SECTION 2: Guess the Output

```
Snippet 1:
```

```
public class NestedLoopOutput {
       public static void main(String[] args) {
       for (int i = 1; i \le 3; i++) {
             for (int j = 1; j \le 2; j++) {
                     System.out.print(i + " " + j + " ");
              }
       System.out.println();
   }
                    Assignment 3
  Section 2: Guess the output
 Snippet 1:
   ower loop
              Inner loop
                                guessed output
               J=2
                                 2122
               j=1
                                  3132
              j=2
```

Snippet 2:

```
 \begin{array}{c} \text{public class DecrementingLoop } \{ \\ \text{public static void main (String[] args) } \{ \\ \text{int total} = 0; \\ \text{for (int } i = 5; \, i > 0; \, i \text{---}) \, \{ \\ \text{total} += i; \\ \text{if (} i == 3) \text{ continue;} \\ \text{total } -= 1; \\ \} \\ \text{System.out.println(total);} \\ \} \\ \end{array}
```

```
Snippet 2:

i=5, total = 0+5=5, i==3 is false, total = 5-1=4

i=4, total = 4+4=8, i==3 is false, total = 8-1=7

i=3, total = 7+3=10, i==3 is false, skip

i=2, total=10+2=12, i==3 is false, total=11

i=1, total=11+1=12, i==3 is false, total=11

Glessed output:-

[]
```

```
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);
}

Snippet 3

count=0, prints 0, count=1, C == 3 is false

count=1, prints1, count = 2, C == 3 is false

count=2, prints2, count=3, C == 3 is true, break
```

Snippet 4:

Guess output: -

```
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);
}
}
```

```
Shippet 4

i = 1, prints 1, i = 2

i = 2, prints 2, i = 3

i = 3, prints 3, i = 4

i = 4, prints 4, i = 5

i < 5 as (5 < 5) is fedse, loop stops

prints 5

Guess 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);
    }
}</pre>
```

```
Snippet5:

i=1, 1\%2=0 false, num=1-1=0

i=2, 2\%2=0 true, num=0+2=2

i=3, 3\%2=0 false, num=2-3=-1

i=4, 4\%2=0 true, num=-1+4=3

i=4, 4\%2=0 true, num=-1+4=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);
    }
}
```

```
Shippet 6

n=5

y=++x-n--+-x+n+t;

++x:x=6

x--:x=6, then x become 5

-x:x=4, then x become 5

x+t:x=4, then x become 5

y=6-6+4+4=8

Output:-

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);
    }
}
```

```
Snippet 7

d=10, b=5

result= +ta * b-- - -a + b+t;

+ta:a=11

b--:b=5, then b become 4

-a:a=10

b++:b=4, then b become 5

result= 11x5-10+4=55-10+4=49

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);
        }
}</pre>
```

```
Snipped 8

Count= 0

-i= 0

-i+1: return 0, then i become 1

-> ++1: i become 2, return 2

-> count += 0-2=-2: count=-2

-i= 2

-i+1: return 2: then i become 3

-> ++i: i become 4, return 4

-> count += 2-4=-2: count=-4

Guess Output:-

-4
```