Assignment 1

• create as simple scheduler (a "TODO" list)
  - data are stored in a file
  - manipulation via parameters of the command line
    • java balicek.Todo -a priority message
      - adds the message with given priority
      - priority is integer (can be even negative)
    • java balicek.Todo -l
      - prints out the messages sorted by priority decreasingly
    • java balicek.Todo -r
      - prints out the messages sorted by priority increasingly
    • java balicek.Todo -d
      - interactive
      - prints out all messages (formatted as order number then message)
      - asks the user which message should be deleted
      - deletes the message
Assignment 2

• Create a method that returns the biggest value in an array
  - create a multi-threaded implementation
    • a) use the threads directly
    • b) use an executor
    • c) use data streams

• Create a “synchronized” counter for long
  - 2 methods
    • long get() - returns the counter value
    • void inc() - increases the counter value
Tests...
Test 1

- What is printed out

```java
public class Test01 {
    private static java.util.Random rnd = new java.util.Random();

    public static void main(String[] args) {
        StringBuffer word = null;
        switch (rnd.nextInt(2)) {
            case 1:  word = new StringBuffer('P');
            case 2:  word = new StringBuffer('G');
            default: word = new StringBuffer('M');
        }
        word.append('a');
        word.append('i');
        word.append('n');
        System.out.println(word);
    }
}
```

A  Pain or Gain  
or Main,  
differently  
each start  
B  always Pain  
C  always Gain  
D  always Main  
E  something else  
F  cannot be  
compiled

The example based on code from J. Bloch, N. Gafter: Java Puzzlers
Test 2

• What is printed out

```java
public class Test02 {
    public static void main(String args[]) {
        System.out.println("H" + "a");
        System.out.println('H' + 'a');
    }
}
```

A  Ha  Ha
B  Ha
C  something else
D  cannot be compiled