

NNCalcModel.java

```
1 import components.naturalnumber.NaturalNumber;
2
3 /**
4  * Model interface.
5  *
6  * The Natural Number Calculator model consists of the top and bottom operands
7  * (which have only getter methods).
8  *
9  * @author Bruce W. Weide
10 *
11 * @mathmodel <pre>
12 * type NNCalcModel is modeled by
13 *   (top: NATURAL_NUMBER,
14 *    bottom: NATURAL_NUMBER)
15 * </pre>
16 * @initially <pre>
17 *   ():
18 *     ensures
19 *       this = (0, 0)
20 * </pre>
21 */
22 public interface NNCalcModel {
23
24     /**
25      * Reports top operand.
26      *
27      * @return this.top
28      * @aliases reference returned by {@code top}
29      * @ensures top = this.top
30      */
31     NaturalNumber top();
32
33     /**
34      * Reports bottom operand.
35      *
36      * @return this.bottom
37      * @aliases reference returned by {@code bottom}
38      * @ensures bottom = this.bottom
39      */
40     NaturalNumber bottom();
41
42 }
43
```