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Java

Java Fundamental | Bootcamp
Looping

Subjects : Looping

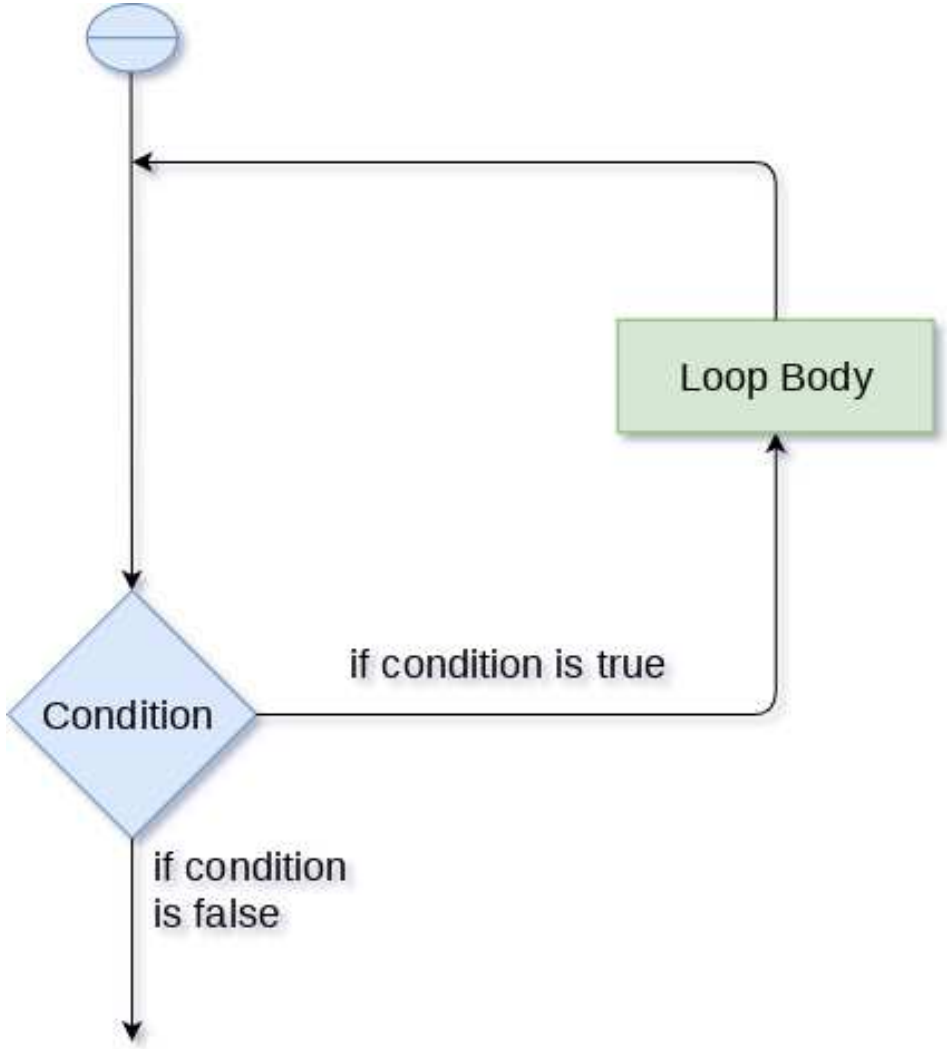
1. Operator Pembanding
2. Loop
3. While
4. Do While
5. For

Operator Pembanding

No	Operasi	Operator
1	Sama dengan	==
2	Lebih besar dari	>
3	Lebih kecil dari	<
4	Tidak sama dengan	!=
5	Lebih besar sama dengan	>=
6	Lebih kecil sama dengan	<=

Table disamping adalah operator pembanding yang biasa digunakan dalam pembuatan suatu kondisi.

