Assignments

- create interface Printer with method void print(String msg)
- create implementation GenericPrinter of the interface
- create implementations TimestampPrinter and LabelPrinter
  - for TimestampPrinter use System.out.println(new java.util.Date())
  - for LabelPrinter, “label” is set in constructor
- in constructors of all classes print out name of the class
  - test them by creating instances of all classes
- create class Logger
  - method addPrinter sets a printer
  - method log prints out message using the set printer
  - method setLevel sets a level – messages with lower level are ignored (i.e. the method does not print them out)
Assignments – cont.

- create interface MyCollection with methods
  - void add(Object o)
  - Object get(int i)
  - void remove(Object o)
  - void remove(int i)

- create an implementation of the MyCollection interface
  - use an array, which is reallocated if needed

- update the Logger, so that more than one Printer can be set

- add a default method to the Printer interface that prints an integer using the existing print(String) method
  - default void print(int number)
Assignments – for fast ones

- create an implementation of the MyCollection interface using a linked list
Test

- Add declaration of “i” so that the program prints “YES” (is it possible?)

```java
if (i == -i && i != 0) {
    System.out.println("YES");
} else {
    System.out.println("NO");
}
```
Test

• Add declaration of “i” so that the program prints “YES” (is it possible?)

    if (i == -i && i != 0) {
        System.out.println(“YES”);
    } else {
        System.out.println(“NO”);
    }

• Solution

    int i = Integer.MIN_VALUE;

• Explanation:
  - Integer.MIN_VALUE = 0x80000000
  - negation is 0x7fffffff + 1 = 0x80000000

The example based on code from J. Bloch, N. Gafter: Java Puzzlers
• What does the program print out?:

```java
public class LoopTest {
    public static void main(String[] argv) {
        int START = 2000000000;
        int count = 0;
        for (float f = START; f < START + 50; f++)
        {
            count++;
        }
        System.out.println(count);
    }
}
```

A   0         D   nothing
B   50       E   something else
C   49
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public class LoopTest {
    public static void main(String[] argv) {
        int START = 2000000000;
        int count = 0;
        for (float f = START; f < START + 50; f++)
        {
            count++;
        }
        System.out.println(count);
    }
}
```

A 0  D  nothing
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