

LAB211 Assignment

Type:	Long Assignment
Code:	J1.L.P0007
LOC:	100
Slot(s):	N/A

Title

Phone management in a store.

Background

Mr. Hoa has a phone shop, so Mr. Hoa wants to build a phone management software with the following basic functions such as: add, search, remove. The program must be designed so that adding a new phone is easy. Let's build your idea based OOP model.

Program Specifications

You are required to develop a Java program that shows the following menu:

Welcome to HKT Store - @ 2021 by <Student ID - Student Name >

Select the options below:

1. Add a phone
2. Search a phone by model
3. Remove the phone by model
4. Print the phone list in the descending order of Model
5. Quit

Each menu choice should invoke an appropriate function to perform the selected menu item. Your program must display the menu after each task and wait for the user to select another option until the user chooses to quit the program. Each phone has the following information: model (**cannot be modified, cannot be duplicated**), CPU, RAM, primary camera, screen-size, price, color, brand. Use collection to store the phones.

Function details

1. Function 1: Show menu 15Loc

The program displays a menu and asks users to input an option from 1 to 5.

2. Function 2: Build the data structure 15Loc

- Classes, abstract classes, interfaces.
- Use only one collection to store phone.

3. Function 3: Add a phone to the list 15Loc

- User input new phone's information
- Remember to check the model cannot be duplicated. Other information must be validate.
- Add the new a phone to the collection.
- After adding, the program asks whether you want to continue adding another phone or return to the menu.

4. Function 4: Search a phone by model 15Loc

- User input the model want to search. The program returns all phone that has name contain the search string.
- If the phone is not existed, the screen shows message "This phone Model does not exist". Otherwise, the screen shows the phones information.
- After searching, the program asks if the user wants to continue searching for another model or return to the menu.

5. Function 5: Remove the phone by model 15Loc

- User can remove any phone in the collection by Model.
- Before the remove, the program must show confirm message.

- Show the result of the remove: success or fail.
- After removing, the program returns to the menu.
- 6. Function 6: Print the phone -10Loc**
 - The program will print the phone list in the descending order of Model.
 - After printing, the program returns to the menu.
- 7. Function 7: Store the phone list to text file- 15 Loc**
 - The user enters the file name you want to save.
 - The program will save all information of the phone in the store to the file.
 - After save, the program returns to the menu.

Guidelines

- The requirements of the assignment can be more flexible depending on your instructor.
- The instructor will explain the requirement on the first slot of the assignment.