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1 // Example 4.2 joi/examples/ArrayDemo.java
2 //
3 //
4 // Copyright 2003 Bill Campbell and Ethan Bolker
5
6 // A class illustrating arrays
7 //
8 // Build an array of Fibonacci numbers 1, 1, 2, 3, 5, 8, ...
9 // and play with it. Sample output:
10 //
11 // %> java ArrayDemo 8
12 // Sum first 8 Fibonacci numbers
13 // 1 1 2 3 5 8 13 21
14 // total: 54
15 //
16 // First 8 Fibonacci numbers (reverse order)
17 // 21 13 8 5 3 2 1 1
18 // Every other fib
19 // 1
20 // 3
21 // 5
22 // 7
23
24 public class ArrayDemo
25 {
26     public static void main( String[] args )
27     {
28         int n = 6; // default
29         if (args.length > 0) {
30             n = Integer.parseInt(args[0]);
31         }
32
33         int[] fibs = new int[n]; // declare and create array
34
35         fibs[0] = fibs[1] = 1; // fill first two positions
36         for ( int i = 2; i < n; i++ ) { // fill the rest
37             fibs[i] = fibs[i-1] + fibs[i-2];
38         }
39
40         // standard idiom for accumulating total of an array
41         int total = 0;
42         System.out.println("Sum first " + n + " Fibonacci numbers");
43         for ( int i = 0; i < n; i++ ) {
44             System.out.print(fibs[i] + " ");
45             total += fibs[i];
46         }
47         System.out.println("\ntotal: " + total);
48         System.out.println();
49
50         System.out.
51         println("First " + n + " Fibonacci numbers (reverse order)");
52         for ( int i = n-1; i >= 0 ; i-- ) {
53             System.out.print(fibs[i] + " ");
54         }
55         System.out.println();
56

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57         System.out.println("Every other fib");
58         for ( int i = 0; i < n; i += 2 ) {
59             System.out.println((i+1) + "\t" + fibs[i]);
60         }
61         System.out.println();
62     }
63 }

```