

Which loop is preferred to when

If we know **the iterations in advance** then use for loop

If we **don't know the number of iterations** then we use while loop

If we want to **execute loop atleast once** then we use do-while loop

Diff bw if-else-else if and switch case

Using **switch statement** we can improve **readability**

If we use **if else - else if statement** then it will start reading all the conditions, **so it's performance becomes slow**

If we **switch statement** directly it uses case matching labels, **so it's performance becomes fast**

In **switch statement** don't forget to use **break keyword**, if there is no break keyword then from the matched case labels **it will execute all cases and default**

## Diff bw if-else-else if and switch case

```
int key = 10;
switch (key) {
case 10:
System.out.println("Case 10 Matched");
break;
case 20:
System.out.println("Case 20 Matched");
break;
case 30:
System.out.println("Case 30 Matched");
break;
default:
System.out.println("Case Not Matched");
break;
}
```

Case 10 Matched

```
if(key == 10) {
System.out.println("Condition 10 Matched");
}else if (key == 20){
System.out.println("Condition 20 Matched");
}else if (key == 30) {
System.out.println("Condition 30 Matched");
}else {
System.out.println("Condition Not Matched");
}
```

Condition 10 Matched

```
package com.dl.one.statements;  
//No Statement and break keyword for case label  
public class Eg2 {  
    public static void main(String[] args) {  
  
        int key = 20;  
        switch (key) {  
            case 10:  
                System.out.println("Case 10 Matched");  
                break;  
            case 20:  
            case 30:  
                System.out.println("Case 30 Matched");  
                break;  
            default:  
                System.out.println("Case Not Matched");  
                break;  
        }  
    }  
}
```

//Best Practice

```
int a = 4;  
if (a % 2 == 0) {  
    System.out.println(a + " is Even Number "); // 4 is Even Number  
} else {  
    System.out.println(a + " is Odd Number ");  
}
```

```
int b = 5;  
if (b % 2 != 0) {  
    System.out.println(b + " is Odd Number "); // 5 is Odd Number  
} else {  
    System.out.println(b + " is Even Number ");  
}
```

//Best Practice

```
int a = 10;
```

```
if (a > 0) {
```

```
System.out.println("Positive"); // Positive
```

```
} else if (a < 0) {
```

```
System.out.println("Negative");
```

```
} else {
```

```
System.out.println("Zero");
```

```
}
```

//Initialization part is optional

//Best Practice

**public class** Eg1 {

**public static void** main(String[] args) {

**int** i = 0;

**for** (; i < 5; i++) {

System.out.println(i);

}

}

}

0

1

2

3

4

//Multiple Statements at initialization

//Best Practice

**public class** Eg2 {

**public static void** main(String[] args) {

**int** i = 0;

**for** (System.out.println("Hello Java"), System.out.println("Hello Python"); i < 5; i++) {

System.out.println(i);

}

}

}

Hello Java

Hello Python

0

1

2

3

4



//Can Take only single Initialization

//Best Practice

**public class** Eg3 {

**public static void** main(String[] args) {

**for** (**int** i = 0, j =0; i < 10 && j < 10; i++, j++) {

System.**out.println**(i + " " + j);

}

}

}

0 0

1 1

2 2

3 3

4 4

5 5

6 6

7 7

8 8

9 9

//condition part is optional, works like infinity loop

//Best Practice

**public class Eg4 {**

**public static void** main(String[] args) {

**for (int i = 5; ; i++) {**

System.out.println(i);

}

}

//increment/decrement part is optional works infinity loop

//Best Practice

**public class** Eg5 {

**public static void** main(String[] args) {

**for** (**int** i = 0; i < 5; ) {

System.out.println(i); // 0 0 0 ...

}

}

}

//Best Practice

**public class** Eg6{

**public static void** main(String[] args) {

//use manually increment part

**for(int** i=5; i<10;) {

System.**out.println**(i);

i+=1;

}

}

}

5  
6  
7  
8  
9

//Best Practice

**public class** Eg7{

**public static void** main(String[] args) {

//multiple statements in increment part

**for** (**int** i = 0; i < 5; **System.out.println**("Hello Java"), **System.out.println**("Hello Python")) {

**System.out.println**(i);

i++;

}

}

}

0

Hello Java

Hello Python

1

Hello Java

Hello Python

2

Hello Java

Hello Python

3

Hello Java

Hello Python

4

Hello Java

Hello Python

//Best Practice

**public class** Eg8 {

**public static void** main(String[] args) {

**int** i =0;

**while** (**true**) {

System.**out.println**(i); // infinite loop

i++;

}

// System.out.println("Hello Java"); //Unreachable code

}

}

//Best Practice

```
if (null == null) {  
    System.out.println("If Condition"); // If Condition  
}else {  
    System.out.println("Else Condition");  
}
```

```
if (null != null) {  
    System.out.println("If Condition");  
}else {  
    System.out.println("Else Condition"); // Else Condition  
}
```

//Best Practice

```
if (true == true) { // Comparing identical expressions
System.out.println("If Condition"); // If Condition
}else { // Dead code
System.out.println("Else Condition");
}
```

```
if (true != true) { // Dead code // Comparing identical expressions
System.out.println("If Condition");
}else {
System.out.println("Else Condition"); // Else Condition
}
```