I understood the basic concept of CAD modeling due to my previous experience with Inventor, working with SolidWorks helped further develop my knowledge and skills. I learned how to successfully create a drawing, while labeling the
overall general dimensions. In the future, I expect to work with software such as this.

Therefore, I will be at an advantage considering the expertise I gained from this project.