**Compiled Counting Examples**

**Simple Counting**

class CountingSimple {

public static void count(int from, int to, int step) {

int counter = from;

while (counter < to) {

counter = counter + step;

}

}

}

Bytecode:

public static void count(int, int, int);

Code:

0: iload\_0

1: istore\_3

2: iload\_3

3: iload\_1

4: if\_icmpge 14

7: iload\_3

8: iload\_2

9: iadd

10: istore\_3

11: goto 2

14: return

LineNumberTable:

line 3: 0

line 4: 2

line 5: 7

line 7: 14

LocalVariableTable:

Start Length Slot Name Signature

0 15 0 from I

0 15 1 to I

0 15 2 step I

2 13 3 counter I

}

**Counting with Printing**

class Counting {

public static void count(int from, int to, int step) {

int counter = from;

while (counter < to) {

counter = counter + step;

[System](http://www.google.com/search?hl=en&q=allinurl%3ASystem+java.sun.com&bntI=I%27m%20Feeling%20Lucky).out.println("counter = " + counter);

}

}

}

Bytecode:

public static void count(int, int, int);

Code:

0: iload\_0

1: istore\_3

2: iload\_3

3: iload\_1

4: if\_icmpge 39

7: iload\_3

8: iload\_2

9: iadd

10: istore\_3

11: getstatic #2; //Field java/lang/System.out:Ljava/io/PrintStream;

14: new #3; //class java/lang/StringBuilder

17: dup

18: invokespecial #4; //Method java/lang/StringBuilder."<init>":()V

21: ldc #5; //String counter =

23: invokevirtual #6; //Method java/lang/StringBuilder.append:(Ljava/lang/String;)Ljava/lang/StringBuilder;

26: iload\_3

27: invokevirtual #7; //Method java/lang/StringBuilder.append:(I)Ljava/lang/StringBuilder;

30: invokevirtual #8; //Method java/lang/StringBuilder.toString:()Ljava/lang/String;

33: invokevirtual #9; //Method java/io/PrintStream.println:(Ljava/lang/String;)V

36: goto 2

39: return

LineNumberTable:

line 3: 0

line 4: 2

line 5: 7

line 6: 11

line 8: 39

LocalVariableTable:

Start Length Slot Name Signature

0 40 0 from I

0 40 1 to I

0 40 2 step I

2 38 3 counter I

}