

Count Example (incr's short version)

```
1  /* Copyright (C) 2006 M. Ben-Ari */
2
3  class Count_s extends Thread {
4      static volatile int n = 0;
5      static int N;
6
7      public void run() {
8          int temp;
9          for (int i = 0; i < N; i++) {
10             /* temp = n; n = temp + 1; */
11             n++;
12         }
13     }
14 }
```

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```
15 public static void main(String[] args) {
16     if (args.length > 0) {
17         try { N = Integer.parseInt(args[0]); }
18         catch (NumberFormatException e) {
19             System.err.println("Argument" + " must be
20                 an integer");
21             System.exit(1);
22         }
23
24         Count_s p = new Count_s();
25         Count_s q = new Count_s();
26         p.start();
27         q.start();
28         try { p.join(); q.join(); }
29         catch (InterruptedException e) { }
30         System.out.println(N + " + " + N + " = " + n);
31     }
32 }
```

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Count Example (incr's long version)

```
1  /* Copyright (C) 2006 M. Ben-Ari */
2
3  class Count_l extends Thread {
4      static volatile int n = 0;
5      static int N;
6
7      public void run() {
8          int temp;
9          for (int i = 0; i < N; i++) {
10             temp = n; n = temp + 1;
11             /* n++; */
12         }
13     }
14 }
```

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```
15 public static void main(String[] args) {
16     if (args.length > 0) {
17         try { N = Integer.parseInt(args[0]); }
18         catch (NumberFormatException e) {
19             System.err.println("Argument" + " must be
20                 an integer");
21             System.exit(1);
22         }
23
24         Count_l p = new Count_l();
25         Count_l q = new Count_l();
26         p.start();
27         q.start();
28         try { p.join(); q.join(); }
29         catch (InterruptedException e) { }
30         System.out.println(N + " + " + N + " = " + n);
31     }
32 }
```

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Results

1	$10 + 10 = 20$
2	$10 + 10 = 20$
3	$10 + 10 = 20$
4	$10 + 10 = 20$
5	$10 + 10 = 20$

6	$100 + 100 = 200$
7	$100 + 100 = 200$
8	$100 + 100 = 200$

9	$1000 + 1000 = 2000$
10	$1000 + 1000 = 2000$
11	$1000 + 1000 = 2000$

12	$10000 + 10000 = 20000$
13	$10000 + 10000 = 19943$
14	$10000 + 10000 = 10000$
15	$10000 + 10000 = 17963$
16	$10000 + 10000 = 15870$

17	$100000 + 100000 = 200000$
18	$100000 + 100000 = 101867$
19	$100000 + 100000 = 100000$

20	$1000000 + 1000000 = 2000000$
21	$1000000 + 1000000 = 1782471$
22	$1000000 + 1000000 = 1545209$

23	$10000000 + 10000000 = 19981560$
24	$10000000 + 10000000 = 19645800$