Group 19

Project 3 Software Architecture

25 October 2021

3-Tier Architecture

For project three the clearest answer in the context of our project and chosen design paradigm is a 3-tier architecture. Since our project is a budget tracker the user must have an interface to store transactions. This is the presentation tier of our chosen architecture. The next tier is the logic tier, here we have all the logic that handles taking inputs from the UI, interpreting them, altering them if needed and sending them where they need to go, often the data tier. Here we included processes such as calculating totals of money in and out, placement of data into pie charts, logging totals per category and general calculations that are useful to the user. This layer also handles the flow of information to and from the data tier back to the user. For example, transactions input by the user are stored in the data tier using logic, then this data is extracted using logic to present the user with valuable information regarding their personal budget. So, our second tier, logic, handles the specifications of how the data is used and how to apply that data to the UI. Lastly, our third tier is the data tier. This last tier handles the storage and easy retrieval of the user's data. Specifically, the transaction and goal data is stored to be retrieved by the logic tier. 3-Tier architecture is a perfect fit for a budget tracker, as well as a good fit for an object-oriented paradigm. Data storage and retrieval is at the heart of any object-oriented program, so a 3-tier architectural design offered our team a seamless way to gather and present data given by a user.