# Section 2

**Snippet 1:**

public class NestedLoopOutput {

public static void main(String[] args) {

for (int i = 1; i <= 3; i++) {

for (int j = 1; j <= 2; j++) {

System.out.print(i + " " + j + " ");

}

System.out.println();

}

}

} // Guess the output of this nested loop.

Dry Run:

i = 1

j = 1

output : 1 1

j = 2

output : 1 2

i = 2

j = 1

output : 2 1

j = 2

output : 2 2

i = 3

j = 1

output : 3 1

j = 2

output : 3 2

Expected Output:

1 1

1 2

2 1

2 2

3 1

3 2

**Snippet 2:**

public class DecrementingLoop {

public static void main(String[] args) {

int total = 0;

for (int i = 5; i > 0; i--) {

total += i;

if (i == 3) continue;

total -= 1;

}

System.out.println(total);

}

}

Dry run:

I = 5:

Total = 5;

Total = total -1 = 4;

I = 4:

Total = 8;

Total = total -1 = 7;

I = 3:

Total = 10

I = 2:

Total = 12;

Total = total -1 = 11;

I = 1:

Total = 12;

Total = total -1 = 11;

Expected Output = 11

**Snippet 3:**

public class WhileLoopBreak {

public static void main(String[] args) {

int count = 0;

while (count < 5) {

System.out.print(count + " ");

count++;

if (count == 3) break;

}

System.out.println(count);

}

}

Dry run:

Count = 0;

Count = 1;

Count = 2;

Count = 3;

Break;

Expected output : 0 1 2 3

**Snippet 4:**

public class DoWhileLoop {

public static void main(String[] args) {

Int i = 1;

do {

System.out.print(i + " ");

i++;

} while (i < 5);

System.out.println(i);

}

}

Expected output : 1 2 3 4 5

**Snippet 5:**

public class ConditionalLoopOutput {

public static void main(String[] args) {

int num = 1;

for (int i = 1; i <= 4; i++) {

if (i % 2 == 0) {

num += i;

} else {

num -= i;

}

}

System.out.println(num);

}

}

Dry Run:

I = 1:

Num = 1 – 1 = 0;

I = 2:

Num = 0 + 2 = 2;

I = 3:

Num = 2- 3 = -1;

I = 4:

Num = -1 + 4= 3;

Expected output: 3;

**Snippet 6:**

public class IncrementDecrement {

public static void main(String[] args) {

int x = 5;

int y = ++x - x-- + --x + x++;

System.out.println(y);

}

}

Dry run:

Int y = 6 – 6 + 4 + 4;

Expected out: 8

**Snippet 7:**

public class NestedIncrement {

public static void main(String[] args) {

int a = 10;

int b = 5;

int result = ++a \* b-- - --a + b++;

System.out.println(result);

} }

Dry run :

A = 10

B= 5

Result = 11 \* 5 - 10 + 4 = 49

Expected output = 49

**Snippet 8:**

public class LoopIncrement {

public static void main(String[] args)

{

int count = 0;

for (int i = 0; i < 4; i++) {

count += i++ - ++i;

}

System.out.println(count);

} }

Expected output : -4;