Looping Statements ≠ Jump Statements :→

① while loop — Entry controlled Loop

```
while (condition){
    statements;
    increment / decrement;
}
```

{ Uncertain Steps not known! }

② do - while loop — Exit controlled Loop

```
do {
    statements;
    increment / decrement;
} while (condition);
```

(It will execute at least once)

{ Certain Finite }

③ for loop

```
for ( initialization; condition; inc/dec ){
    statements;
}
```

④ Enhanced For Loop
For - Each* Loop

Syntax of for loop

```
for (int i=1; i<11; i++){
    statement. → System.out.print(i + " ");
}
```

* initialization, condition, inc/dec
* i → iteration variable / loop variable

Printing Multiplication Table :

i & j — n × n matrix

i \ j	1	2	.....	10
1	1×1 = 1	1×2 = 2	.....	1×10 = 10
2	2×1 = 2	2×2 = 4	.....	2×10 = 20
⋮	⋮	⋮	⋮	⋮
10	10×1 = 10	10×2 = 20	.....	10×10 = 100

i : 1 → 10 (↓) j : 1 → 10 (→)

Nested for loops :

* The innermost loop will complete first (loop 3)
* The loop (2) will finish next
* The outermost loop (1) will complete at last.

```
① for ( ) {          // 1 to 10
    ② for ( ) {      // 1 to 10
        ③ for ( ) {  // 1 to 10
        }
    }
}
```

1 – 2 – 3 – ... 10

1 to 10
1 to 10
1 to 10