Loop



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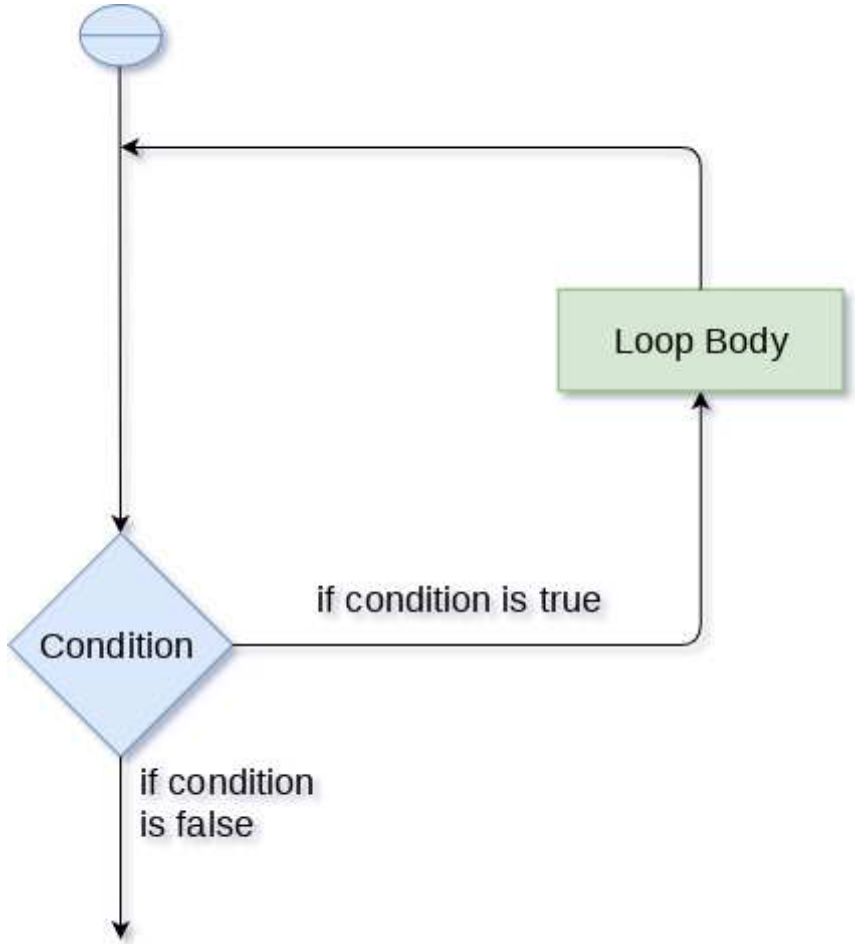
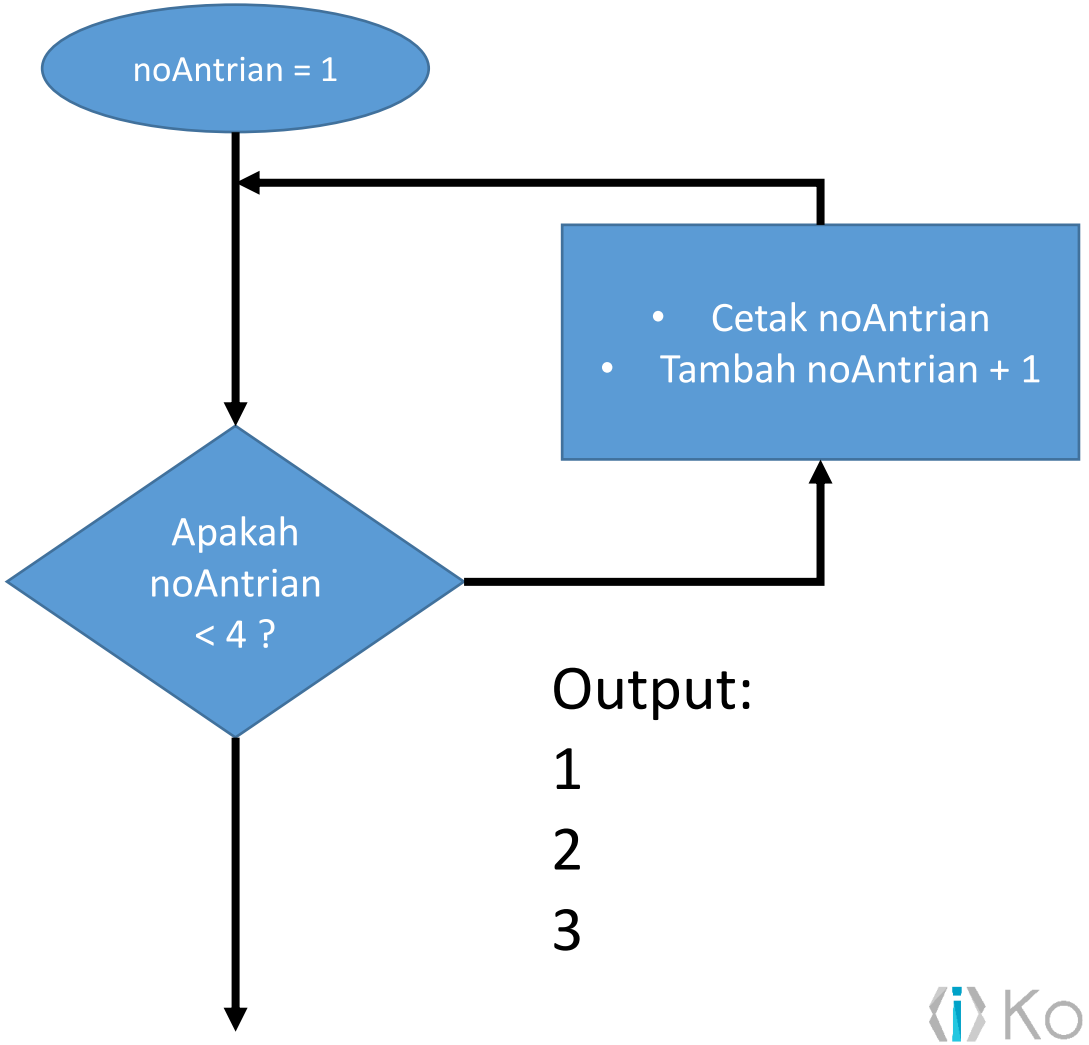
Loop





Output:

