Generics
Workshop 10

In this workshop, you'll learn:

- Generics
- Algorithms

1. Create a class Car with data: Name, Price, Production and properly methods.
2. Create another class named GenericCar with a parameter of the T type. This class manages a collection of object T (may be LinkedList) named a. Implementing some methods for GenericCar:
    - Add: add new item of T to a
    - Display: display all items of a
    - getSize: return the number item of a
    - checkEmpty: check and return whether a is empty or not
    - delete(intpos): remove the item at the position pos of a.

Write a program to use GenericCar as above menu.
Make your own main program to test all above methods.

You can consult the example below for using generic data type.

```
import java.util.*;
class MyList<T>
 {List<T> u;
  MyList()
    {u = new ArrayList<T>();
    }
  void add(T x)
    {u.add(x);
    }
  void addMany(T [] a)
    {for(int i = 0;i<a.length;i++) u.add(a[i]);
    }
  void display()
    {for(int i=0;i<u.size();i++) System.out.print(u.get(i) + "  ");
     System.out.println();
    }
 }
class Main
  {
    public static void main(String[] args)
       {MyList<String> t = new MyList();
       String [] a = {"Hoa","La","Canh","Cay"};
       t.addMany(a);
       t.display();
       System.out.println();

        System.out.println();
       }
  }
```

Additional proposed exercises:

3. Create a class Flower with data: Name, Price, Color and properly methods.

4. Create another class named ListFlower. This class manages a collection of Flower (may be LinkedList) named a. Implementing some methods for ListFlower:

- Add: add new item of Flower to a
- Display: display all items of a
- sort(): sort as descending by Price and display all items of a
- search(Flower f): check and return whether f is exists in a or not.
- delete(int pos): remove the item at the position pos of a.

Write a program to use ListFloweras above menu.

Make your own main program to test all above methods.