



Faculty of Computing and Informatics (FCI)
Multimedia University
Cyberjaya

**PSP 0101 – Problem Solving and Program
Design**

Trimester 2215

Lecture Session: TC01V

Tutorial Session: TL02

Group Number: G03

**Assignment Topic: Drive-Thru System for
Angel's Hair Restaurant**

Group Members

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1.0 Purpose and Usage of Program

This program is a drive-thru ordering system for a restaurant named “Angel’s Hair Restaurant”. This program is developed to give customers the same experience as ordering directly at the counter or online through mobile applications. These will be explained further in the features section here.

The administrators of the program are the staff of the restaurant. Meanwhile, the users of this program are the customers themselves.

For the login section for administrators’, the usernames and passwords are predetermined and can only be changed by the developer of the program in the text file named “admins.txt”.

On the other hand, for the signup section for users, customers can signup through this program on their own by keying in a new username and also a password for it. After signing up, they can log in to order food from the restaurant. They can use the same username and password to order again.

This system also has a guest login option where customers who are in a hurry or do not want to signup as a user can log in as guests. This enables them to order fastly.

There are six features for the administrators. They are

1. Adding items to the food menu
2. Deleting items from the food menu
3. Change the password of users (if the user forgets their password)
4. Check the restaurant’s bank account balance (separated for the drive-thru system)
5. Withdraw money from the account
6. View order history

As for the users, there are five features as follows:

1. Order food from the menu
2. View the food menu before ordering food
3. See available coupon codes for discounts to be used during the ordering process
4. Apply discounts to the total price that has to be paid whenever an available coupon code is used
5. Giving a rating to the restaurant’s service and food

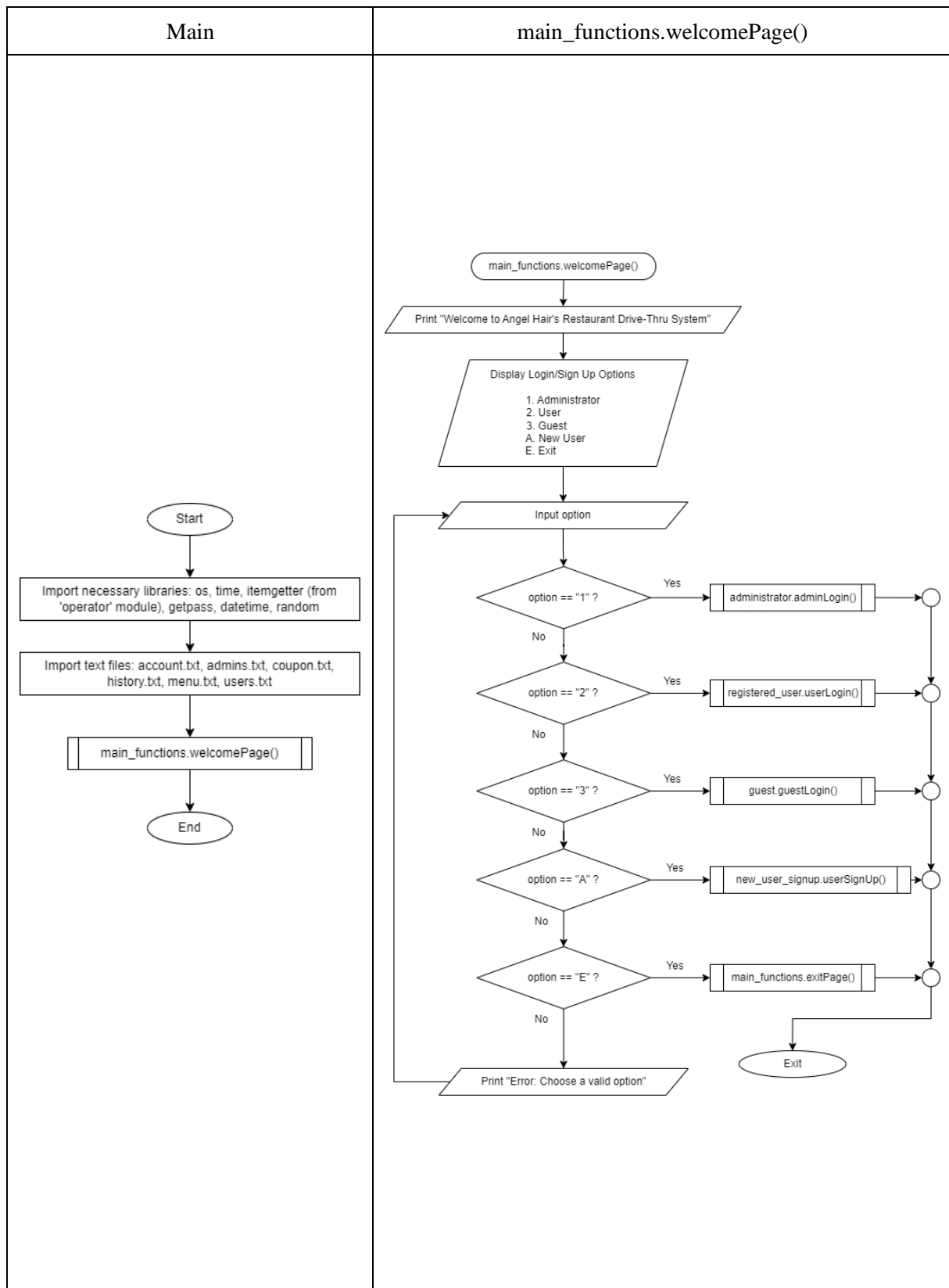
These features for both administrators and users will improve their drive-thru ordering system and gives advantages to them as well in terms of saving time and energy.

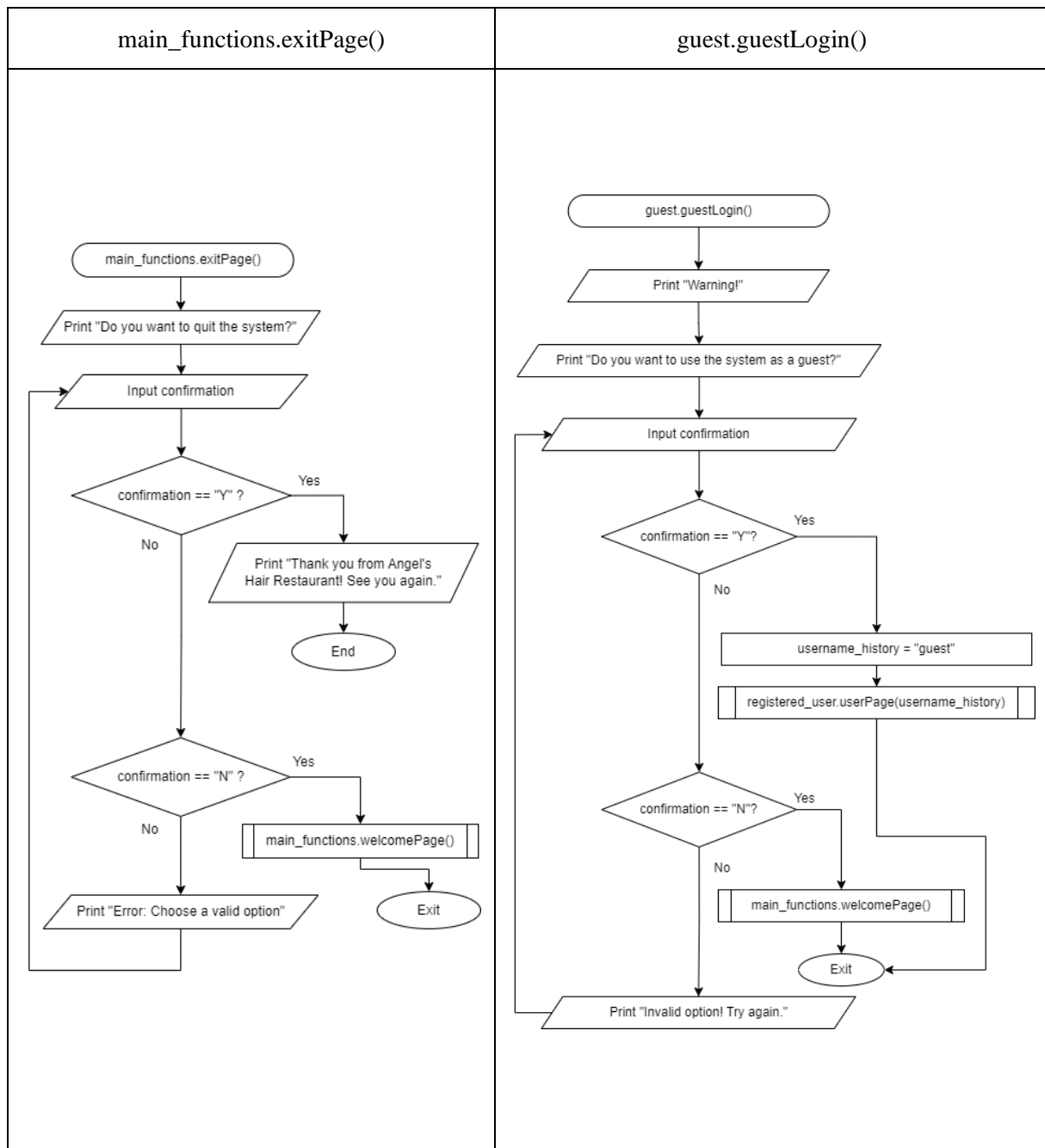
For our part, we made some extra research which helped us to develop and increase the efficiency of the way our program works as well. We made some research on using text files as we want to make sure the data collected from user input is managed well and saved and can be accessed even though the program is restarted.

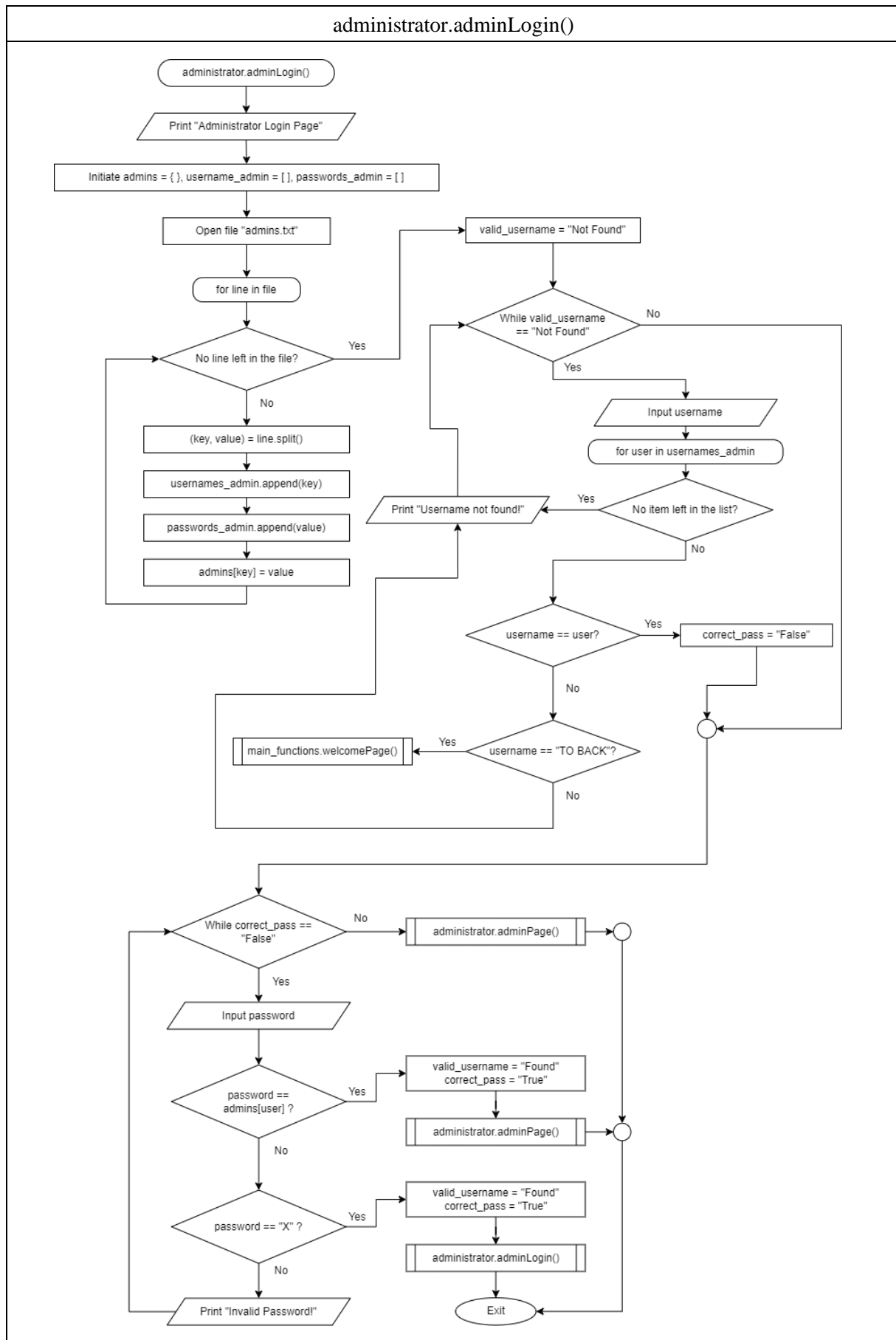
To add on, we used class methods to organise the code better and make it readable. We have also imported some extra built-in modules such as os, itemgetter and getpass. These built-in modules helped to improve our code and its output better.