1

2

3

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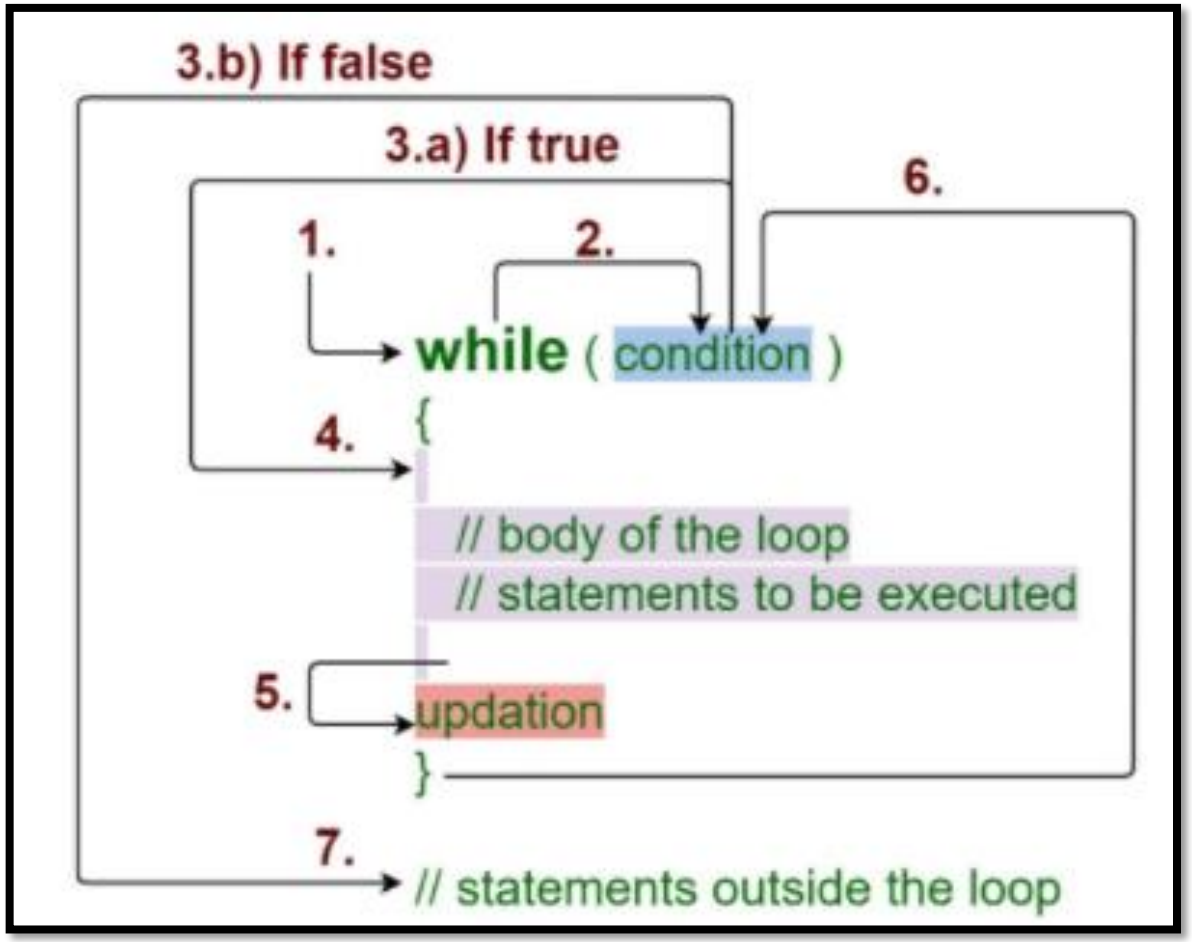
While

Perulangan while loop melalui blok kode selama kondisi yang ditentukan benar:

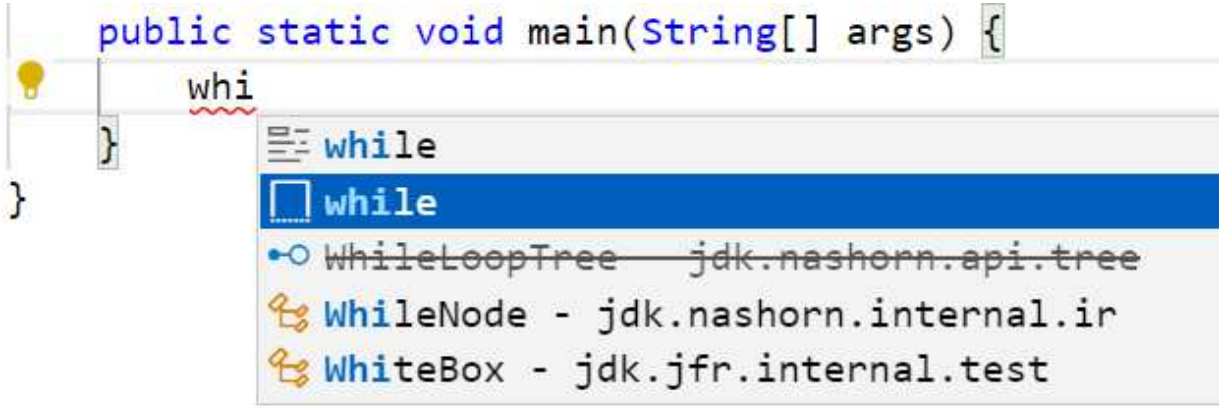
```
while (condition) {
  // code block to be executed
}
```

