Forrest Edens

CS 499

7/29/2018

Milestone 3

The artifact for this Enhancement is the same artifact I submitted previously, however I have focused on data structure concerns. As previously described, this code is from a robotics course, where I programmed a robot to “sweep” a room and avoid objects while beeping, thereby allowing a visually impaired individual to navigate the room. In the last milestone, I added functionality that allowed the robot to beep when backing up, as well as light up for added visibility. In this milestone, I updated the logic and loops used, to make the code cleaner and easier to follow.

I chose this artifact again, because in addition to the benefit this code could potentially provide to the visually impaired, it is a good demonstration of my algorithmic abilities. Because this code is continuous, and has multiple functions that must be performed simultaneously, but are dependent on a number of different factors, clear logic and neatly composed code are essential. The “beep” loop must coexist with the “sweep and avoid” loop, and neither one can inhibit the other. Therefore, this code is a good demonstration of my ability to make several loops work together in my code. Additionally, there were some superfluous and incorrect conditions that I was able to correct or remove as needed, to improve the program.

I did meet the course objectives I intended to meet, as outlined in Module 1. I streamlined my looping logic, fixed the errors in the conditions, and commented my code. These were the goals I outlined for myself, and all were successfully implemented. I did not update my plans, although I did slightly alter how I handled one of my enhancements. Rather than deleting superfluous code at the end of my final loop, I “commented it out.” Therefore, I still have the code available if I find a use for it later, but it is not being implemented. This final logic is only superfluous because the technology in the Finch does not make it useful. However, if I was working with different platform, this code could be helpful. Therefore, I did not delete it completely.

I feel as though creating this code greatly improved my skills with loops, as they were so instrumental to the implementation of my program. Loops are an incredibly powerful tool, but using many of them in a piece of code can be intimidating. This code helped me overcome that concern, but improving the code also taught me an important lesson. I assumed that my code was all correct, because It was functioning properly, however I had a mistake in my conditions for the “beep” loop. During my code review I noticed this error, which allowed me to fix it (very easily.) Updating this code taught me about the importance of thorough review, even when you believe your code is written correctly.