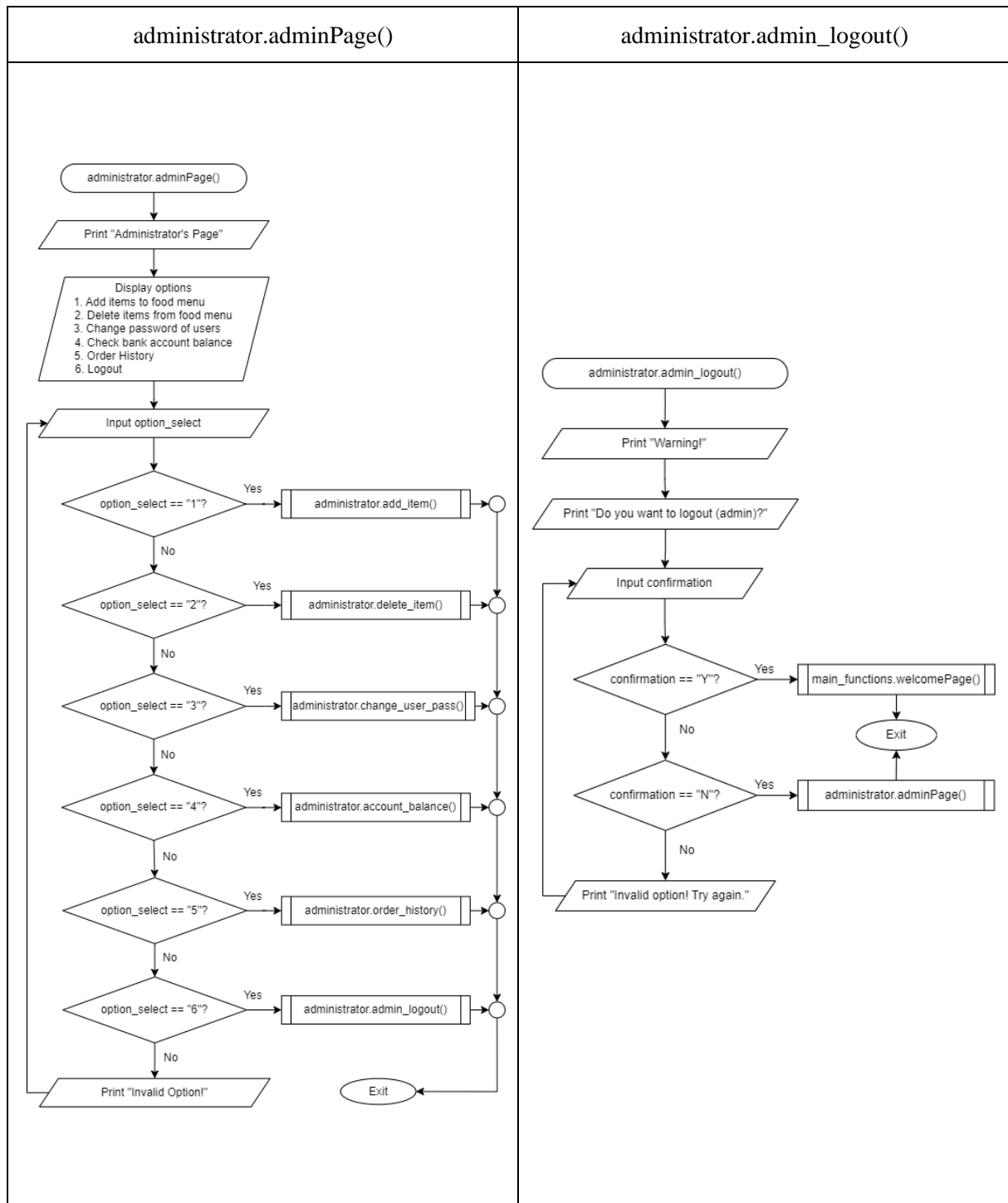
The websites we referred to and used to do our research are attached in the reference section of this document.

