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 messaga
      - 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 (formated 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

```
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