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 implementation of the interface
  – use an array, which is reallocated if needed

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

• add a \textit{default} method to the Printer interface that prints an integer using the existing print(String) method
  – \texttt{default void print(int number)}
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");
}
```
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");
}
```

• Solution
```java
int i = Integer.MIN_VALUE;
```

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