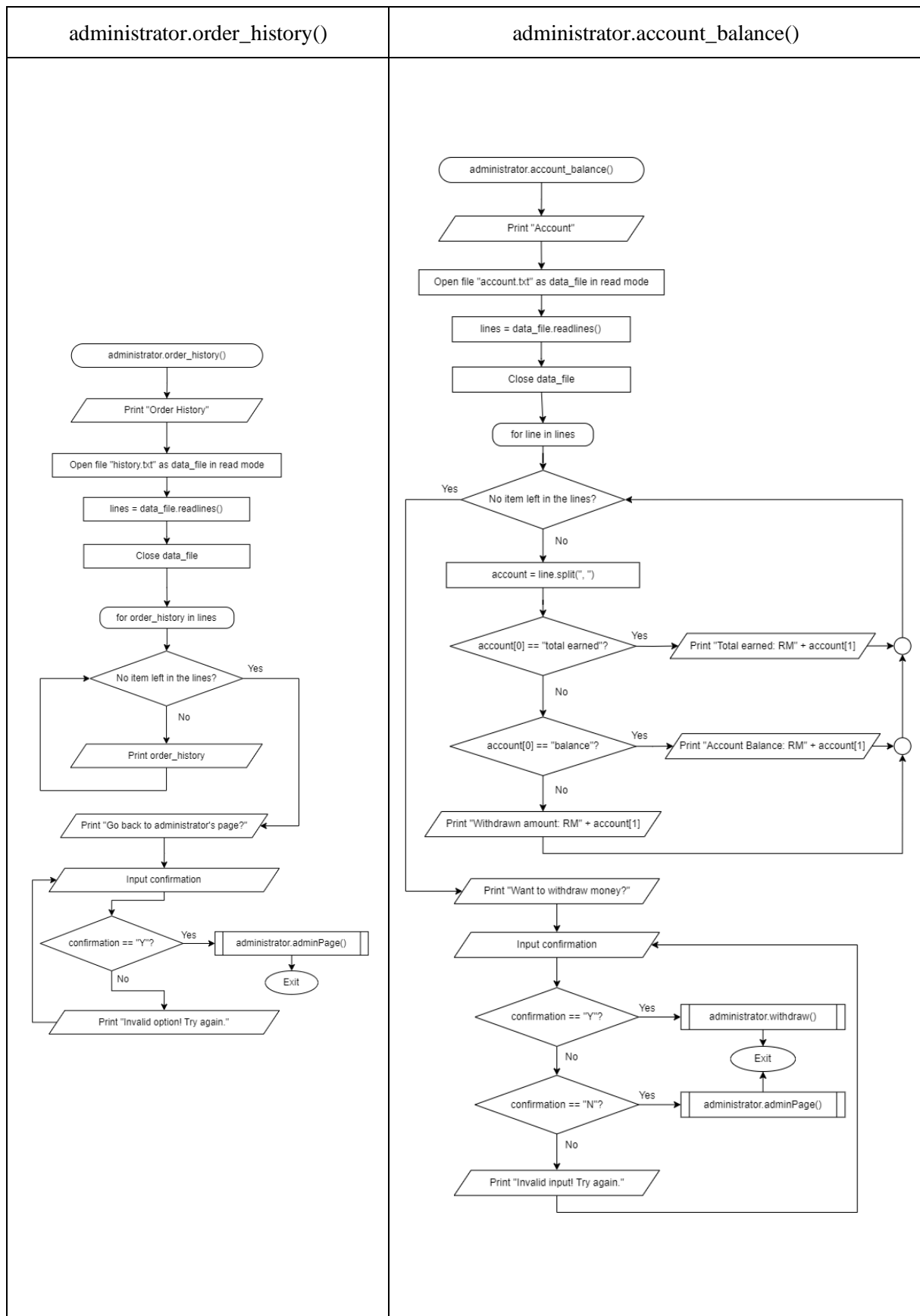
2.0 Flowchart

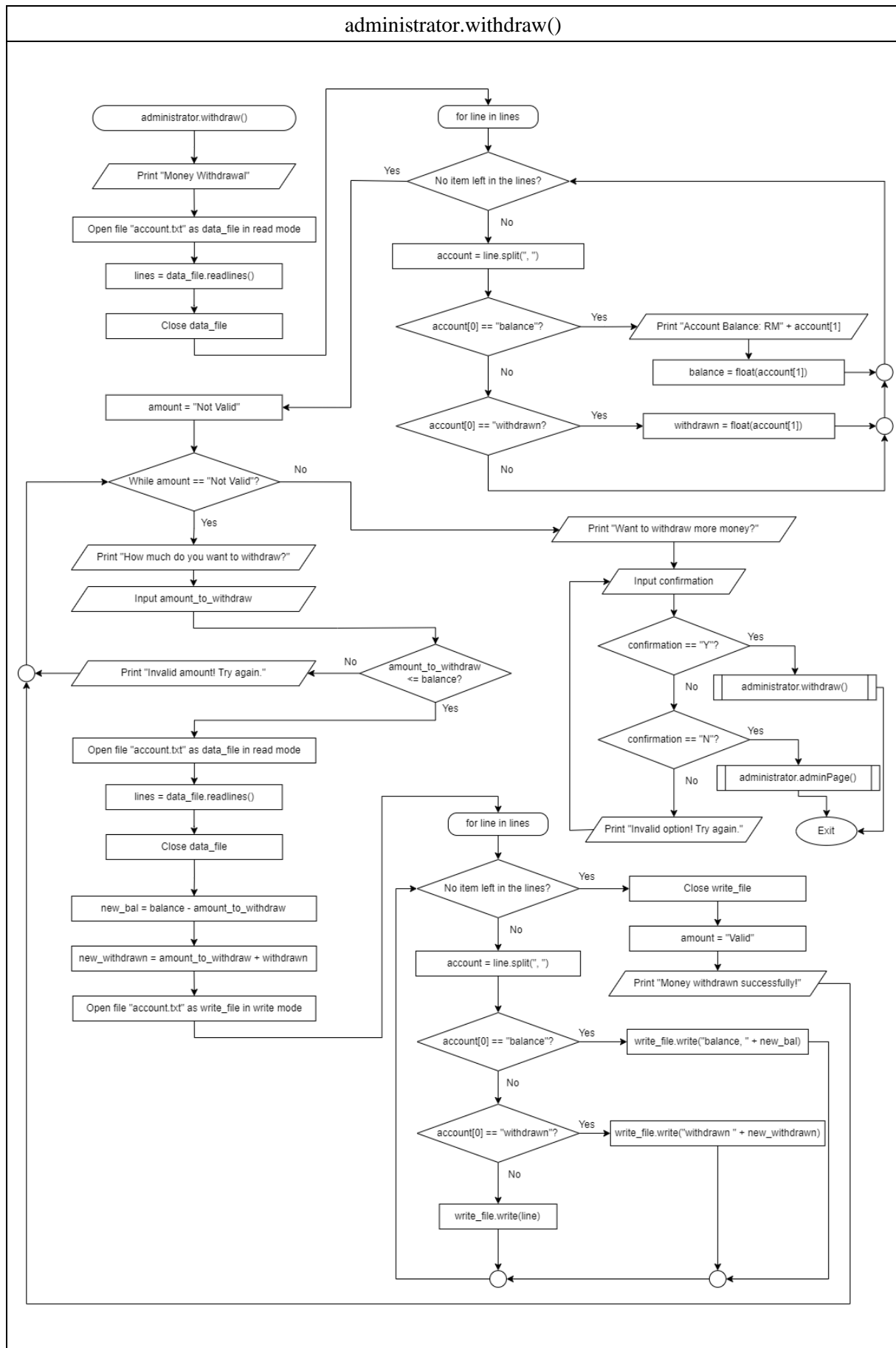


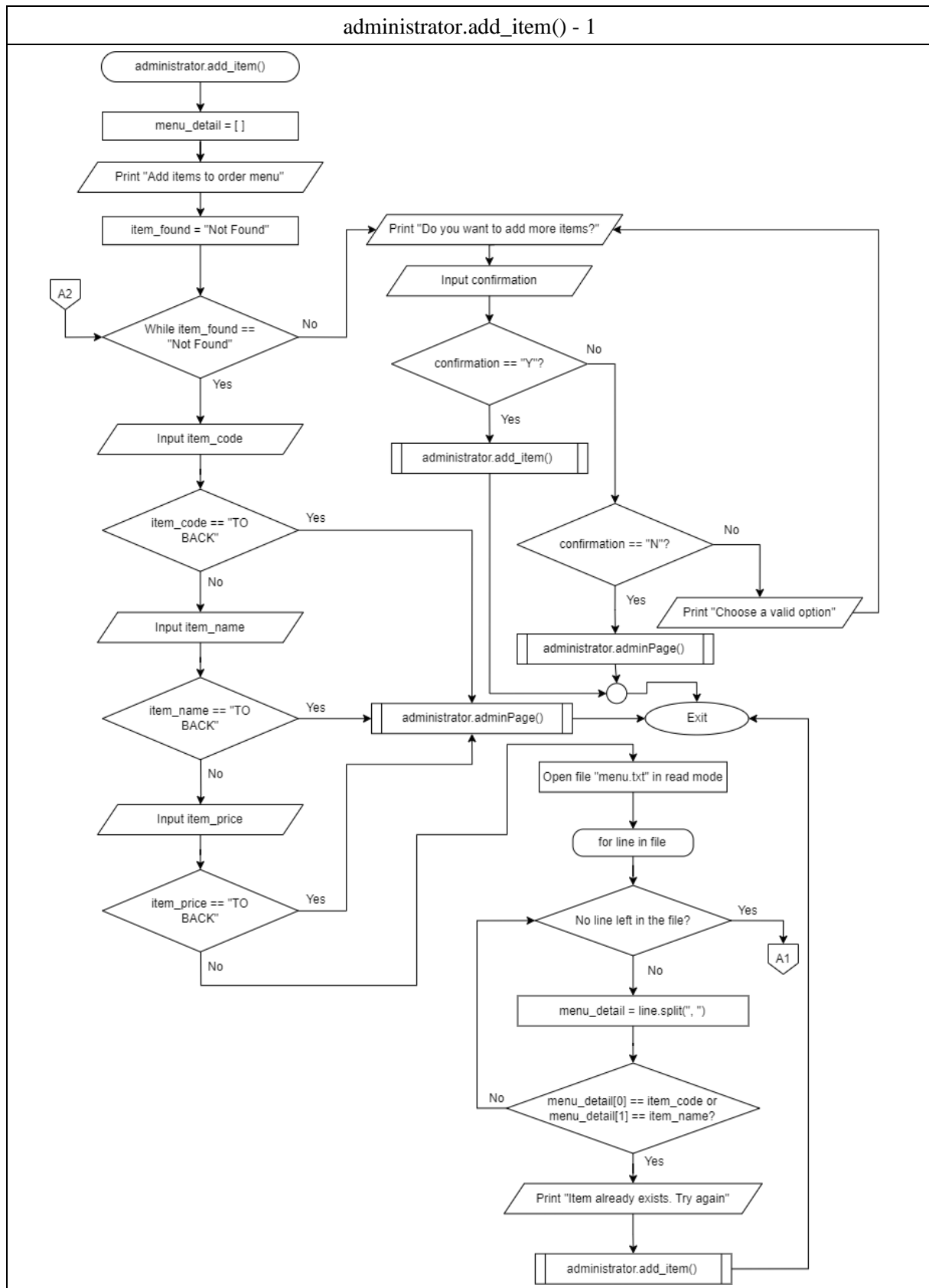


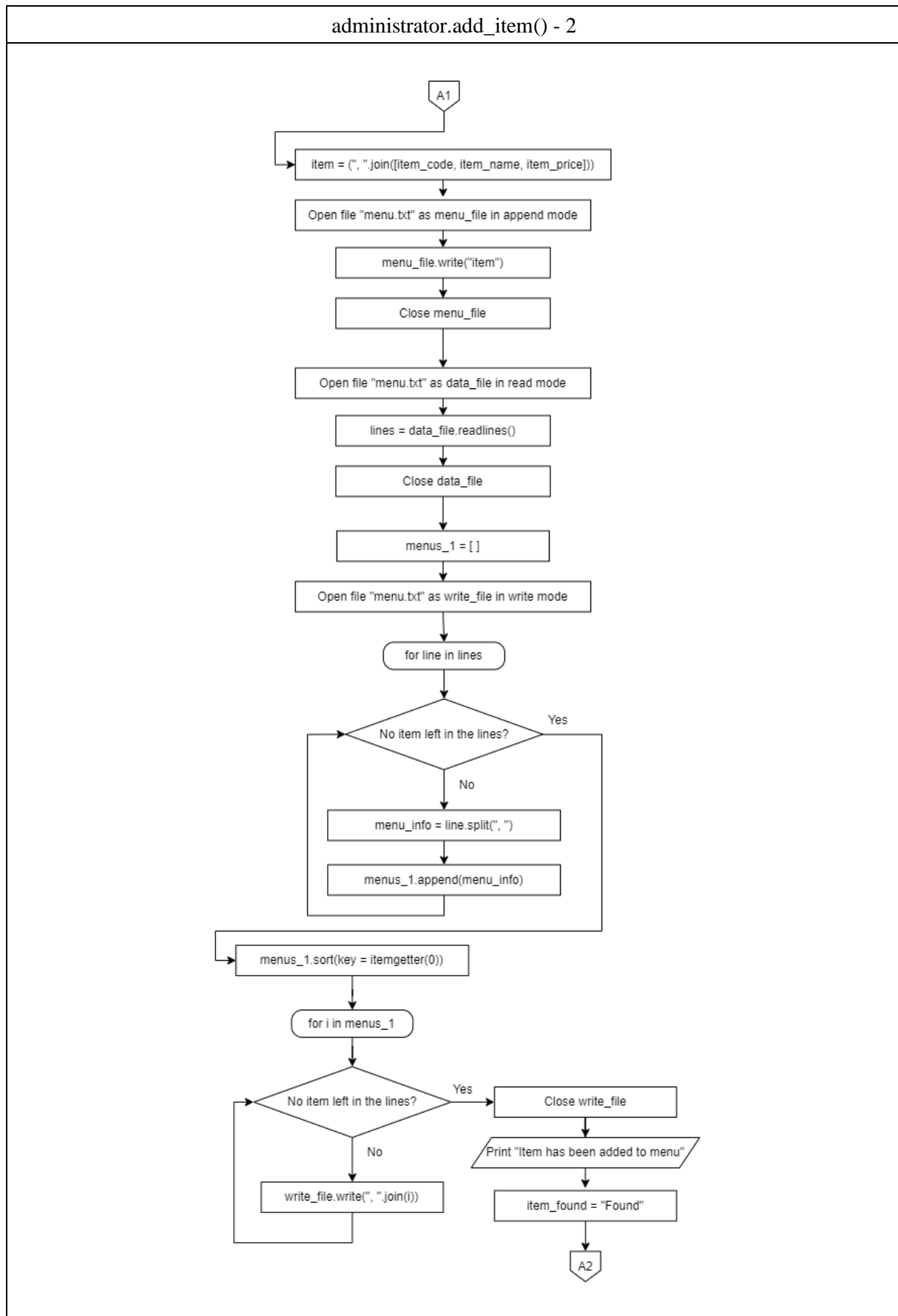


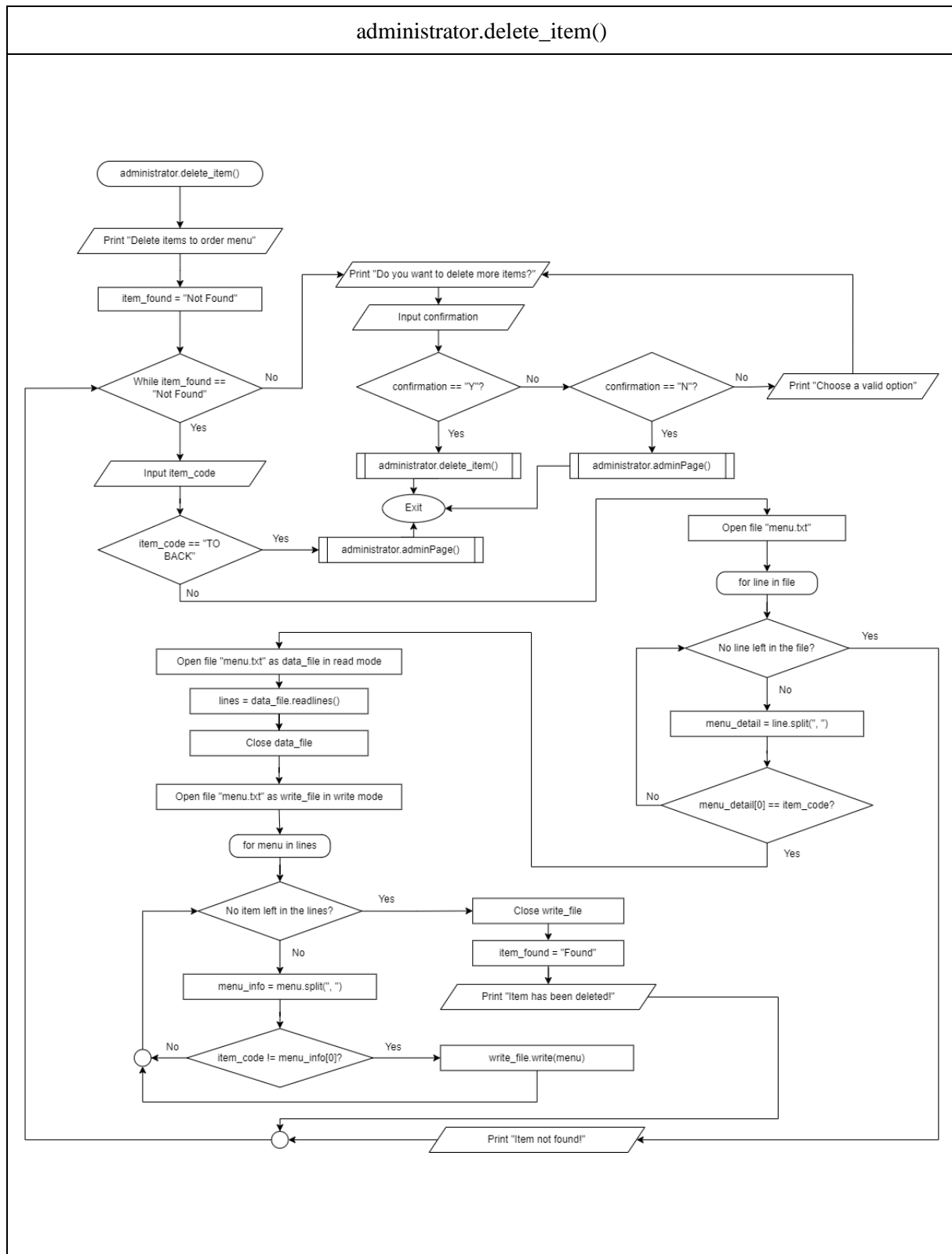




