### **Iteration Statements:**

1. If we want to execute group of statements **repeatedly** or more number of times then we should go for iteration statements..

Three types of iteration statements present in Java.

They are

1)for

2)while

3)do while

# for loop:

1. The for loop contains four parts initialization, condition, increment/decrement part and statement.

# **Syntax:**

```
for(initialization; condition; incr/decr){
//statement or code to be executed
}
```

#### **Initialization:**

- Each and every part is separated by Semicolon and It is Mandatory.
- 2. Initialization part is optional.
- 3. Multiple Statements at initialization but separate it by comma
- 4. Can Take only single Initialization int i = 0, j = 0; not multiple constants int i = 0, int j = 0

#### **Conditional Part:**

- 1. conditional part is optional.
- 2. If we are not taking any condition then compiler will place the true value.
- 3. condition must be **Boolean(true or false)**
- 4. cannot take statement inside the conditional part

```
for(initialization; condition; increment/decrement){
//statement or code to be executed
}
```

# **Increment/Decrement**

- 1. Inside the for loop increment/decrement is optional.
- 2. In case of **increment**, **decrement** it is possible to take any number of **statements** and also each and every **statement** is separated by comma

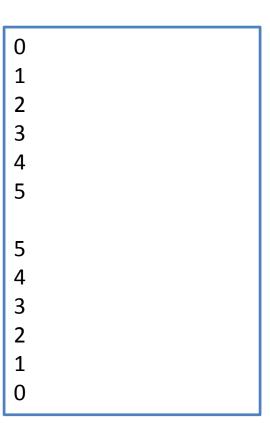
```
package com.dl.iterationstatements;
//for loop loop increment/decrement
public class Eg1 {
public static void main(String[] args) {
for (int i = 0; i <= 5; i++) {
System.out.println(i);
for (int i = 5; i >= 0; i--) {
System.out.println(i);
```

# While

1. A while loop statement repeatedly executes a target statement as long as a given condition is true.

```
Syntax:
while(condition) {
  // Statements
}
```

```
package com.dl.iterationstatements;
//while loop increment/decrement
public class Eg2 {
public static void main(String[] args) {
int i = 0;
while (i <= 5) {
System.out.println(i);
i += 1;
System.out.println(" ");
int j = 5;
while (j >= 0) {
System.out.println(j);
j -= 1;
```



#### **Do While**

1. If we want to execute the loop body at least one time then we should go for do while statement.

# Syntax: do{ //body }while(condition);

- 1. In the do while first body will be executed, then only the condition will be checked.
- 2. In do while the while must ends with semicolon; other wise we will get compilation error.
- 3. do is taking the body and while is taking the condition and the condition must be boolean condition
- 4. In case of while loop current iterations will be performed and in do while loop next iteration is performed

```
package com.dl.iterationstatements;
//do while
public class Eg3 {
public static void main(String[] args) {
int i = 0;
do {
//body
System.out.println("Do block " + i);
j++;
} while (i<=5);</pre>
do {
System.out.println("Do Block Execution One Time");
}while(false);
```

Do block 0
Do block 1
Do block 2
Do block 3
Do block 4
Do block 5
Do Block Execution One Time