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CS 162

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Assignment 1 Design Document

Understanding the Problem:

Summary. We are being asked to write a program that will allow users to access and sort their financial budgets, each with multiple transactions. It must be secure in that users must remember their ID and password in order to be able to view their transactions. It must also be secure in that users can choose to see the data on the screen immediately or written to a separate file.

User experience. The user should run the program with the name of the necessary source files, and then be prompted to enter their ID and password. Upon successful login, the user should have four options: sort categorically, sort chronologically, sort monetarily, and exit the program. After choosing one of the three options they should either choose to print to the screen or write the transactions to file of their naming.

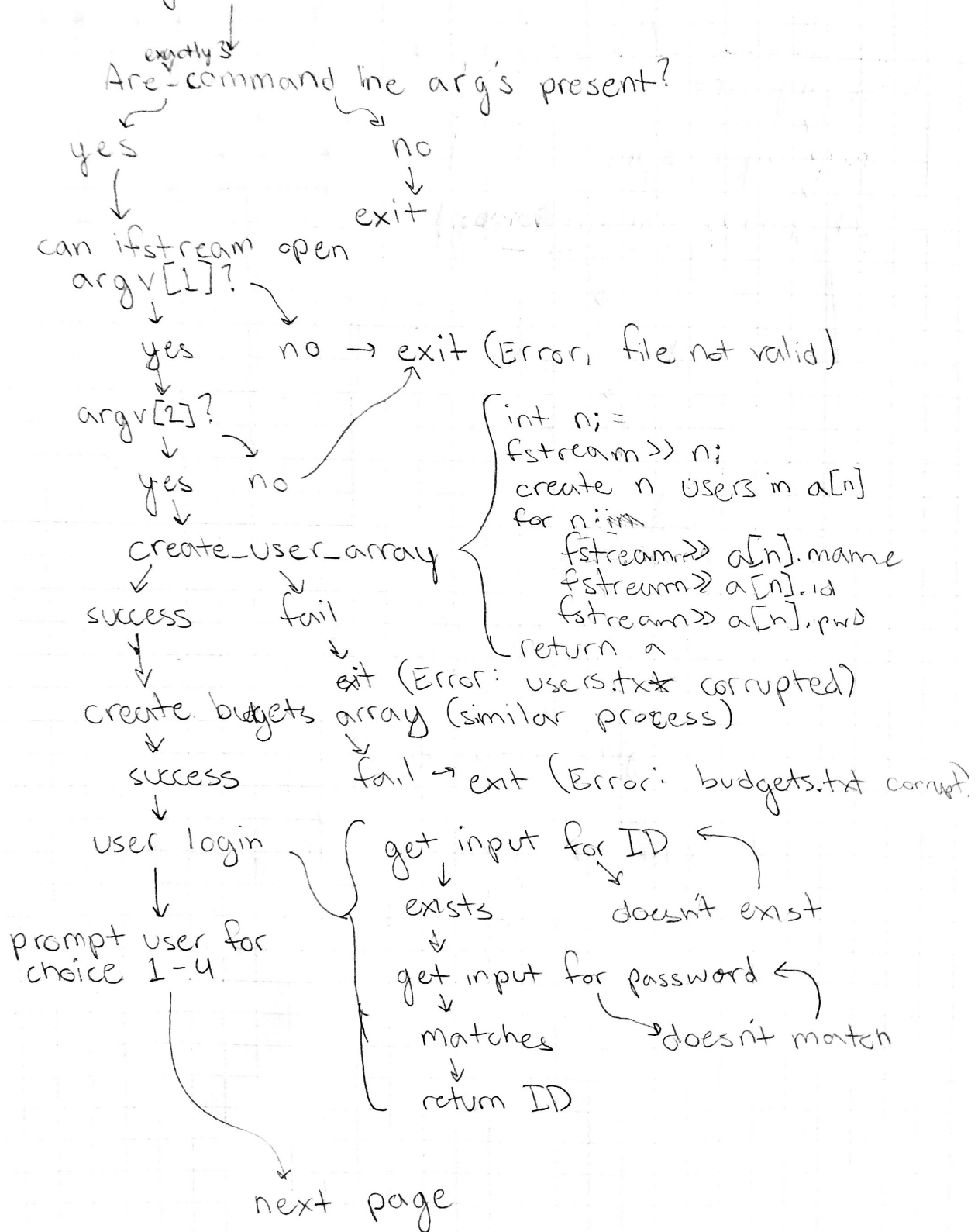
Assumptions:

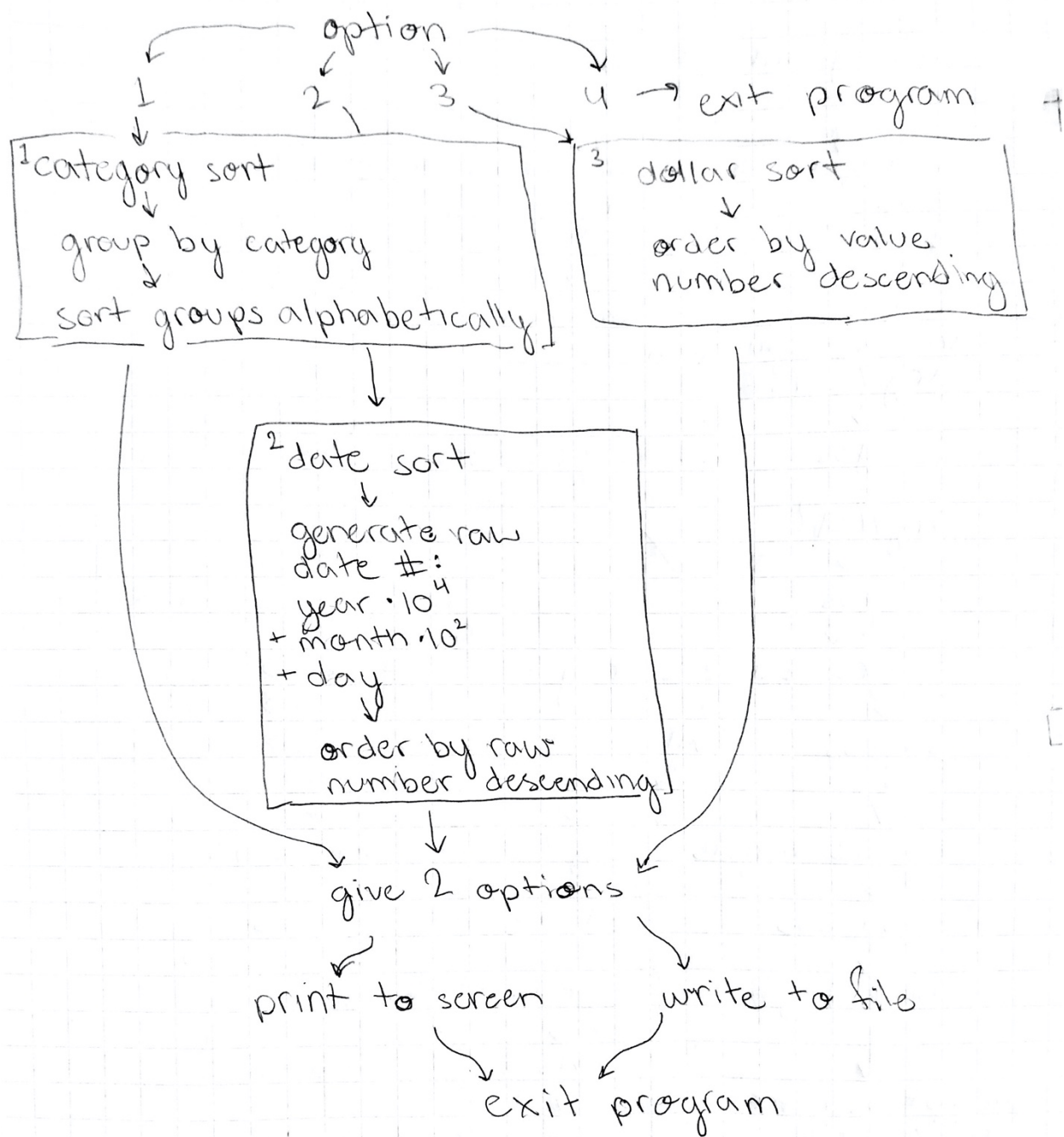
- I am assuming that users know which filenames to enter to command line arguments
- I am assuming that these files are formatted correctly
- I am assuming that a given user does not want to run the program more than once

Design:

(see next page)

Program Starts





Testing:

<i>Function</i>	<i>Case</i>	<i>Case Type</i>	<i>Outcome</i>
Choose_option	Input: 3	Good	Sort by dollar amount
Choose_option	Input: 03.000	Edge	Error: number must be an integer
Choose_option	Input: Option 100	Bad	Error: number must be an integer
Check_cmd_args	Argv[1] = users.txt (and said file exists)	Good	Continues
Check_cmd_args	Argv[1] = users..txt	Edge	Error: file not found/file not valid
Check_cmd_args	Argv[1] = NULL	Bad	Error: incorrect number of arguments
Get_user_id	Input: 4069032 (not found in source file)	Bad	User ID not found: please try again (2 tries remaining)
Get_pwd	Input: 1234 (matches appropriate password)	Good	Password correct. Login successful.
Get_pwd	Input: “ ”	Bad	Error: password is not correct
Get_pwd	Input: “1234 ” (with a space)	Edge	Error: password is not correct