# **Lab Assignment 6\_2 – Enumeration Types & Objects as Parameters**

**Important:** Make sure you include the 3 header comments listed in previous lab assignments.

1. Write a program named **Lab6\_2A** that will read a set of orders for cases of sodas and calculate the total price for all of them.

Create a second class named **Order**. In that class do the following:

1. Define an enumerated type named **brands** that has the values *DrPepper, SevenUp, IBC, Welchs*.
2. Define the following instance variables:
   * 1. DrPepperCases (int)
     2. SevenUpCases (int)
     3. IBCCases (int)
     4. WelchsCases (int)
     5. totalCost (double)
3. Write a constructor with no parameters that sets all the instance variables to 0.
4. Write a return method named **getEnumValue** with a return type of **brands**. It should receive a character parameter with the first letter of a brand name and return the **brands** (enumerated value) equivalent of it.
5. Write a void method called **addNewOrder** that will accept a **brands** parameter called **soda** and an integer **numOrdered** parameter and do the following:
   * 1. Use a switch statement to determine the price per case of this brand and calculate the cost for the number of cases ordered. (Ex- If the brand is IBC and numOrdered is 7, then cost is 7 \* 4.00 which would be 28.00.)

| **Brand** | **Cost per Case** |
| --- | --- |
| Dr Pepper | 5.00 |
| Seven Up | 4.50 |
| IBC | 4.00 |
| Welchs | 5.50 |

* + 1. Add the number of cases to the appropriate instance variable (**DrPepperCases**, **SevenUpCases**, etc.)
    2. Add the cost to the **totalCost** instance variable
    3. Print the **soda** name, **numOrdered** and **cost** for these cases with a tab between each of them.

1. Write a void method named **readOrders** (no parameters) that will:
   * 1. Declare 3 variables: **soda** (data type - brands), **nbrCases** (int) and **sodaInitial** (char)
     2. Read **sodaInitial** and the number of cases ordered from a text file (**Lab6\_2A.txt**) until the file is empty.
     3. For each line read from the file:
        1. Call **getEnumValue** sending **sodaInitial** as the parameter and put the returned value into **soda**
        2. Call **addNewOrder** sending **soda** and the number of cases.
     4. After the while loop, print a blank line.
2. Write a toString() method that will return a string with each of the instance variables on its own line with a label.
3. Back in the main class:
   * 1. Declare and instantiate a new Orders object named **currentOrder** (no parameters).
     2. Call **readOrders** for the **currentOrder** object (no parameters).
     3. Print the **currentOrder** object using the toString method shortcut.

Hints:

* You will need to add **throws FileNotFoundException** at the end of the heading line for the **readOrders** method and also the main method back in the main class.
* You also need to import java.io.\* and java.util.Scanner at the top of both classes.

1. Write a program named **Lab6\_2B** that will play a game of Blackjack between the user and the computer.

Create a second class named **Card** with the following:

1. Define the following private instance variables: **cardValue** (int) & **cardSuite** (String)
2. Write a constructor with no parameters that will
   * 1. Set **cardValue** to a random number between 1 and 13
     2. Generate a second random number between 0 and 3 and assign **cardSuite** a string based on its value (0 – hearts, 1 – diamonds, 2 – spades, 3 – clubs)
     3. Call **drawCard**
   1. Write a void method named **drawCard** that will draw a simple version of the card like the example shown (11 will have a J in it for Jack, 12 – Q for Queen, 13 – K for King)

Also print **cardSuite**

\*\*\*\*\* \*\*\*\*\*

\* 2 \* \* Q \* etc….

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* 1. Write a public int method named **getValue** (no parameters) that will return **cardValue**

Back in the main class:

1. Print the title “User Cards”
2. Declare and instantiate a **Card** object named **user1**
3. Declare and instantiate a **Card** object named **user2**
4. Print the title “Computer Cards”
5. Declare and instantiate a **Card** object named **computer1**
6. Declare and instantiate a **Card** object named **computer2**
7. Call the **findWinner** method, sending **user1**, **user2**, **computer1** & **computer2** as parameters.
8. After the main method (but still inside the class) write a public static void method named **findWinner**
   * 1. It should have 4 parameters of type **Card – u1, u2, c1, c2**
     2. Add the 2 cards for the user and get the sum. If the sum is greater than 21, set it to 0. (Use the **getValue** method to get the value of each card object.)
     3. Do the same thing for the 2 computer cards.
     4. Compare the user sum to the computer sum and print a statement to show who won or if it was a tie. (The player with the highest score wins.)