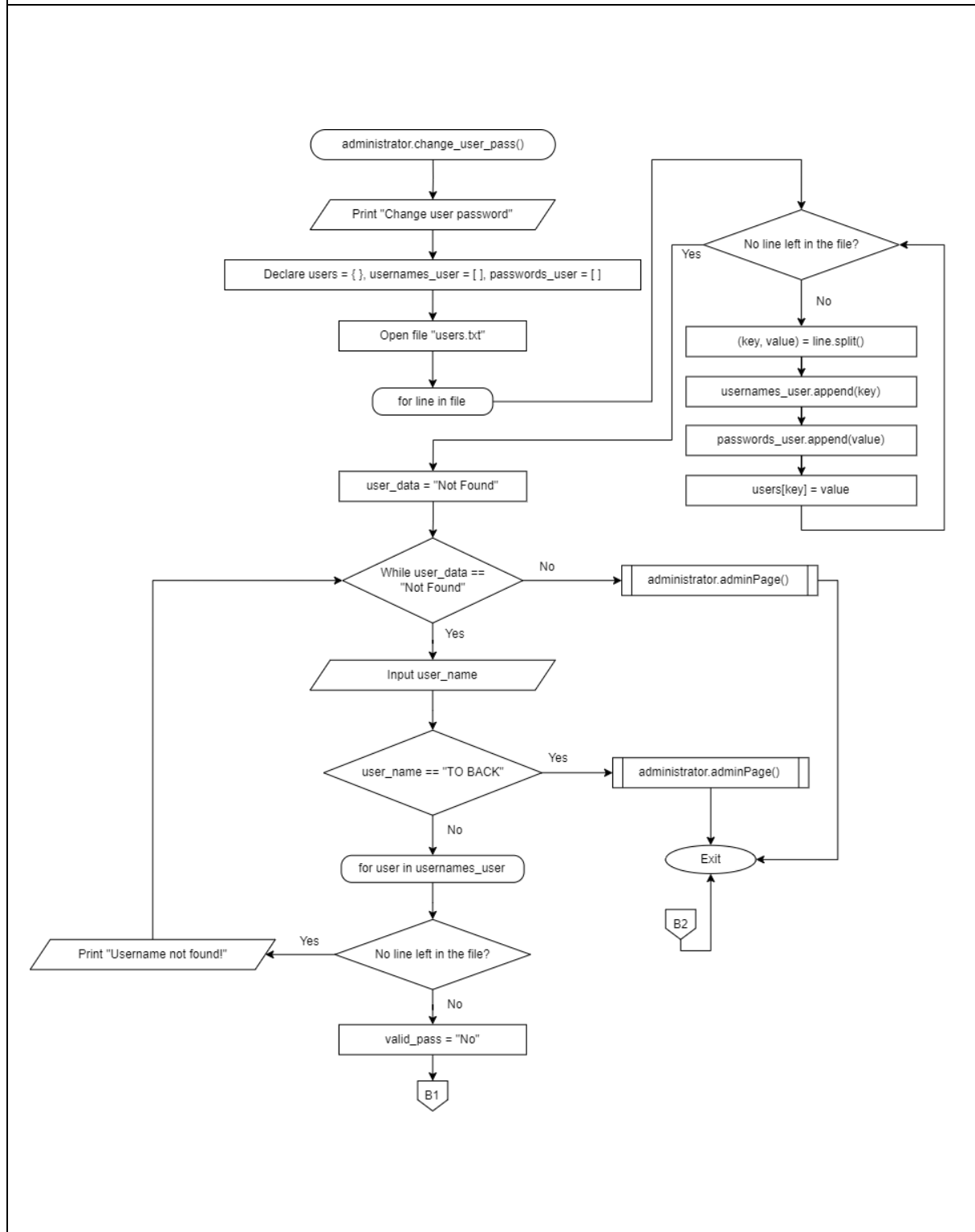




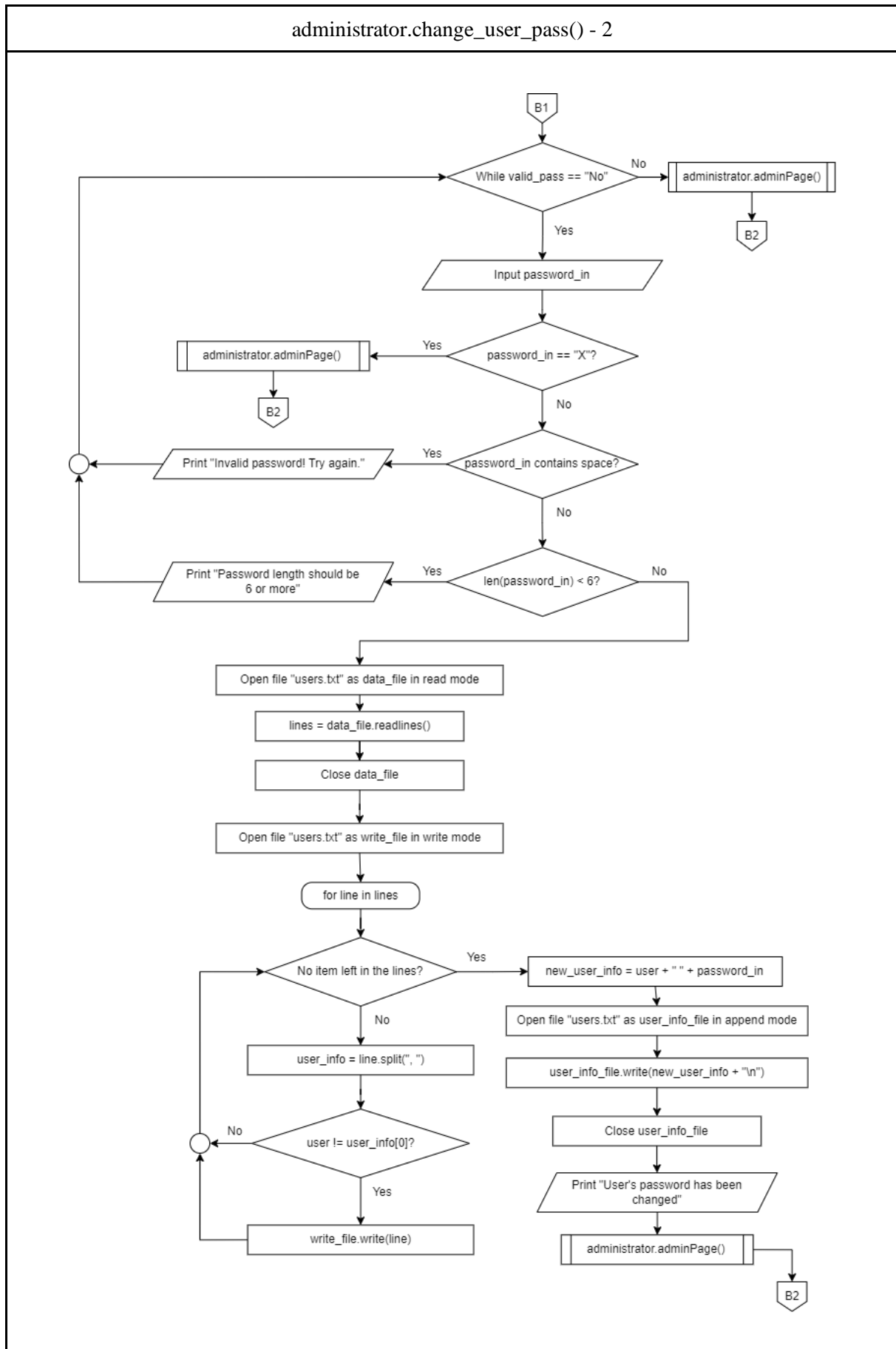




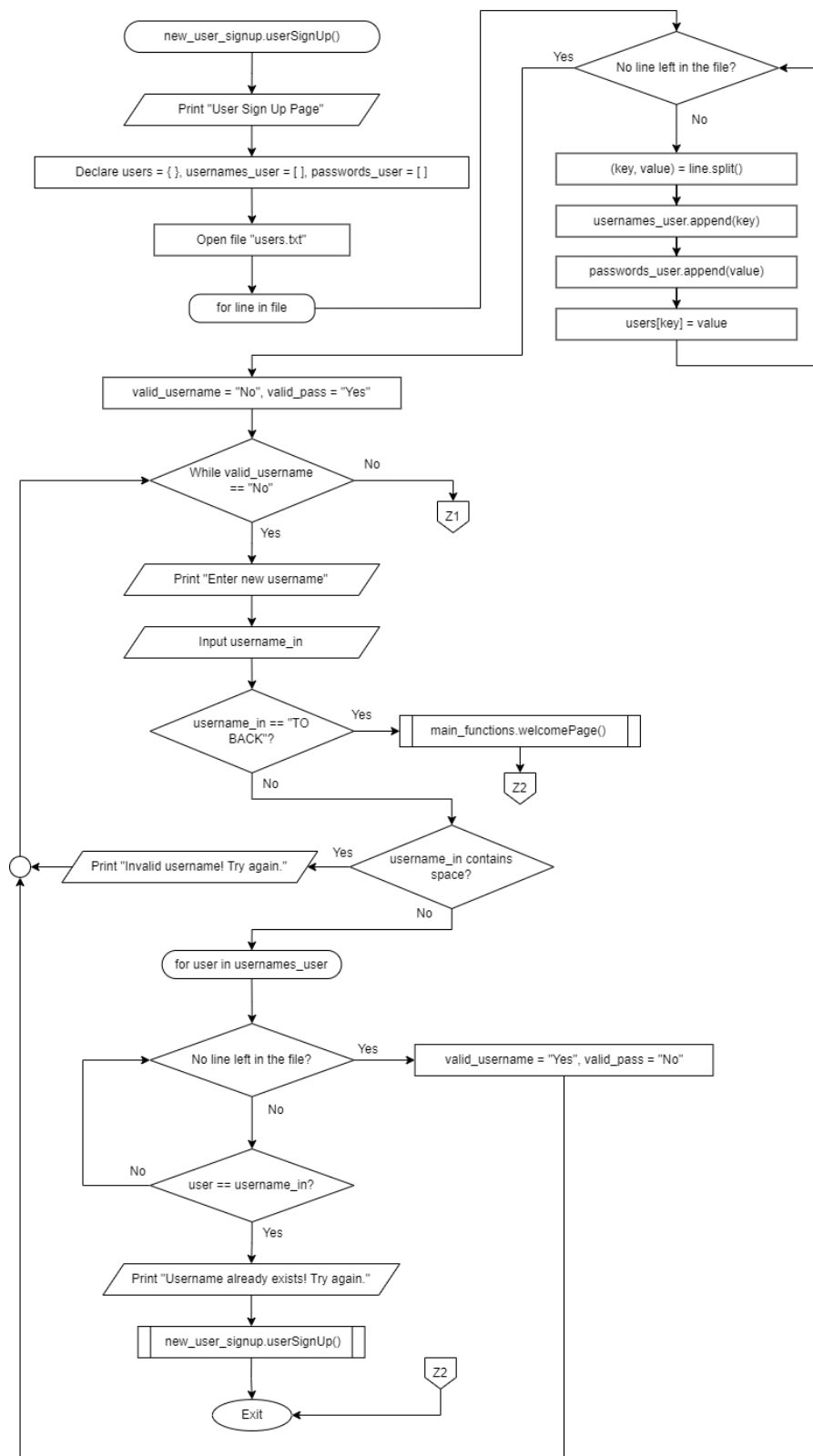
administrator.change_user_pass() - 1



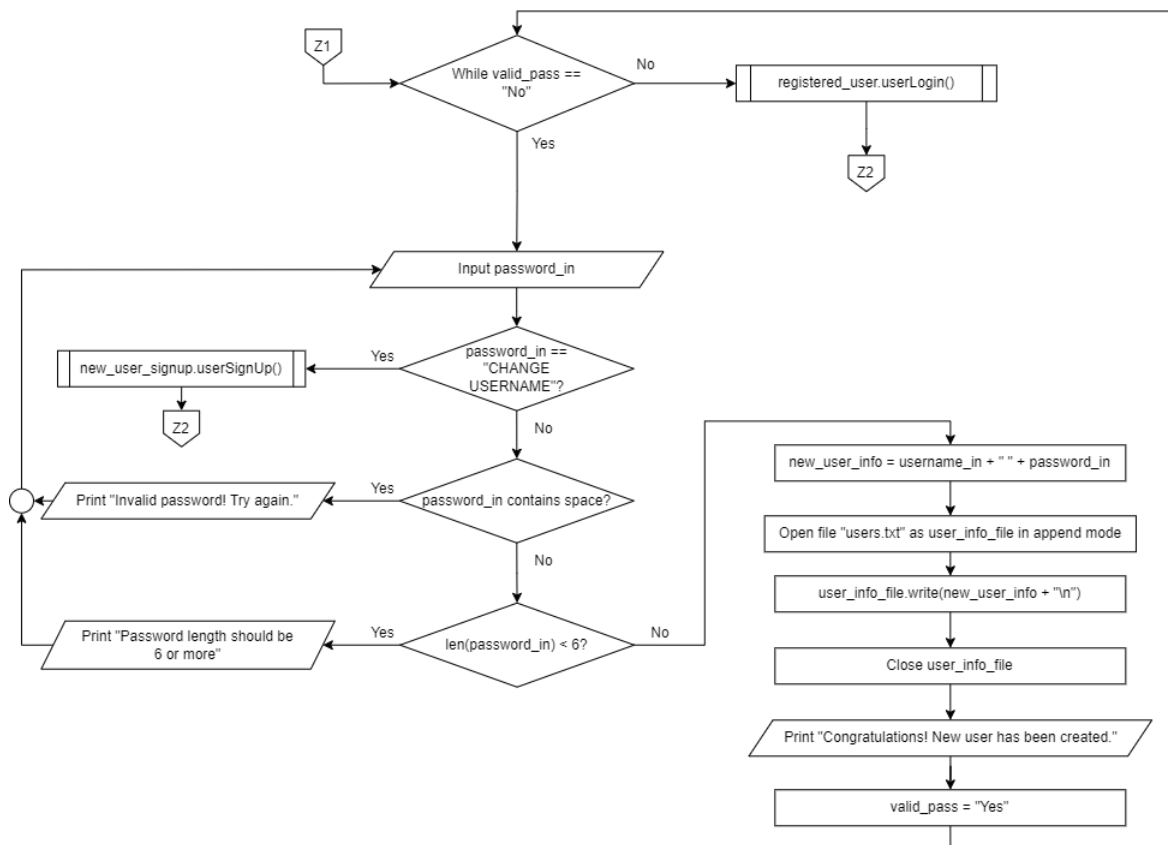
