Group 19

Project 3 Design Paradigm

25 October 2021

Object-Oriented Design

For project three our team decided that we would use the programming language Java because we felt that this language would offer a nice-looking UI through the GUI JavaFX. Since Java is entirely object oriented, so our design paradigm selection was rather strait forward. It follows that we decided to develop our budget tracking program using an object-oriented design. Using an object-oriented design simplified storing transaction data as well as creating user accounts. Transaction objects hold all the data for any given addition to the budgeting list, so extracting this data is as easy as calling a getter. In order to provide useful data to the user, transactions are specified by date, sign(+/-), item, price and category. This string of information associated with a transaction is then used to provide the user with budgeting information. For example, a user may want to cut down fast-food spending, so having data about which transactions belong to the food category is a necessity. Our team used categories and price to provide the user with a pie chart that displays the user’s expenses per category. Essentially, we needed a way to store and extract user data and object are perfect for solving this problem. Overall, we chose an object-oriented design due to the nature of a budgeting application. When it comes to monthly or yearly budgeting there is a massive amount of data that needs to be sifted through, and object-oriented programming is the perfect paradigm to sift, collect, and interpret data.