Homework-06

1. Create a Program list of unique elements taken from the user. Sort and print these elements.
   Concepts:
   - Read N elements from the user
   - If the element does not exist in the ArrayList, add it.
   - Sort the ArrayList using Collections.sort().

   Sample output: Enter 7 integers: 1 3 4 5 1 3 2 5 6

   <p align="center">[1, 2 ,3, 4, 5]</p>

2. Write a program contains two methods for swapping elements in an array. The first method, named swap, fails to swap two int arguments. The second method, named swapFirst-TwoInArray, successfully swaps the first two elements in the array argument.

3. Write a program that prints the sum of each row in a 2D array. Resolve the exercise and print the sum of each column.

   Example: public static void main(String[] args){
         Int[][] integers = {
             { 1 , 2 , 3 , 4}
             {5 , 6 , 7 , 8}
             }
         }

Sum of row 1: 10	Sum of Column 1 : 6
Sum of row 2: 26	Sum of Column 2 : 8
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4. Creating a menu program with the following options:
   - Add Element
   - Remove Element.
   - Display Elements
   - Exit

The program runs infinitely until the user choose the fourth option.

Removing an integer from an ArrayList using a new Integer().

Removing an integer from an ArrayList using Integer.valueOf().

Now sample output look like a game 😁:

//display element 1.Add 2.Remove 3.Display 4.Exit Your Choice: 3 Your List:[] 1.Add 2.Remove 3.Display 4.Exit Your Choice: 1 enter an integer:5 **Added** 1.Add 2.Remove 3.Display 4.Exit	Your Choice: 3 Your List:[5] 1.Add 2.Remove 3.Display 4.Exit Your Choice: 2 Enter the number of remove:5 **Removed.** Your Choice: 2 Enter the number of remove:99 Element not found Your Choice: 4 Good bye **Exit**

5. Create a two dimensional array with 12 "rows" and 2 "columns". The first column will correspond to a month of the year such as January = 1 and December = 12.
   The Second column will be the revenue that a lemonade stand makes in that month. Load the array with the following information.
   Jan = $34
   Feb = $44
   Mar = $23
   Apr= $76
   may = $65
   June = $98
   July = $123
   Aug= $102
   Sept = $87
   Oct = $43
   Nov = $34
   Dec= $12

6. Write a Java Program to create classes as the following:

a. Class (Everyone will use your own name) which has methods walk() and cry().

b. Cass lion inherited from class (_)then override method walk() and cry().

c. Cass tiger inherited from class (_) then override method walk() and cry().

d. Class Main contain main method then create Objects and call method cry() and walk() as following:

• (_) a1 = new (_) (); then call methods

• (_) a2 = new lion (); then call methods

• (_) a3 = new tiger (); then call methods

• lion c1 = new lion (); then call methods

• tiger d1= new tiger (); then call method

** NOTICE**

- test your code by sample input.
- your code won't be same of others if it is then both of your assignment will be declined.
- use comment almost every line of code.
- submit it on time .
- your code will have in one project named Assignment_06,make it zip and send it to akabillah4420@gmail.com don't forget to write the Student ID and subject name "Assignment_06" in the mail.
- Be sincere to obey all of the rules otherwise may be you will get (LOW SCORE.)

Deadline: **6 May 12:00 am BD time and 2:00 pm china time.**

__Happy Coding__