1. Reflection
    a. Machine Learning:
        i. I've always wanted to learn a lot more about this topic in artificial intelligence. The reason being is that I've always genuinely been curious about how artificial intelligence learns how to solve problems on its own rather than having us to hard code an algorithm ourselves (although granted, we are still coding an algorithm for the agent to learn on its own). As I learned more about machine learning in this class, the more I learned that machine learning and artificial intelligence isn't really as science fiction as I have thought. Turns out, it's just more math! For instance, I've looked through the slides and read it thoroughly, only to see a lot of equations and calculus! It turns out that machine learning is really just an optimization problem where the agents put more emphasis on waits based on what it deemed as the optimal action in each iteration. Despite this, however, I still enjoyed learning about machine learning. Just because I realized that machine learning is just more math doesn't mean that I'm discouraged by it. I really do enjoy learning, even if it involves math. I feel like I've only understood the technical workings of how artificial intelligence and machine learning actually works.
    b. Supervised Learning - Linear Regression:
        i. Between linear regression and logistic regression, I found learning more about linear regression more enjoying. It's hard to describe, but I just really like the greater flexibility that linear regression provides in terms of values compared to the binary system that logistic regression deals with. There's just something I like about predicting a value based on multiple independence variables/inputs. I've taken a statistics class before, and I definitely knew what linear regression is about. It's basically a line that minimizes the sum squared regression of all data points. It was only now that I learned that something like this could be applied to machine learning! I've always had a fondness for learning about statistics. It's hard to describe it, but I just like dealing and manipulating data. Anyway, we have equations in statistics to find the linear regression of a data set. However, in machine learning, we do this through many iterations where the agent learns over time. Basically, they just keep picking the action that reduces the sum squared regression until all changes to the sum squared regression are very miniscule.
    c. Supervised Learning - Logistic Regression:
        i. Personally, learning this was a lot more of a headache than I had originally anticipated. The thing is, it isn't really any too different from linear regression. The only major difference is that we're turning the linear regression into a logistic (curved) regression. We can still apply the same principles to finding a linear regression to finding a logistic regression. By that, I mean, keep picking the action that leads to the greatest decrease in the sum squared regression. In the slides, the process is different, but I found that it should still produce the same results regardless. Anyway, the part that made this more of a headache for me is the fact that we have to classify a set of independent variables into a probability, and thus make the agent come up with a prediction/classification. It's hard to describe it, but the fact that there's more involved compared to linear regression just made logistic regression a little bit harder to learn and deal with.