COMP 1451 Lab09b

Continue from lab09a to add functionality that ensures only one type of reference can be added to your list. In other words, make your list "type-safe'.

Create an overloaded constructor in MyArrayList **public MyArrayList(Object type)**. The constructor parameter will be used to set the type of reference to be added to the list. Set up a private filed of the same type as the parameter. You will also instantiate your Object[] in this constructor. Do not change the default constructor.

In **public boolean add(Object toAdd)** you will first check the toAdd parameter to ensure it is the same as the type you set in the overloaded constructor. If it is then go ahead and add the reference to your list. If not then return false and display an error message indicating the method parameter was rejected due to incompatible type.

To check the "toAdd" parameter you will have to first have to get the type of class it is (HINT: look at Object methods). Next, you will need to check its type against the type you established in the overloaded constructor (HINT: look at the Class methods).

Finally, provide a driver class that will:

> 1) create the an instance of MyList and then add references to it. Be sure to try incompatible types.

> 2) Check to see if the list is empty.

> 3) Display the contents of the list.

> 4) Display the size of the list.

> 5) Display the first element in the list.

> 6) Remove the first element in the list.

> 7) Display the list one final time.

The take-home lab is due the night before the next class. Upload it to the appropriate D2L dropbox before the deadline.