While - Flowchart

```
while (condition) {
  // code block to be executed
}
```



While – Pilihan Sintax Java



- Ketik while lalu ctrl + space
- Pilih yang while dengan icon kotak putih

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While - Contoh

```
int i = 0;
while (i < 5) {
  System.out.println(i);
  i++;
}
```

Blok kode yang ada didalamnya terdiri dari 2 kode yaitu

1. Cetak variable i
2. Tambah nilai variable i menjadi 1

While

Output:

0

1

2

3

4

```
public class KelasWhileSyntax {
    Run | Debug
    public static void main(String[] args) {
        int i = 0;
        while (i < 5) {
            System.out.println(i);
            i++;
        }
    }
}
```

While

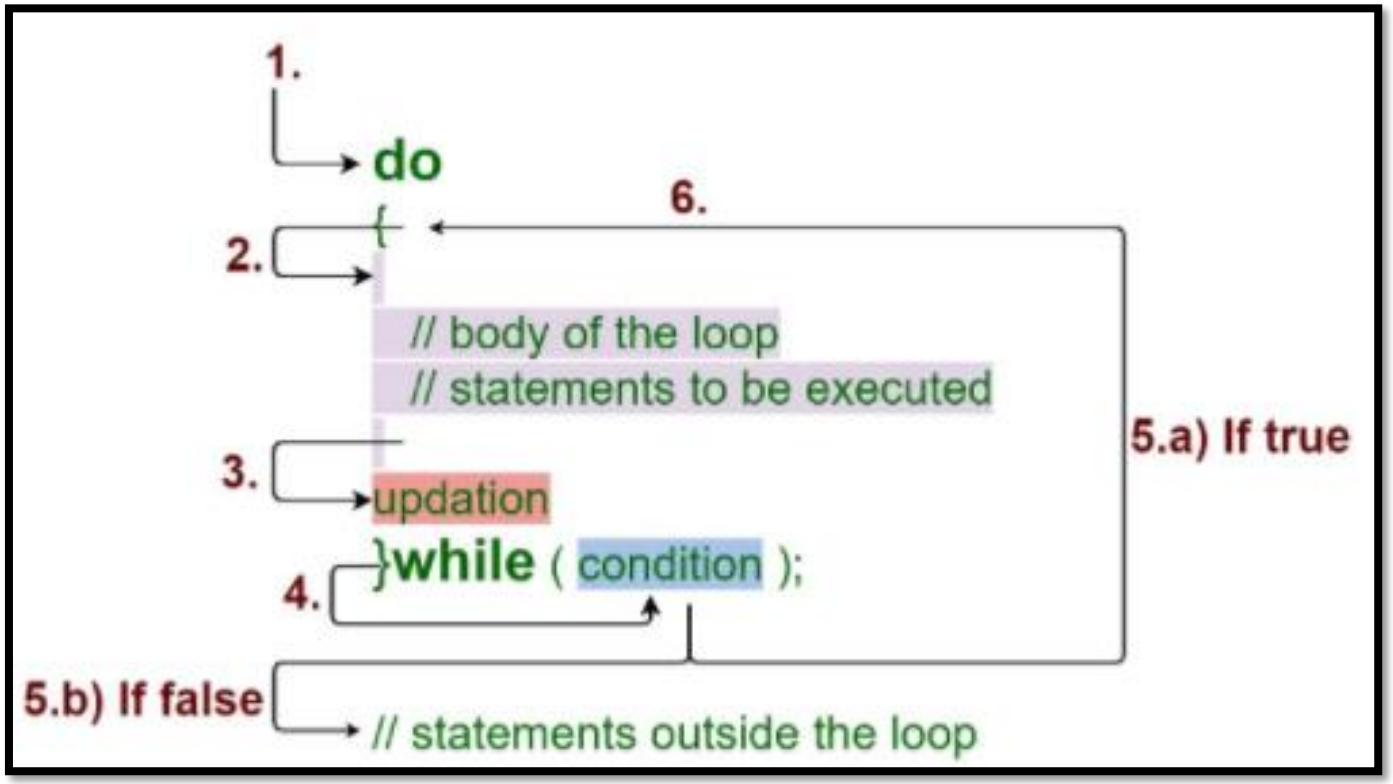
```
public class KelasWhileDasar2 {
    Run | Debug
    public static void main(String[] args) {

        int noAntrian = 1;
        while (noAntrian < 4) {
            System.out.println(noAntrian);
            noAntrian =  noAntrian + 1;
        }

    }
}
```

