Briefing

The data structure is an ordered collection of generic items that closely resembles java.util.List<E> interface and offers the following functions:

- **`T get(int i)`**: returns ith element in the list
- **`List<T> getAll()`**: returns a list of all elements in the structure
- **`void add(T t)`**: adds an element to the end of the structure
- **`void add(int i, T t)`**: adds an element to the structure at the ith index similar to how ArrayList behaves
- **`T remove()`**: removes and returns the element at the beginning of the structure
- **`T remove(int i)`**: removes and returns the element at ith index of the structure similar to how ArrayList behaves
- **`double getWindowAverage()`**: return the average of the elements in the window

Time complexity:

- **`T get(int i)`**: O(1)
- **`List<T> getAll()`**: O(1)
- **`void add(T t)`**: O(1)
- **`void add(int i, T t)`**: O(1)
- **`T remove()`**: O(1)
- **`T remove(int i)`**: O(1)
- **`double getWindowAverage()`**: O(1)

Assumptions

- The elements implement **Java.lang.Number** interface
- The elements are immutable