administrator.change_user_pass() - 2



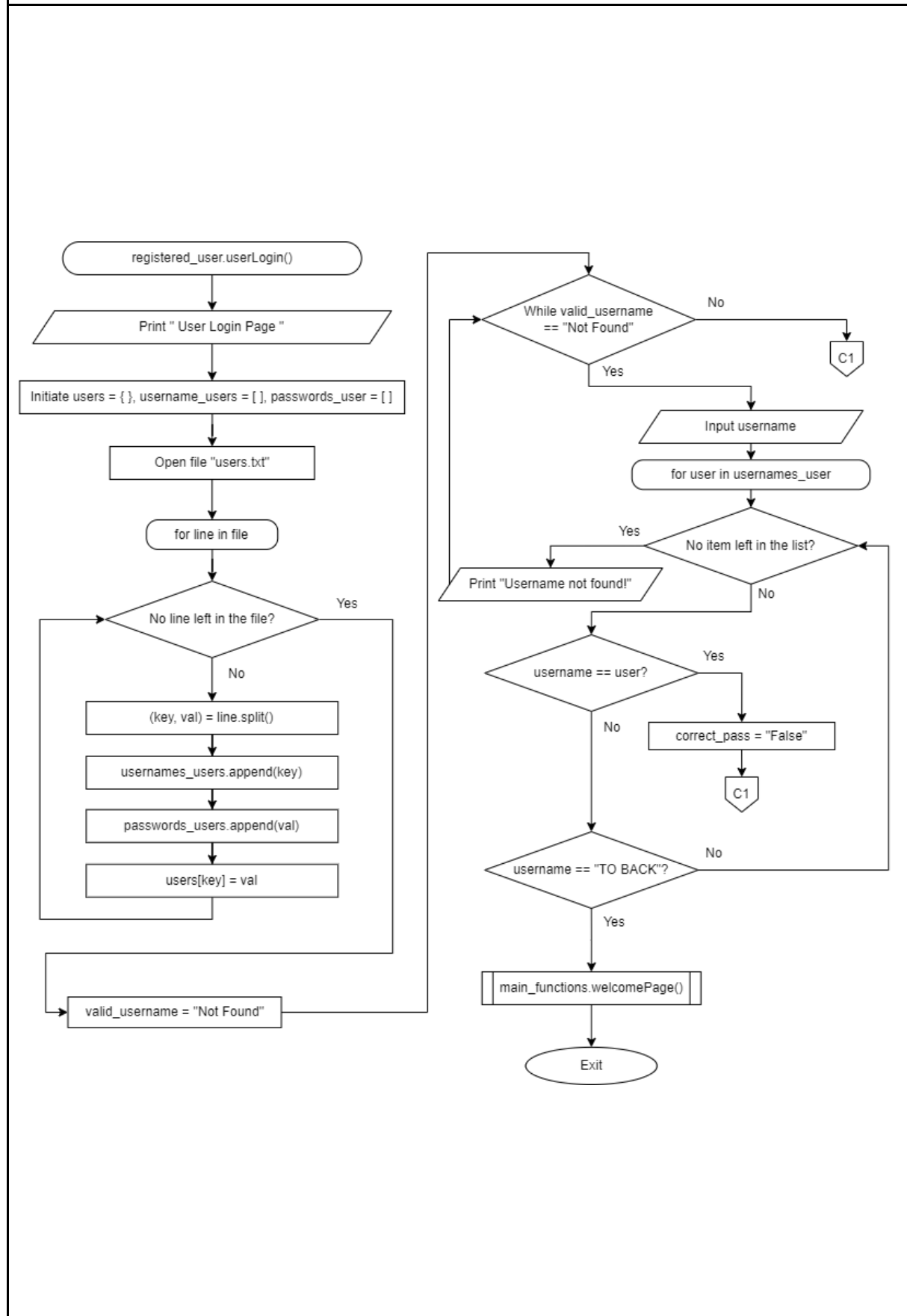
new_user_signup.userSignUp() - 1



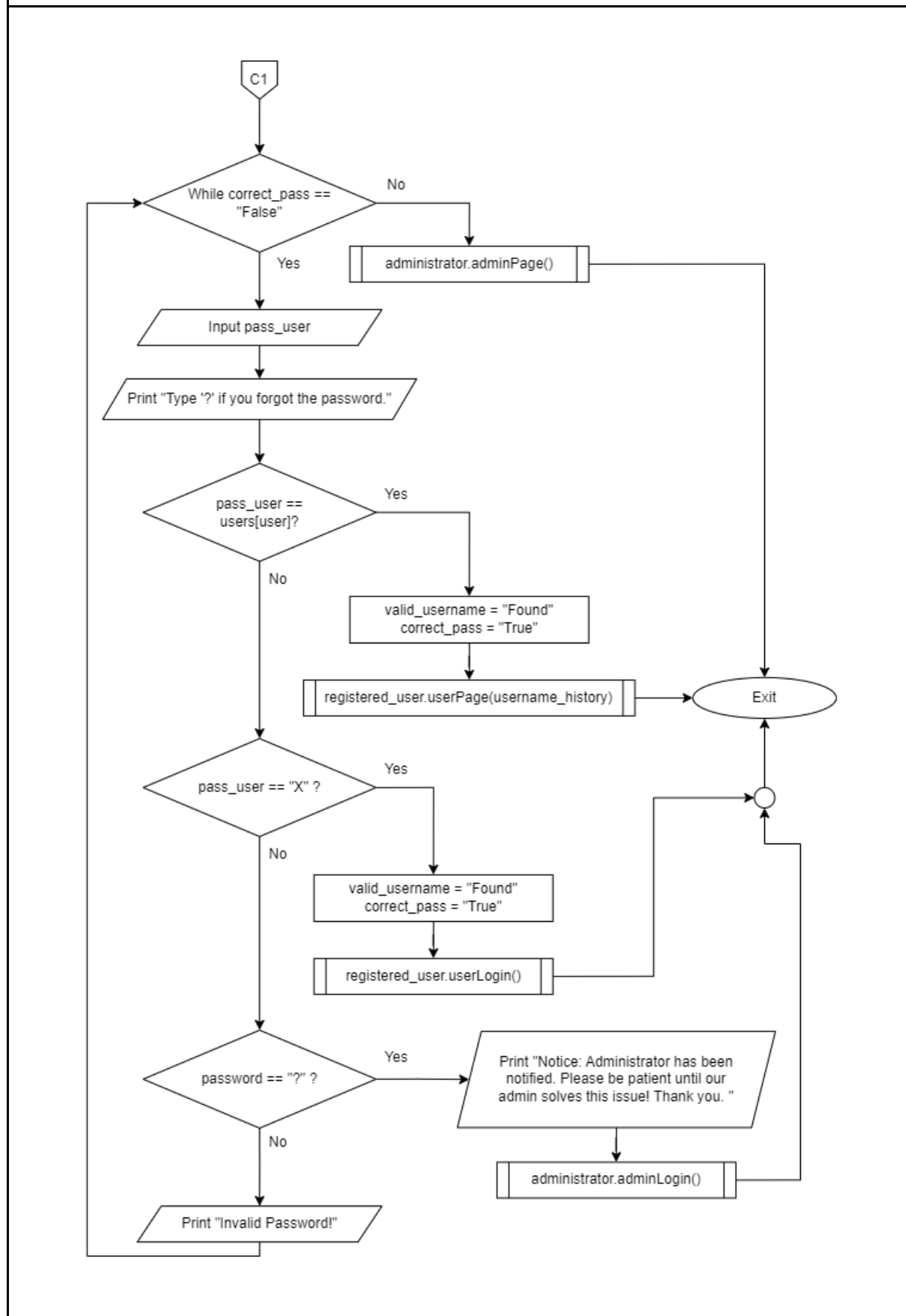
new_user_signup.userSignUp() - 2

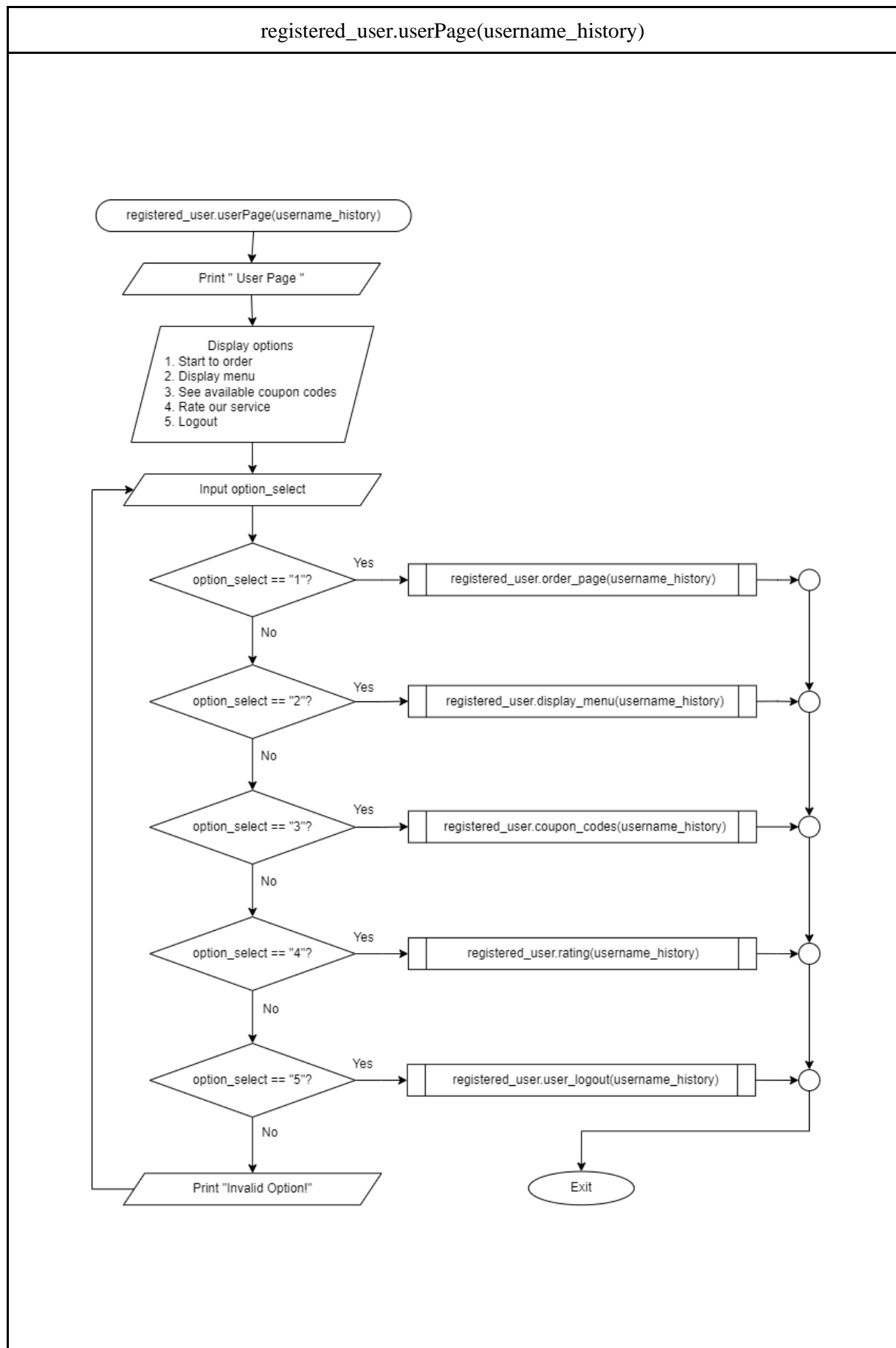