Do While

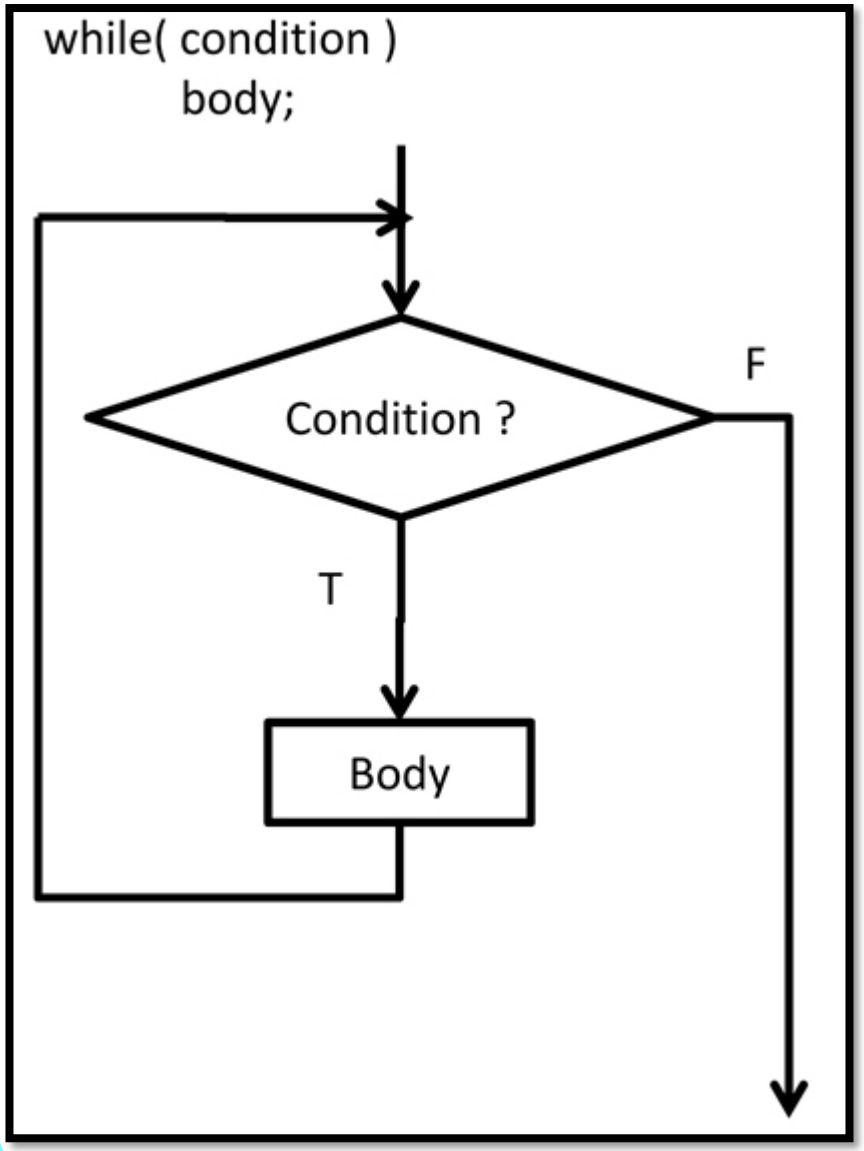
```
do {
  // code block to be executed
}
while (condition);
```

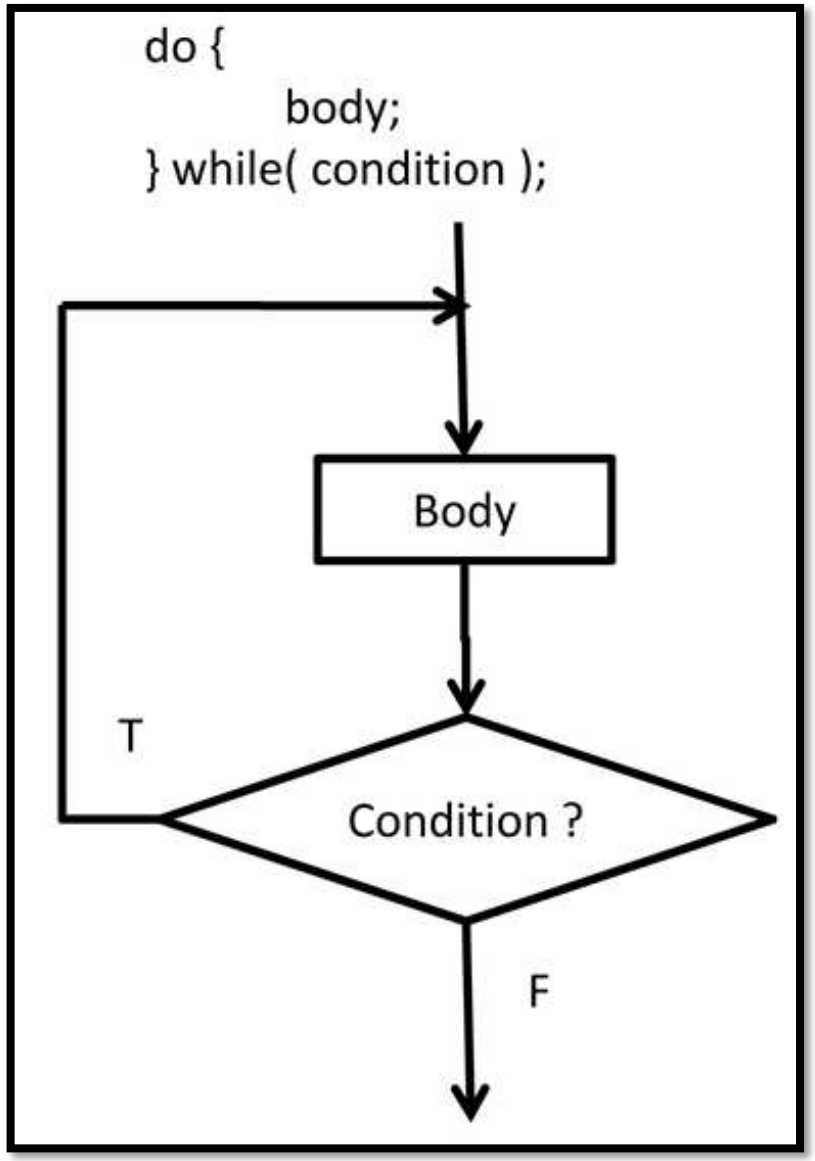
Do While - Flowchart

```
do {
  // code block to be executed
}
while (condition);
```

