

## Criterion A: Planning

### Household Budgeting

#### Defining the Problem

Client: Julia Mitchell      Advisor: Mr. Donnelly

Client Julia Mitchell, my mother, is a homemaker and keeps an accurate account of the household transactions for every month. She creates a spreadsheet every month and adds every transaction by adding a new row and roughly categorizing the transaction. Her goal is to keep track of the family spending to ensure that the money spent is within the monthly budget. Also, she keeps track of the date of each transaction so she can look back at previous months to track down a particular transaction. Often, she has to perform this time consuming task late at night instead of relaxing after a long day.

I have watched her go through this process for many years and I realized that I could create a program to make this process more efficient for her and more helpful for members of the family who wish to look through these logged transactions. I decided to hold a half-hour meeting with her to better understand the different issues with her current method. Her primary issues with the current method are as follows:

- Throughout the month, it is difficult to tell when the family spending is on track to meet the monthly budget
- It is difficult to take certain months with higher or lower spending into account in relation to the annual budget
- Each time a transaction is added, all the information has to be manually typed
- It is difficult to compare the spending of previous months and analyze those expenses

Using this information and additional meetings to discuss proposed solutions, I will be able design a program to address these problems.

## **Rational for Proposed Solution**

At first, I was thinking about creating an online system, but realized that it would not be a good idea because Julia will be entering confidential data and there are too many security issues with an online system. Instead, I decided to create a program using Java because it is user friendly, free, and platform independent. Since there will be a lot of interaction between the functionality and the graphical user interface, I chose to use Object Oriented Programming.

Julia uses a single, up to date MacBook Pro to record the transactions and has kept the previous spreadsheets on her computer. As a result, her hardware and software is compatible with this product and I will have access to previous data to calculate trends and cater the program to her specific needs. The previous data can be analyzed to provide a reference for developing analytics of future data.

## **Stating Success Criteria**

- Program will allow user to add transactions to a table. These transactions can be updated or deleted at any time.
- Program will allow user to assign each transaction month, year, category, amount, and whether it is a single or recurring. If the transaction is recurring, the user can enter how many times the transaction will occur in a month.
- The transactions will be sorted with the oldest on top and newest on the bottom.
- The user will be able to access all the transactions added and filter them based on category, month, year, and whether the transaction is single recurring.
- The user will be able to set and adjust the monthly budget.
- Program will allow user to see the remaining balance for a chosen month based on the previous transactions.
- Program will allow user to see expense analytics for any chosen year.

Word Count: 420