registered_user.userLogin() - 1

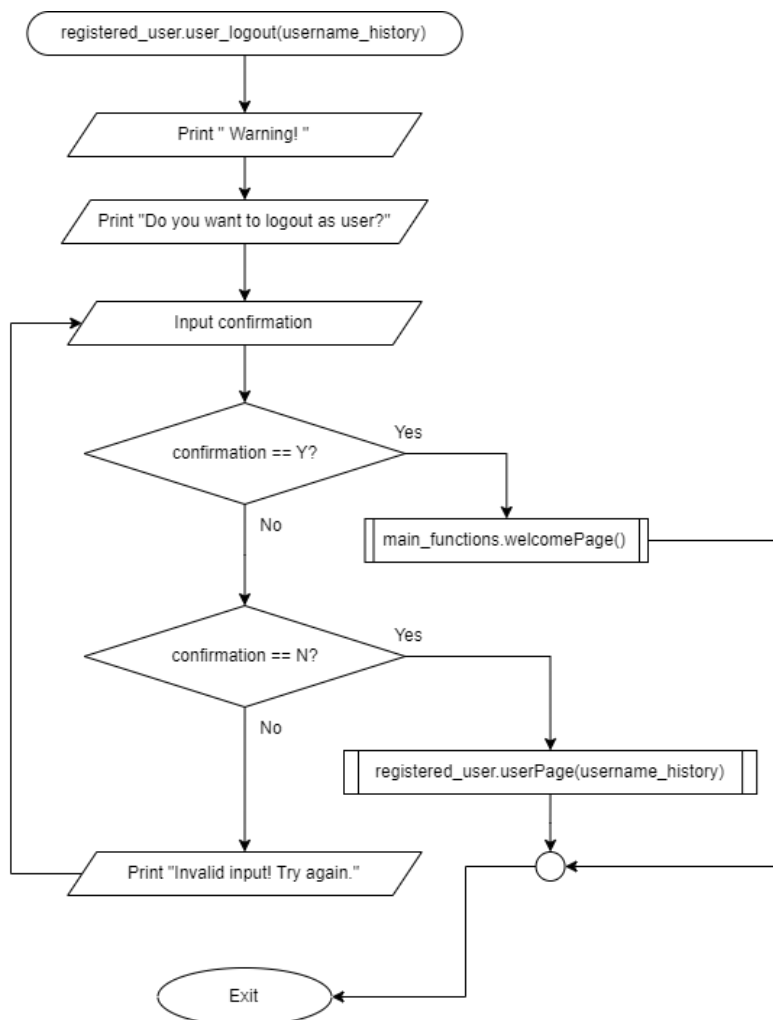


registered_user.userLogin() - 2

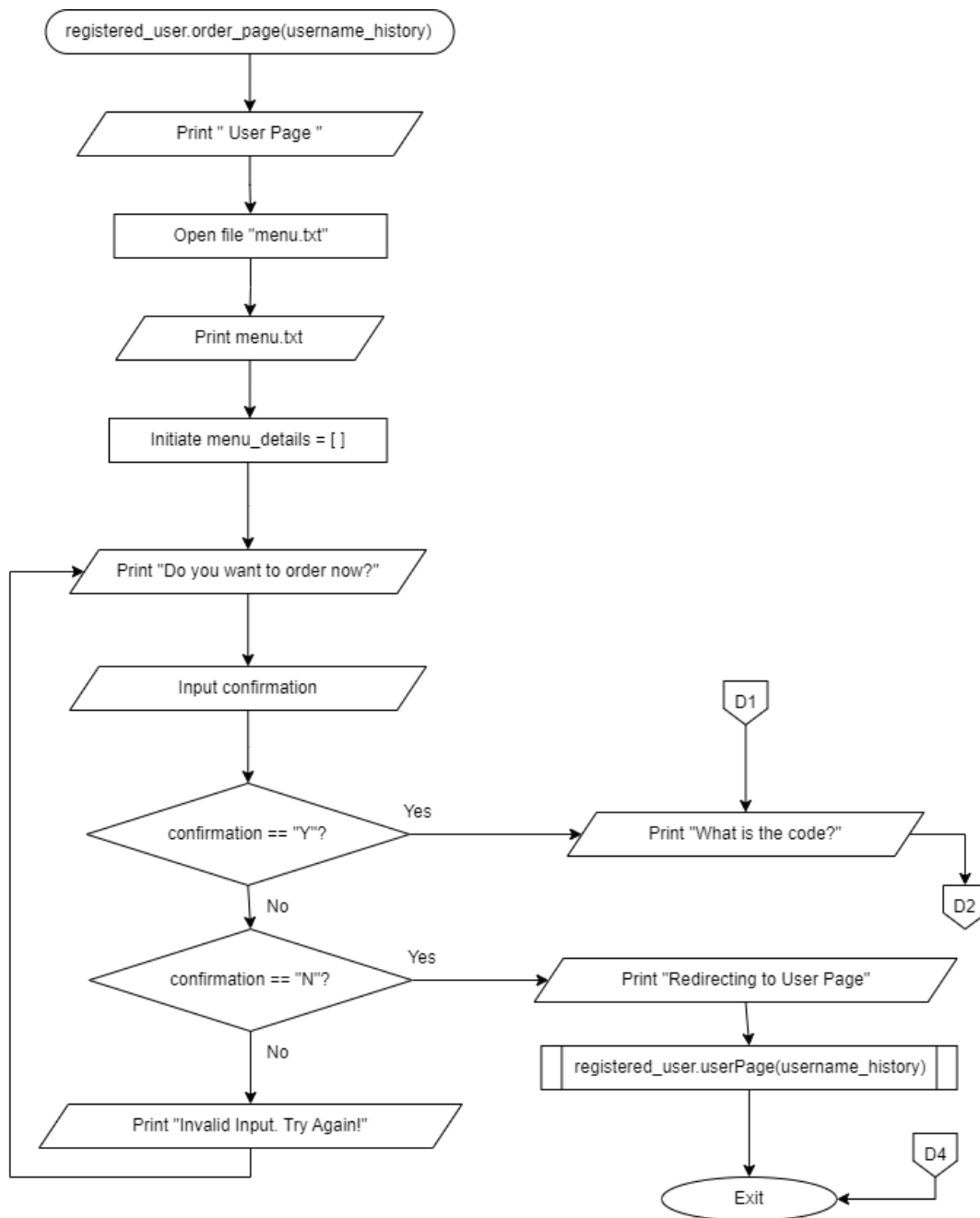




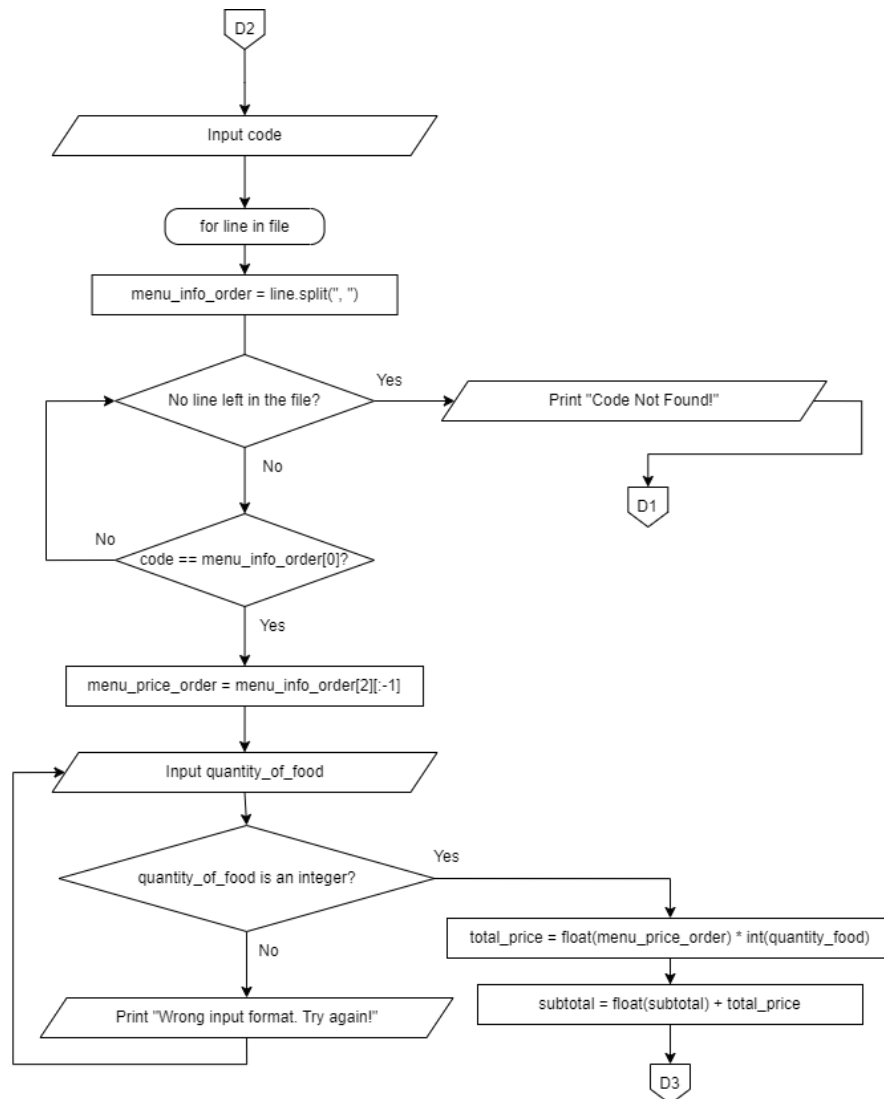
registered_user.user_logout(username_history)