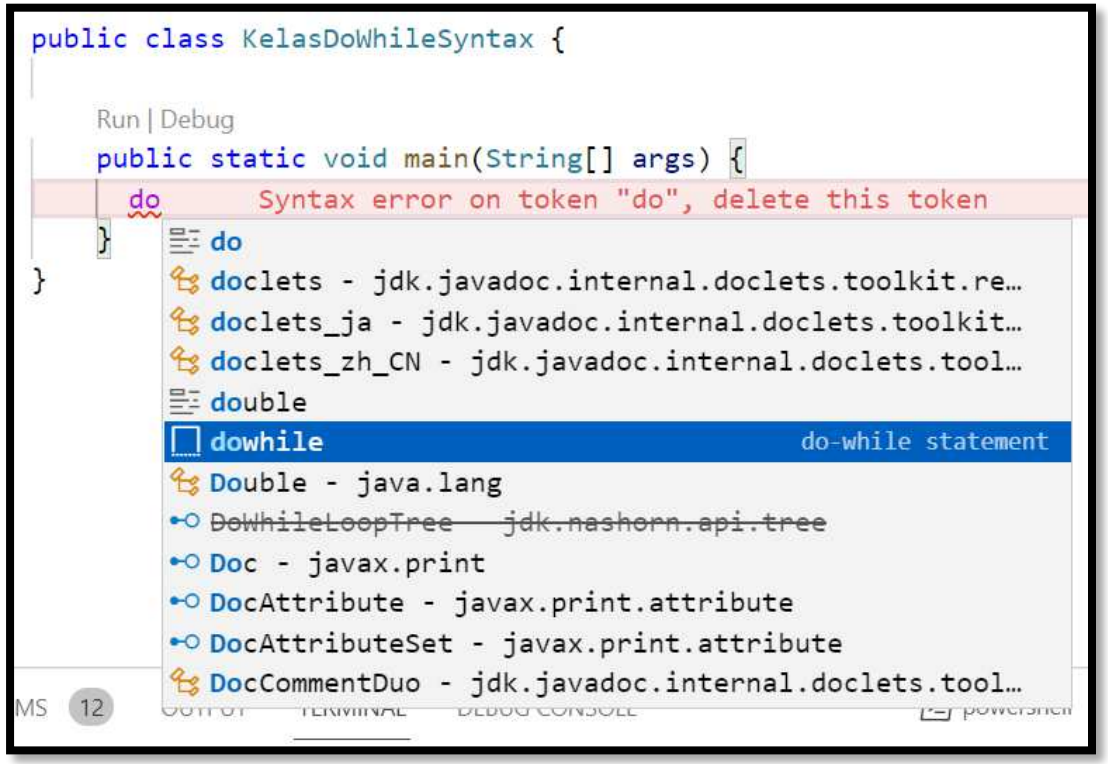


While vs Do While





Do While – Sintax Java



- Ketik Do lalu ctrl + space
- Klik do while statement

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Do While – Sintax Java

```java
public class KelasDoWhileSyntax {

    Run | Debug
    public static void main(String[] args) {
        do {

        } while (condition);
    }
}
```

Do While - Contoh

```
public class KelasDoWhileDasar {
    Run | Debug
    public static void main(String[] args) {
        int i = 4;
        do {
            System.out.println(i);
            i++;

        } while (i < 7);
    }
}
```

Do While - Contoh

```
public class KelasDoWhileDasar2 {
    Run | Debug
    public static void main(String[] args) {
        int noAntrian = 1;
        do {
            System.out.println(noAntrian);
            noAntrian++;

        } while (noAntrian < 4);
    }
}
```

For

- Saat kita tahu persis berapa kali kita ingin mengulang block code lebih direkomendasikan untuk menggunakan **for**.

```
for (statement 1; statement 2; statement 3) {
  // code block to be executed
}
```

