Bedside Holder
99-359 Final Project

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1   Intention

My intention in creating the bedside holder is both to replace, and to improve upon an existing utility that I own. The purpose of this utility is to act as a nightstand for lofted beds. Unlike traditional nightstands, this utility is not a piece of furniture. Rather, it is a tray that is attachable to various surfaces via a secondary, vice-like component.

There are two main problems with this setup that I would like to solve. First, the tray is too shallow, and any movement of the bed causes the objects it contains to fall out. For example, sometimes if I have a bottle of water in the tray and I roll over while asleep, the bottle will loudly fall out of my bed and wake me up. Second, if there are a lot of different things in the tray, the existing holder becomes to cluttered to be effective.

2   Research & Context

Before designing my version of the bedside holder, I did research into existing attachable bedside nightstand/tray products to get an idea about what others had designed to solve this problem.

Most of the designs found online for products that can be purchased varied in the way they attached to the bed, but were more or less the same with regards to the way in which they completed the act of "holding." More specifically (though perhaps my results were limited by my narrow search terms), all of the products I found to complete this task were trays of one sort or another with a variety of ways to attach to different bed types.

In order to research both the best method of attachment, and the best method of holding, I additionally sought out the designs and measurements of the existing holder on my bed. Eventually concluding that it was easiest to redesign only the holder part and not the attachment part of my existing bedside tray, I made measurements of the existing attachment part to make sure my design would fit well when printed.

Finally, I researched the various things that people tend to keep next to their beds, and I looked into what I would like to keep next to my bed. I subsequently measured each thing that I intended to store in the holder to make sure that I could design such that everything would fit comfortably in the printed version.

3   Aesthetic & Inspiration

Aesthetically, I was inspired by many of the modern designs of IKEA products. Oddly enough, they seem to be the single business with the most solutions to this bedside holding problem, and their varied solutions are often designed in a modern, Scandinavian style that I sought to emulate.

4   Process & Procedure

After researching and developing my idea, I made several sketches. However, the sketching process was notably distinct from the actual modeling process.

To sketch the holder, I first individually designed all of the discrete components (which were intended to be printed together in the final model). The reason for doing this was to be able to incorporate varying design methodologies into the sketching process. For example, some of the components were designed based around precise measurements, whereas others were designed less carefully.

After individually sketching each discrete component, I designed the entire file together. The final CAD file was designed such that each of the individually designed parts prints as one and fits together with minimal requirements for support material.

5   Reflection

Overall, in completing this project, I adopted a primarily laid-back approach. I learned a lot about CAD modeling, and about design in general.

One major point of learning was with regards to assuming measurements to be ideal. For example, in my design, I sized the attachment part of the holder to the existing attachment component on my bed. I tried to size the attachment very closely to the real thing, and it ended up not working due to changes in the material during printing.