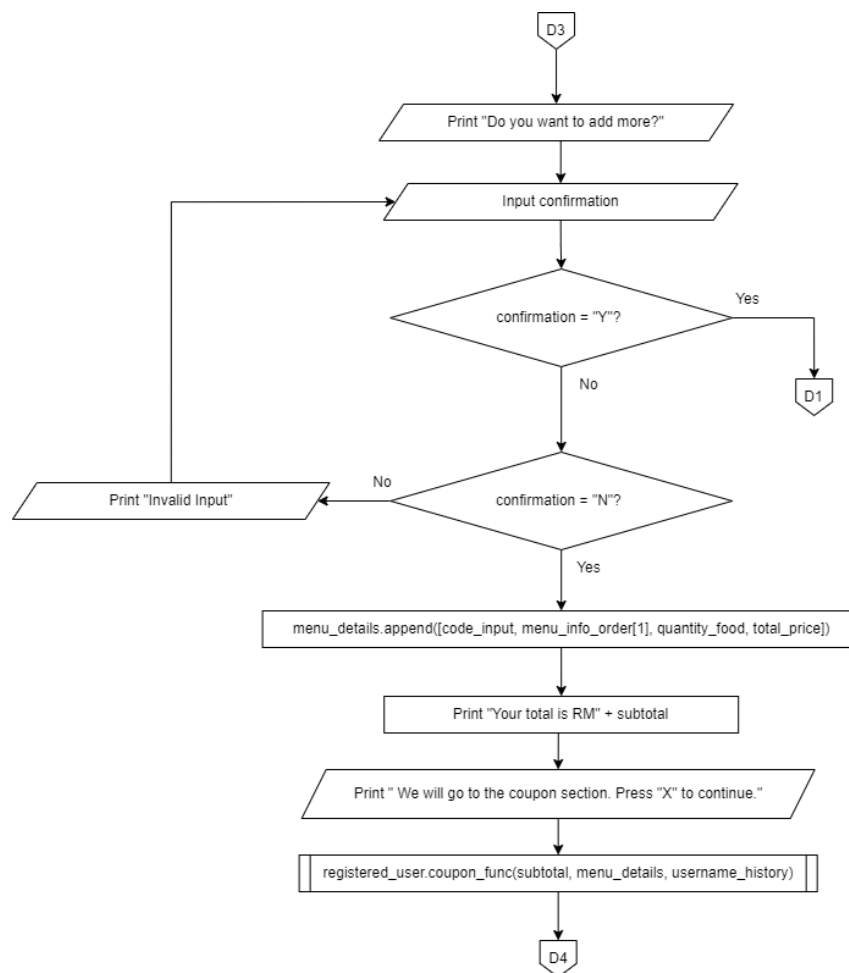
registered_user.order_page(username_history) - 1



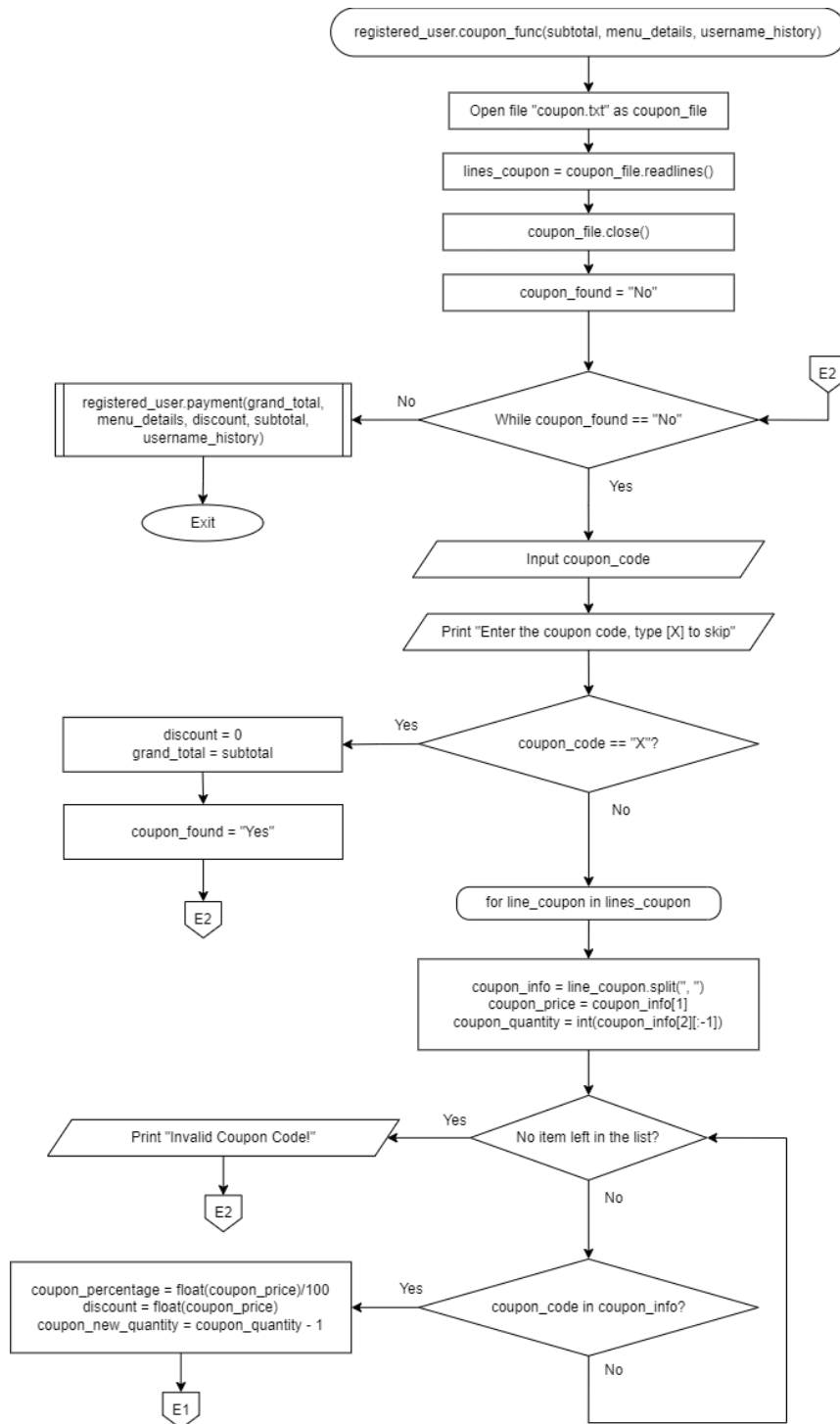
registered_user.order_page(username_history) - 2



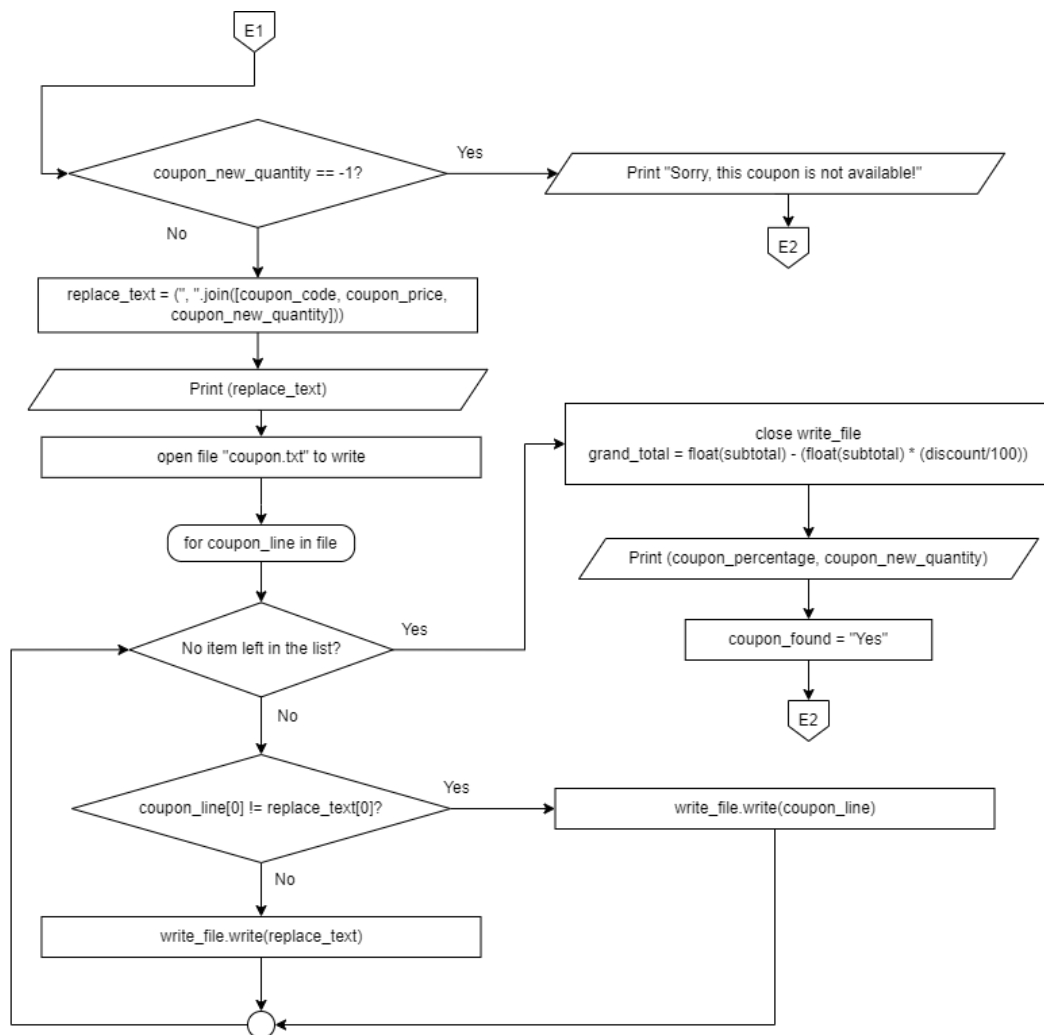
registered_user.order_page(username_history) - 3