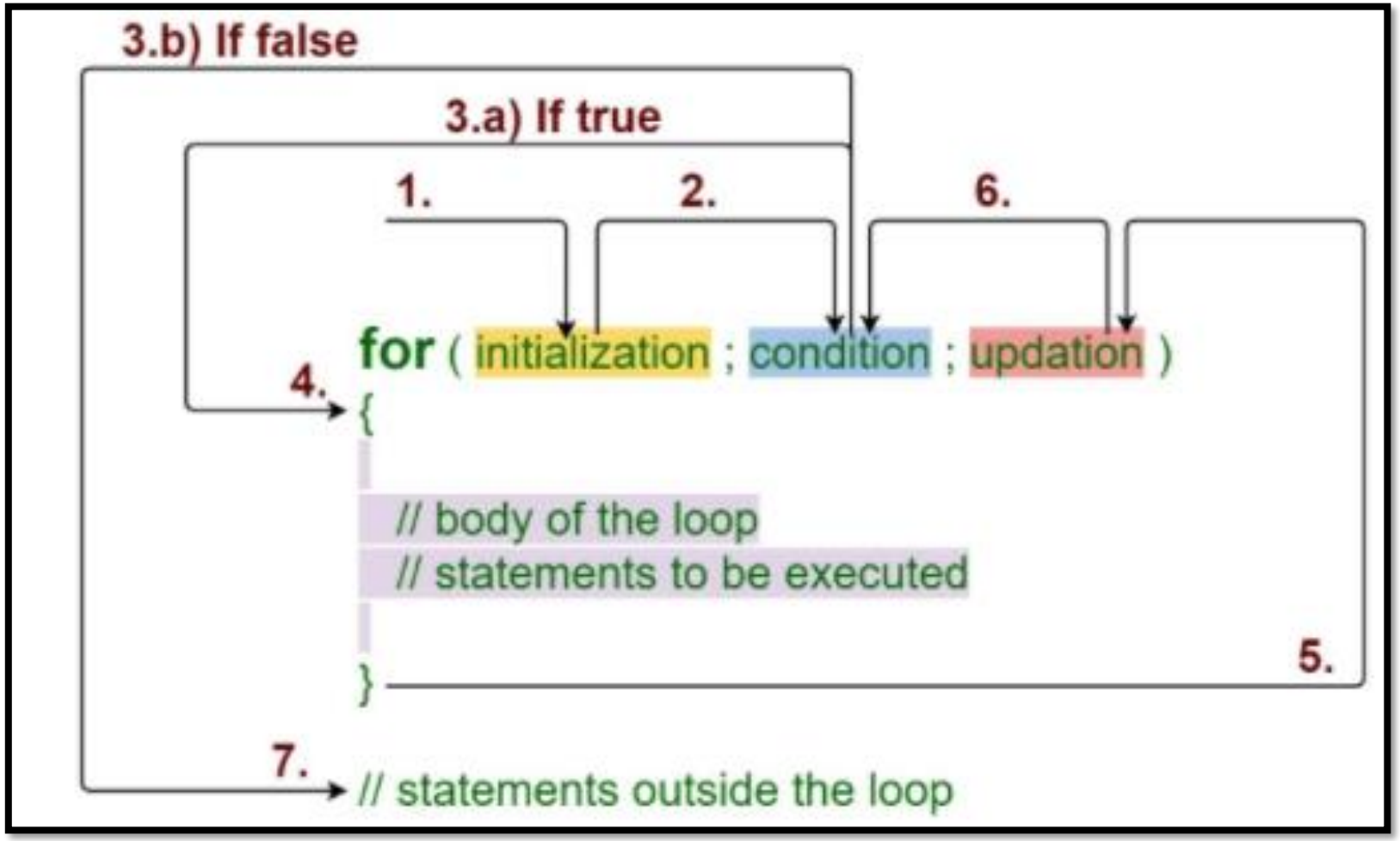
For

```
for (statement 1; statement 2; statement 3) {
  // code block to be executed
 }
```

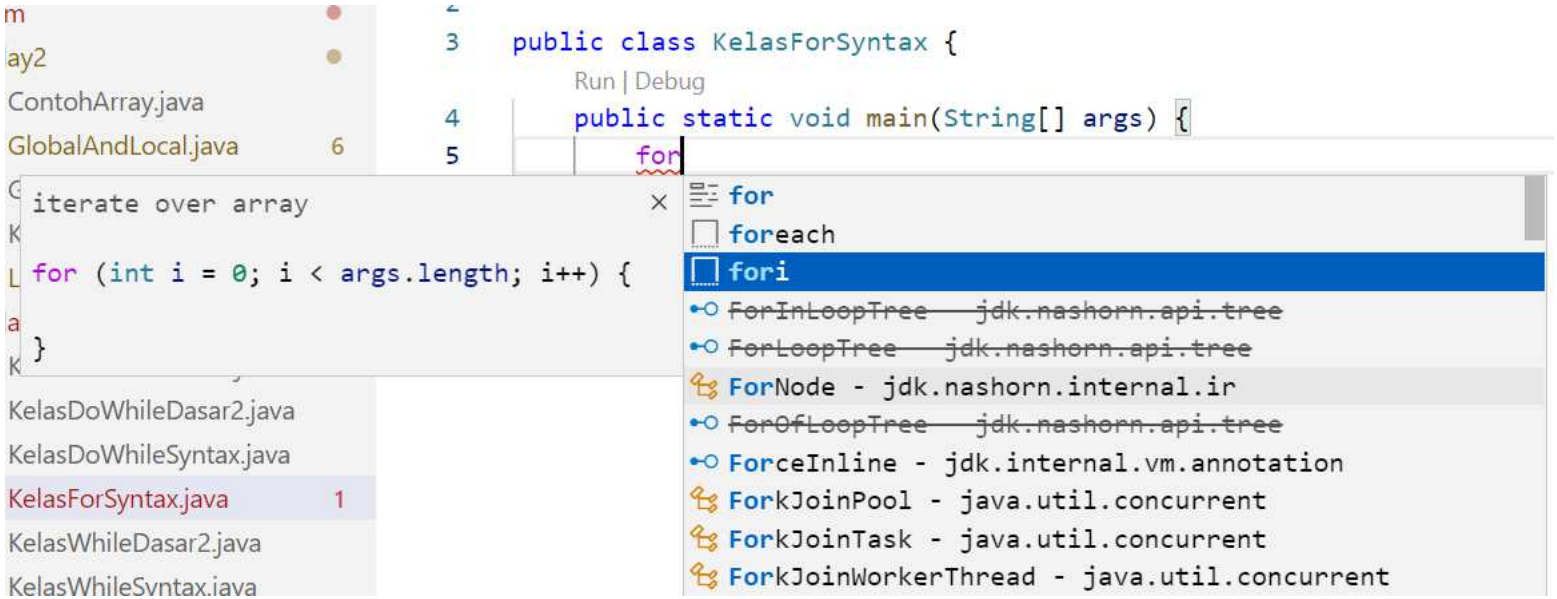
- Statement1 dieksekusi (satu kali) sebelum eksekusi blok kode.
- Statement2 mendefinisikan kondisi untuk mengeksekusi blok kode.
- Statement3 dieksekusi (setiap kali) setelah blok kode dijalankan.

