

Ordered Arrays

1. Review Inheritance and Casting
 - a. Compile-time type vs. Run-time type
 - b. You can assign a value to a variable if the compile-time types are the same
 - c. You can *cast* any expression to *any* type
 - i. For Class types: At runtime, that cast will succeed if the run-time type matches or is above it in the hierarchy, i.e., if *value instanceof Cast-type* is true.
 - ii. For primitive types: Java will convert to the number of bits and precision of the target type, possibly throwing away data.
 - iii. At runtime the cast will fail with a `ClassCastException` if it is not possible.
 - iv. Null casts to any class type.

2. Linear Search: $O(\quad)$

```
public int indexOf(Array<String> words) {
```