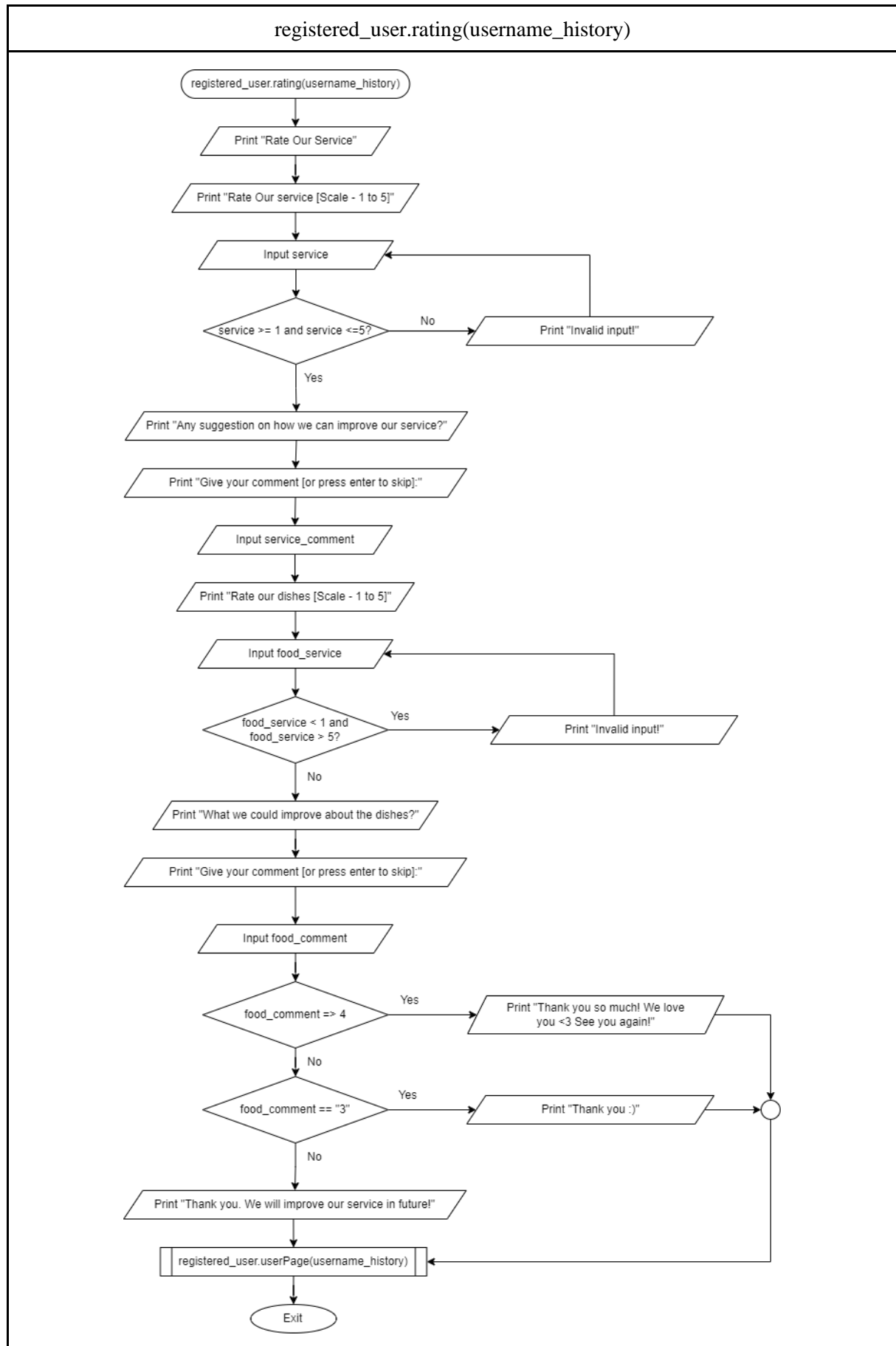


registered_user.coupon_func(subtotal, menu_details, username_history) - 1

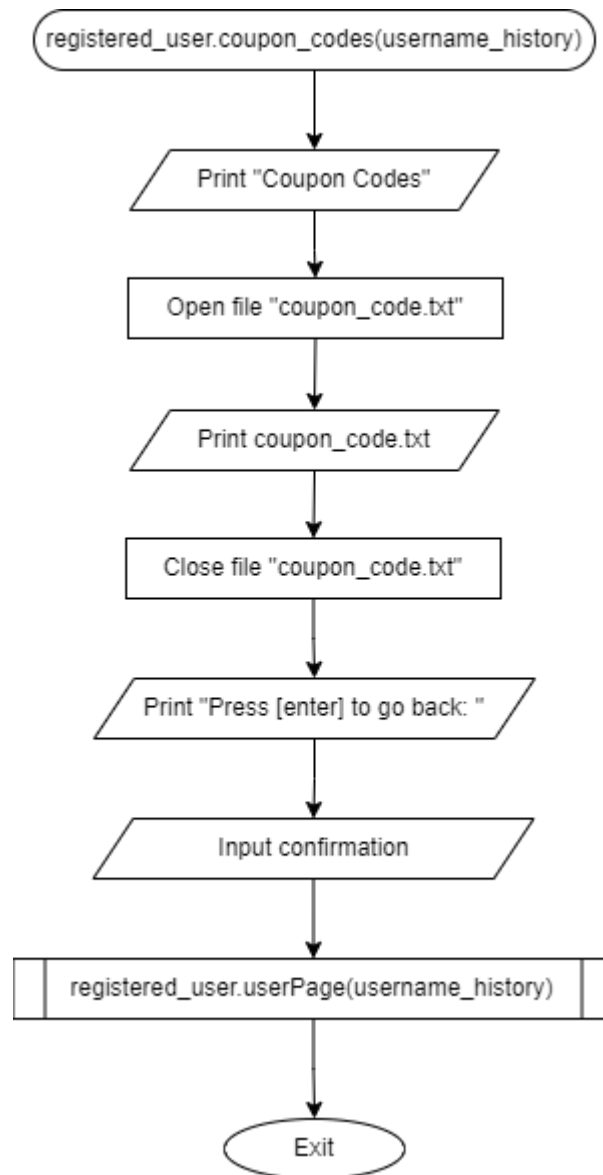


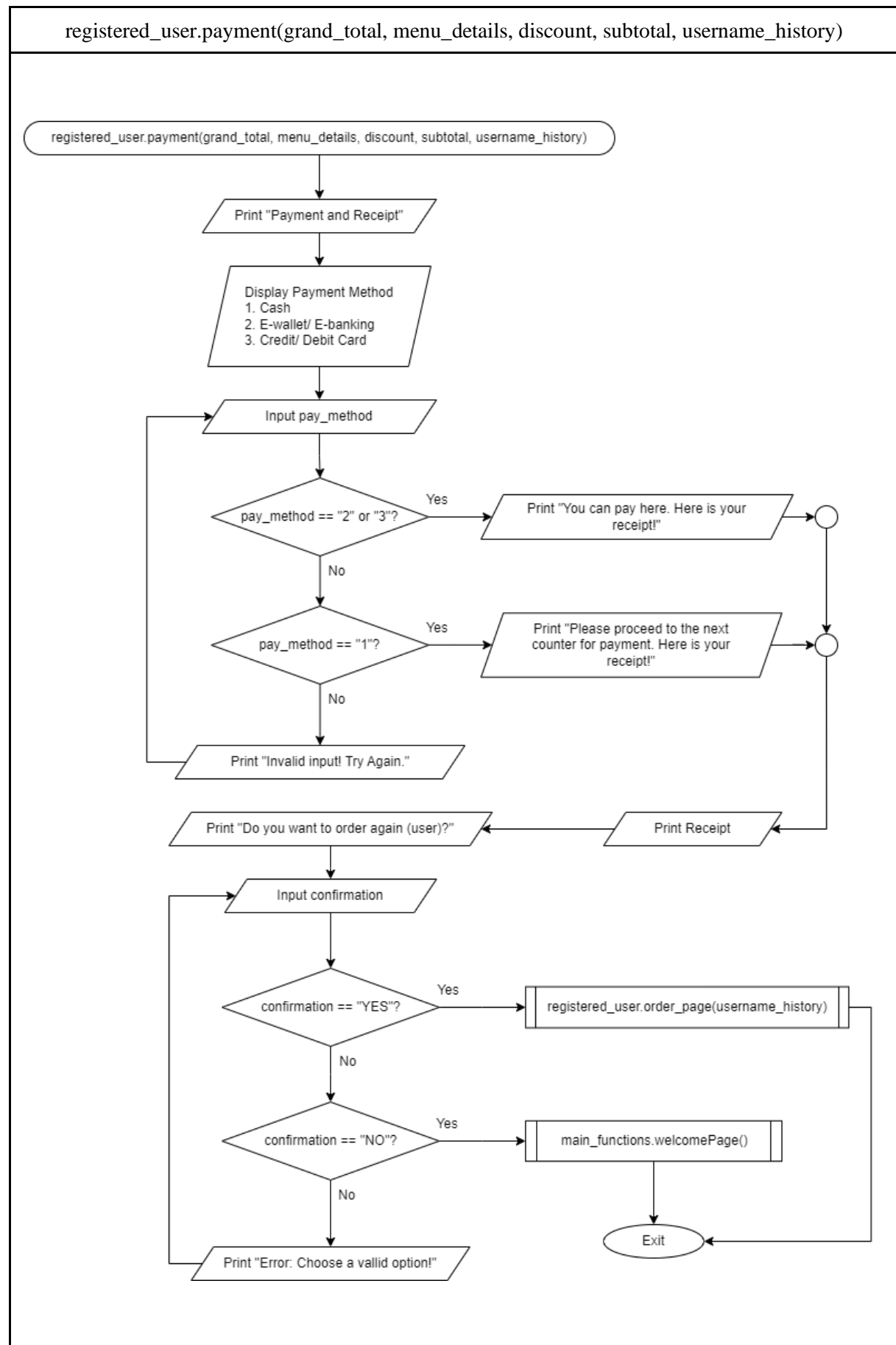
registered_user.coupon_func(subtotal, menu_details, username_history) - 2



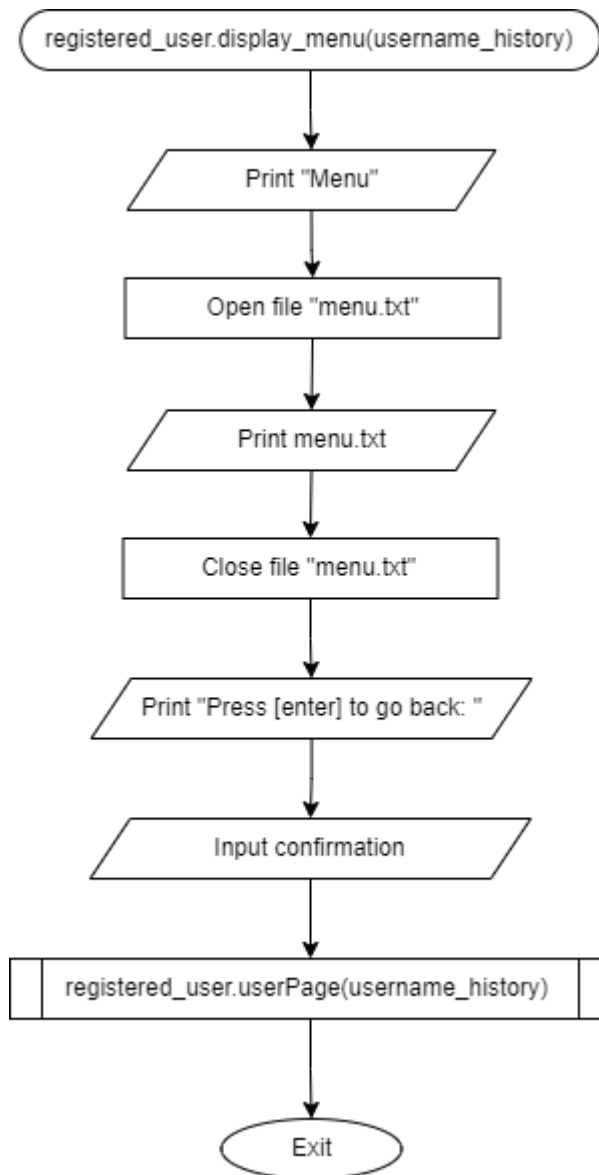


registered_user.coupon_codes(username_history)





registered_user.display_menu(username_history)



3.0 Task Distribution

Name	Student ID	Task Description	Percentage of contribution
Pharthiban A/L Kumarhesan	1211112294	<ul style="list-style-type: none"> • Did all the parts for the Main function, and classes including main_functions(), administrator(), new_user_signup() and guest(). • Helped Nur Adibah and Maryam with functions such as read, write, and append to manage data from text files. • Compiled all the functions together and finalised the code. 	50%
Nur Adibah binti Khairul Anuar	1211112286	<ul style="list-style-type: none"> • Did some functions under the class registered_user(). It includes order_page(), coupon_func(), coupon_codes(), rating() and payment(). • Need help with managing data from text files to be used in Python. Got a clear view after Pharthiban helped with it. 	25%
Maryam binti Norazman	1211111809	<ul style="list-style-type: none"> • Did other functions under the class registered_user(). It includes user_logout(), userLogin(), userPage() and display_menu(). • Need help with managing data from text files to be used in Python. Got a clear view after Pharthiban helped with it. 	25%

All of us are responsible to draw the flowchart for our parts. Finally, we discussed together to finalise all the flowcharts drawn by us.

4.0 References

1. <https://www.geeksforgeeks.org/reading-writing-text-files-python/>
2. <https://www.freecodecamp.org/news/file-handling-in-python/>
3. <https://www.geeksforgeeks.org/ways-sort-list-dictionaries-values-python-using-itemgetter/>
4. <https://www.geeksforgeeks.org/clear-screen-python/>
5. <https://www.geeksforgeeks.org/getpass-and-getuser-in-python-password-without-echo/>
6. https://www.w3schools.com/python/python_classes.asp
7. https://www.w3schools.com/python/python_datetime.asp
8. <https://www.programiz.com/python-programming/time/sleep>
9. https://www.w3schools.com/python/ref_random_randint.asp