

```

> jshell ImList.java
| Welcome to JShell -- Version 17.0.2
| For an introduction type: /help intro

jshell> ImList list = new ImList()
list ==> []

jshell> list.add(1) using add on list that is not generic throws an error
| Warning:
| unchecked call to add(T) as a member of the raw type ImList
| list.add(1)
| ^-----^
$7 ==> [1]

jshell> list immutability
list ==> []

jshell> list = list.add(1)
| Warning:
| unchecked call to add(T) as a member of the raw type ImList
| list = list.add(1)
| ^-----^
list ==> [1]

jshell> int num = list.get(0)
| Error:
| incompatible types: java.lang.Object cannot be converted to int
| int num = list.get(0);
| ^-----^

jshell> int num = (int) list.get(0)
num ==> 1

jshell> ImList<Integer> list2 = list
| Warning:
| unchecked conversion
| required: ImList<java.lang.Integer>
| found: ImList
| ImList<Integer> list2 = list;
| ^--^
list2 ==> [1]

jshell> list2.set(0,99)
$12 ==> [99]

jshell> list
list ==> [1]

jshell> list2 = list2.set(0, 99).add(2) using add on generic list2 no longer throw error
list2 ==> [99, 2]

jshell> ImList<Integer> list3 = new ImList<>().addAll(list2)
| Error:
| incompatible types: ImList<java.lang.Object> cannot be converted to ImList<java.lang.Integer>
| ImList<Integer> list3 = new ImList<>().addAll(list2);
| ^-----^

jshell> new ImList<>().addAll(list2) the ImList here is actually a raw type, i.e. not generic!
$15 ==> [99, 2]

jshell> ImList<Integer> list3 = new ImList<Integer>().addAll(list2) addAll
list3 ==> [99, 2]

jshell> class AscendingComp implements Comparator<Integer> { writing your own Comparator
...> @Override
...> public int compare(Integer a, Integer b) {
...> return a - b;
...> }
...> }
| created class AscendingComp

jshell> class DescendingComp implements Comparator<Integer> {
...> @Override
...> public int compare(Integer a, Integer b) {
...> return b - a;
...> }
...> }
| created class DescendingComp

jshell> ImList<Integer> list4 = new ImList<>(List.of(3,6,8,0,99,-5,-1000)) second constructor
list4 ==> [3, 6, 8, 0, 99, -5, -1000]

jshell> list4.sort(new AscendingComp())
$20 ==> [-1000, -5, 0, 3, 6, 8, 99]

jshell> list4.sort(new DescendingComp())
$21 ==> [99, 8, 6, 3, 0, -5, -1000]

jshell> list4.sort(Comparator.reverseOrder()) built-in method Comparator.reverseOrder()
$22 ==> [99, 8, 6, 3, 0, -5, -1000]

jshell> for (int num: list4) { Enhanced for loop, no need to use .get(index)
...> System.out.println(num * num);
...> }
9
36
64
0
9801
25
1000000

```