Design Paradigms Project 3

In this project out team used a combination of Top-Down Functional Decomposition, Object-Oriented Design and the Component-Level Design. First our team looked at how we wanted our project to work, which was give the user the option of finding a restaurant based on certain specifications such as by price, cuisine type, randomly, etc. Having that specification as a base, we then split up how to handle that. First the user would interact with the program and thus we would need a component that handles user interaction. Second, we would need a component that would interact with the data, and so we created a component that would represent a restaurant as well as a component that would handle the creation of restaurant objects. Lastly, we would need a component that would keep track of user information so that they could give their preferences and have the program remember in order to make decisions based on their preferences.

Using Object-Oriented Design, we set up the components from the Top-Down Functional Decomposition as their own classes. The components would then become objects that we could work with, each having their own methods and values that would allow us to use C++, an object-oriented language, to better demonstrate our project.

Using Component-Level Design we further broke down each class to show how each class interacts with one another. In this way, we were able to describe the methods each would use in order to handle the data they are provided, how they work with or use other classes, and how they can be used again for other purposes.

Our team used all three of these design paradigms to get a better grasp of how our project would work, how we needed to set components up and which algorithms to use, as well as establish how we will split up the work.