Homework Five

Pseudo Code

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Main Class (Shopping)

- Instantiate the ***Bag, ShoppingList,*** *and* ***productPrinter*** classes

1. Product Class

- Call **set*Products*** method to pull the code that will set all products
- Print the shopping Items available for purchase

2. Priority Class

- Call ***setPriority ( )*** method to set product priority

3. Price Class

- Ask the user to enter a budget, that will determine the user's Bank Account
- Budget must be below $58.00.
- Use **try / catch** in case a non - integer is entered for the budget amount.
- User will have 2 chances to enter a valid amount, otherwise the program will end.
- Call **setPrice( )** method to set product price

Let's Go Shopping …

4. Shopping List

- Call ***getShoppingList( )*** method to show the user the products available for purchase.

5. Bag Class

- Instantiate a variable called "name" to pass through the ***setName( )*** method. This method will ask the user for their name
- Call the ***addProduct( )*** methods to add shopping items to a shopping bag

- Call the ***nonPurchasedItems( )*** to show which items from the shopping list were not bought.
- Call ***report( )*** method to print a text file with a list of items purchased
- Call the ***purchasedItems( )***

Product class

- Create public abstract class called Product
- Create 2 public arrayList of size 7
- Create 1 public array of size 7
- Create a method called setProducts that should pass String array arguments
- Prompt the user to enter an item, using a for loop, iterate through the array until 7 elements are entered and the array is completely filled.

Priority Class

- Create a public abstract class called Priority that extends the Product class
- Create a method called ***setPriority( )***
- Create an ArrayList called priority
- For every element available in the priority array, t**ry** adding a priority value to the priority array. If an invalid input is entered, **catch** the *Mismatched Input exception* and end program.
- Use **try / catch** exception in case a priority that is not int is entered
- If Input is invalid and caused a *Mismatch Exception* error, then end the program
- Create a separate method called ***sortBubble ( )*** that passes an integer array
- The ***sortBubble( )*** method will iterate through all elements in the priority array and the product array, and sort values in parallel.
- Convert the priority ArrayList into a temporary array called NewPriority. This array will server to sort all priorities within the ***sortBubble( )*** method

- Using a Bubble sorting option, create two *for* loops that takes the highest input value in the finalProduct array and add it to a temporary variable called **"temp"**
    - Repeat the same step for ***newPriority( )***
- Print the Sorted list,

<u>Price class</u>

- Create a Price class that inherits the Product class.
- Create private variables: **Max and Min**
- Create a public method that passes a double value amount and set that value as the user Bank Account. Call the method ***setBankAccount( )***
- Add a method to return the Bank Account value called ***getBankAccount( )***
- Create a public method called ***setPrice( )*** that passes an ArrayList called newProduct
- For every product in the newProduct array, set a price

<u>Shopping List Class</u>

- Create a Shopping Bag class that inherits from the Bag class
- Loop through the newPriority array from the Priority class
- Loop through the newProduct array from the Product class
- Loop through the price array from the price class
- Output each element of all 3 arrays in a report like format

<u>Bag Class</u>

- Instantiate 3 private variables: **newName, choice, and quantity**
- Instantiate 4 ArrayLists: **cart, bagPrice, total and missingItems**
- Create a method called ***setName( )*** that prompts and takes the user name
- Create a method called ***getName( )*** that returns the user name

- Create a method called ***addProduct( )*** that while the total sum of the user shopping cart is valued at or below $58.00, then ask the user to enter an integer input.
- Assign the integer value to the choice variable.
- Match the choice to the index of the newPriority and match to the corresponding product in the newProduct array and the corresponding price in the price class.

Example

newPriority.get(1)—- same as -—> ***newProduce.get(1)*** —- same as ——> ***price.get(1)***

- Create a function called ***sum( )*** that calculates the sum of an double array list
- Create a function called ***nonPurchasedItems( )*** that outputs values from the newProduct array list that doesn't exist in the bag array list.

<u>Product Printer Class</u>

- Create class productPrinter that inherits from the ShoppingList class and implements the Reportable interface
- Import the following: *java.io.FileNotFoundException, java.io.PrintWriter, java.util.Scanner* libraries
- Create a new private variable called "filename"
- Create a new object for PrintWriter and the Scanner objects
- **try** exception that prints a text file using the PrintWriter
- **catch** if the filename is invalid or can't be created
    - If file can't be created, end the program.