

Gretel Rajamoney

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Design Document #1

Problem Statement

It is quite difficult to keep track of where all the money you spend is going towards. In order to keep track of where all your money is spent, I will be creating a program that categorizes all of your spending so that you can track where all of your money is going. In order to make this tracking program secure I will be creating a user log-in which requests the user to input a password. Also, to make this program more user friendly the user will be able to see all important transactions immediately and will also allow the user to filter each of their transactions based upon category.

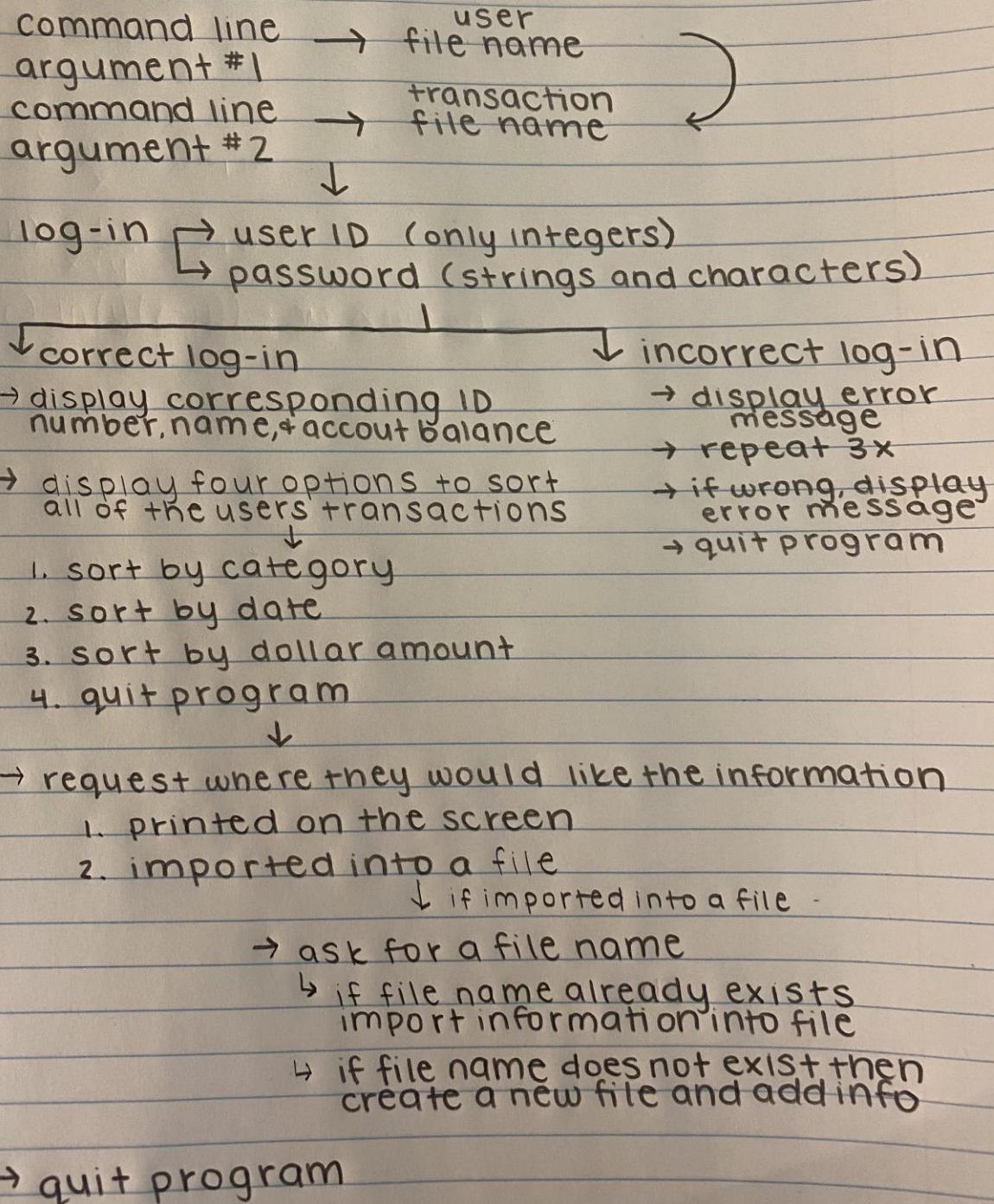
Understanding the Problem

In order to start the program, the user must first input two command line arguments. The first command line argument must contain the name in which the file was created under, this file contains all the information pertaining to the user. The second command line must contain the name of the file which contains that name of the file which carries all of the transactions. Before the user can access their information, they must first input a user ID and a password. The user ID must contain only integers and will be stored as an int, but the password will contain both characters and numbers and will be stored as a string. The program must prompt the user and ask them for an ID and password. If the user fails to input the correct login information after 3 tries, then the program must display an error message and then quit. If the user successfully logs in, then the program must display the corresponding ID number, name, as well as their most recently updated account balance. Once logging into the program the user will be prompted with a list of several options on how they would like to sort their transactions. After the user has selected an option, they will next be asked if they would like the information to be printed onto the screen or imported into a file. If the user selects to create a file, they will be asked what they would like the file to be named. If the file name does not already exist, it will be created as a new file. The available options for sorting transactions are by category, by date, and by dollar amount. The last option listed is to quit the program.

Design:

Program #1 Design

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Testing:

Value	Expected	Actual Meets Expectations
Inputted ID Number x = jnaosd2n3	Print to user that their inputted ID Number is either incorrect or invalid	
Inputted Password (wrong)	Print to user that their inputted password is incorrect	
Inputted Password (wrong x3)	Print to user that their inputted password is incorrect and then quit the program.	
Inputted ID Number (wrong x3)	Print to user that their inputted ID Number is incorrect and then quit the program.	
Inputted ID Number (correct)	Print to the user requesting the password to their account.	
Inputted Password (correct)	The program will display to the user their corresponding name, ID number, and updated account balance.	
Option 1	Sort transactions by category	
Option 2	Sort transactions by date	
Option 3	Sort by dollar amount	
Option 4	Quit the program	
Option 10	Print to the user saying that their inputted option isn't valid & request them to submit a correct option.	
File Option 1	Display the transaction to the user.	
File Option 2	Create a new file/import information into an existing file.	