For

```
for (statement 1; statement 2; statement 3) {
  // code block to be executed
 }
```



For – Sintax Java



- Ketik for lalu ctrl + space
- Pilih for iterate over array

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For – Sintax Java

```java
public class KelasForSyntax {
    Run | Debug
    public static void main(String[] args) {
        for (int i = 0; i < args.length; i++) {

        }
    }
}
```

For – Sintax Java

```
for (int i = 0; i < args.length; i++) {

}
```

```
  //   statement1;          statement2;          statement3
for (int i = 0;   i < args.length;                    i++) {
    // blok kode untuk dieksekusi
}
```

For – Sintax Java

```
 //   statement1;          statement2;          statement3
for (int i = 0;   i < args.length;                  i++) {
    // blok kode untuk dieksekusi
}
```

- Statement1 → int i = 0; artinya nilai awal looping for dari angka 0
- Statement2 → i < args.length; artinya nilai akhir looping for hingga nilai args.length (args.length sendiri belum ditentukan)
- Statement3 → i++; artinya nilai looping akan terus bertambah 1

For - Contoh

```java
public class KelasForSyntax {
    Run | Debug
    public static void main(String[] args) {
        for (int i = 0; i < 4; i++) {
            System.out.println(i);
        }
    }
}
```

Output :

```
0
1
2
3
```

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For – Contoh 3

```java
public class KelasForDasar2 {
    Run | Debug
    public static void main(String[] args) {
        int antrian = 1;
        for (int i = 0; i < 4; i++) {
            System.out.println(antrian);
            antrian +=1;
        }
    }
}
```

Coba jelaskan mengapa outputnya seperti itu?

```
1
2
3
4
```

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For – Contoh 4

```java
public class KelasForDasar4 {
    Run | Debug
    public static void main(String[] args) {
        for (int noAntrian = 1;  noAntrian < 4; noAntrian++) {
            System.out.println(noAntrian);
        }
    }
}
```

Output :

```
1
2
3
```

Coba jelaskan mengapa outputnya seperti itu?

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For – Contoh 5

```java
public class KelasForDasar5 {
    Run | Debug
    public static void main(String[] args) {
        int noAntrian = 1;

        for (int i = noAntrian;  i < 4; i++) {
            System.out.println(noAntrian);
            noAntrian+=2;
        }
    }
}
```

Coba jelaskan mengapa outputnya seperti itu?

```
1
3
5
```

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For – Contoh 6

```java
public class KelasForDasar5 {
    Run | Debug
    public static void main(String[] args) {
        int noAntrian = 1;

        for (int i = noAntrian;  i < 4; i++) {
            System.out.println(noAntrian);
            noAntrian++;
        }
    }
}
```

Coba jelaskan mengapa outputnya seperti itu?

Output :

```
1
2
3
```

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Input Console - Scanner

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Input Console - Scanner

```java
public class KelasInputConsole {
    Run | Debug
    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);

        System.out.println("PENDAFTARAN PESERTA KODEHIVE ACADEMY");

        System.out.print("Masukkan Nama : ");
        String nama = scan.nextLine();

        System.out.print("Masukkan Alamat : ");
        String alamat = scan.nextLine();

        System.out.print("Masukkan Usia : ");
        Integer usia = scan.nextInt();

        System.out.println();

        System.out.println("BIODATA PESERTA");
        System.out.println("-----------------");
        System.out.println("Nama Peserta : "+ nama);
        System.out.println("Alamat Peserta : "+ alamat);
        System.out.println("Usia Pesera : "+ usia);
    }
}
```

Object Scanner

Baca Inputan String

Baca Inputan Int

Output

Input

```
PENDAFTARAN PESERTA KODEHIVE ACADEMY
Masukkan Nama : Gusta
Masukkan Alamat : Jatim
Masukkan Usia : 26
```

Output

```
BIODATA PESERTA
-----------------
Nama Peserta : Gusta
Alamat Peserta : Jatim
Usia Pesera : 26
```

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