

List Design Brainstorming

In this assignment you will brainstorm designs for building a `SortedList` and `UnsortedList`. The only difference between these two lists is that the data in a `SortedList` is sorted in ascending order whereas the data in the `UnsortedList` has no guarantee of order. Both lists should have the following functionality:

`Constructor` - specifies `maxItems` for list

`isFull()`

`size()`

`toString()`

`add(E obj)`

`indexOf(E object)`

Your task is to consider what classes and interfaces you would use in your design and how they relate to one another. You should consider (a) inheritance, (b) interfaces, (c) concrete classes, (d) abstract classes, (e) method overloading/overriding, etc. Your goal is create a design that (a) takes advantage of object-oriented techniques (e.g. polymorphism, inheritance, etc.), (b) minimizes code redundancy and (c) maximizes code reusability. You should build a UML diagram to represent your design. Now, get to it and come up with an impressive design!!