Lesson 6

10.02.2025

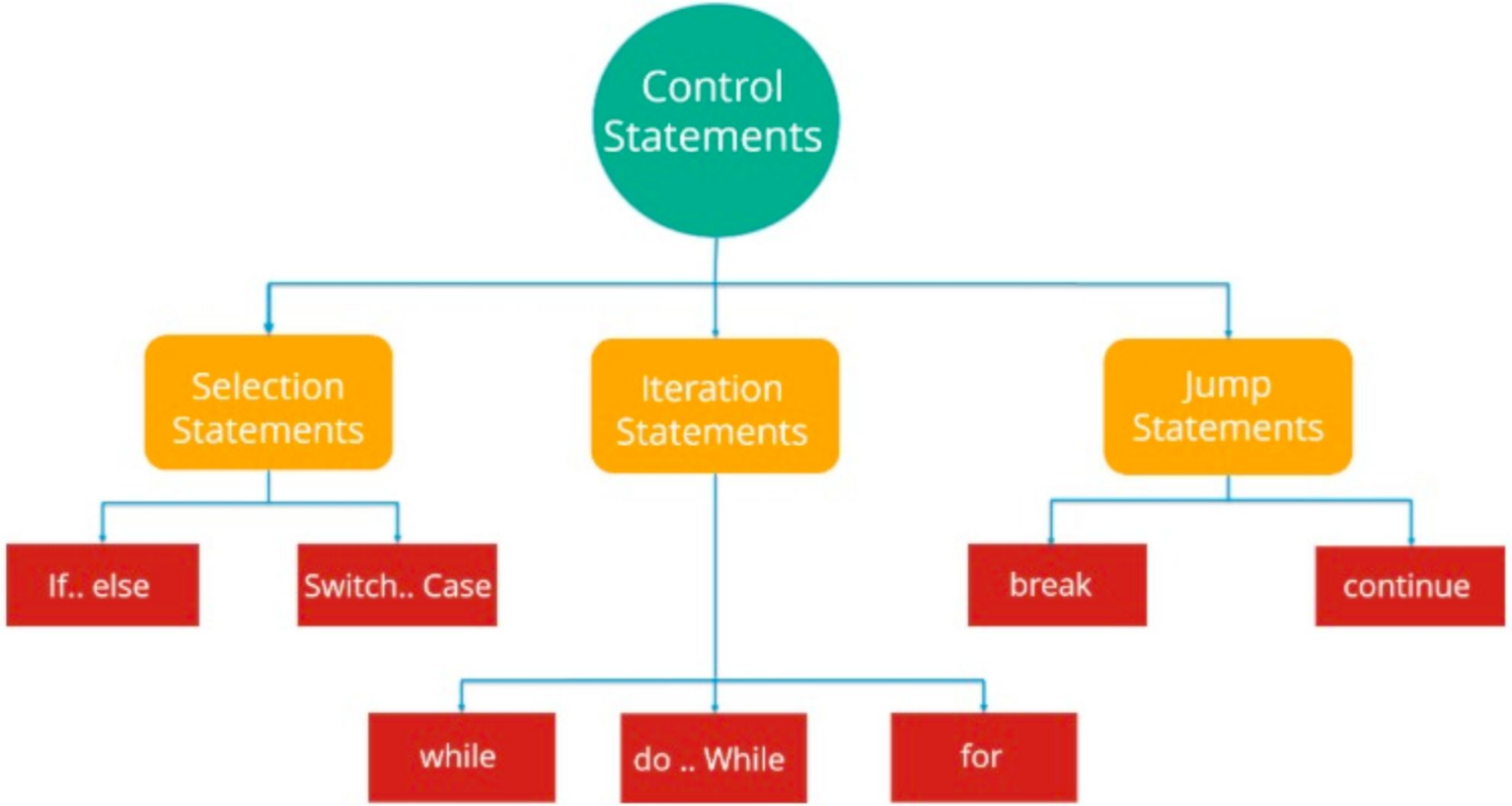
```java
public class Task1 {
    public static void main(String[] args) {
        int a = 3;
        int b = a++ + ++a;
        System.out.println("a: " + a);
        System.out.println("b: " + b);
    }
}
```

```java
public class Task2 {
    public static void main(String[] args) {
        int a = 5;
        int b = 10;
        int c = a++ + --b + ++a - b--;
        System.out.println("a: " + a);
        System.out.println("b: " + b);
        System.out.println("c: " + c);
    }
}
```

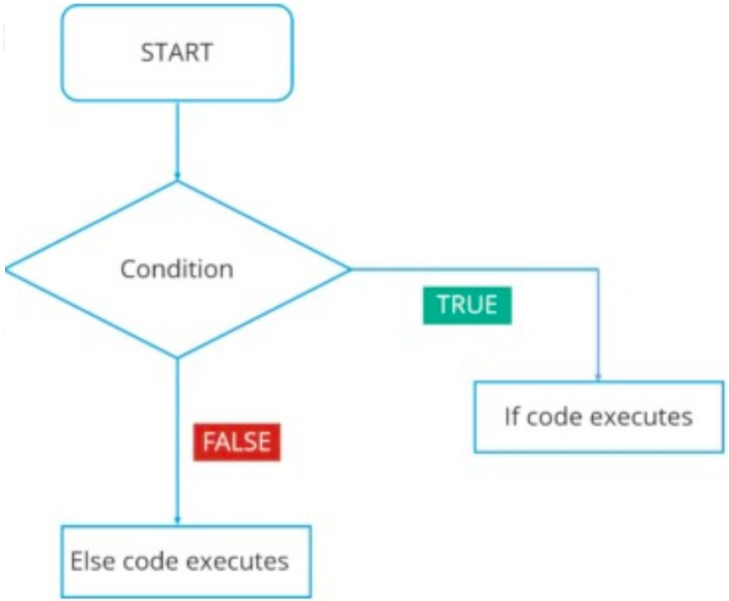
```java
public class Task3 {
    public static void main(String[] args) {
        int num = -5;
        int absValue = (num < 0) ? -num : num;
        System.out.println("Absolute value: " + absValue);
    }
}
```

```java
public class Task4 {
    public static void main(String[] args) {
        int x = 10, y = 15;
        String result = (x > y) ? "x больше y" : ((x < y) ? "x меньше y" : "x равен y");
        System.out.println(result);
    }
}
```

Java control statements

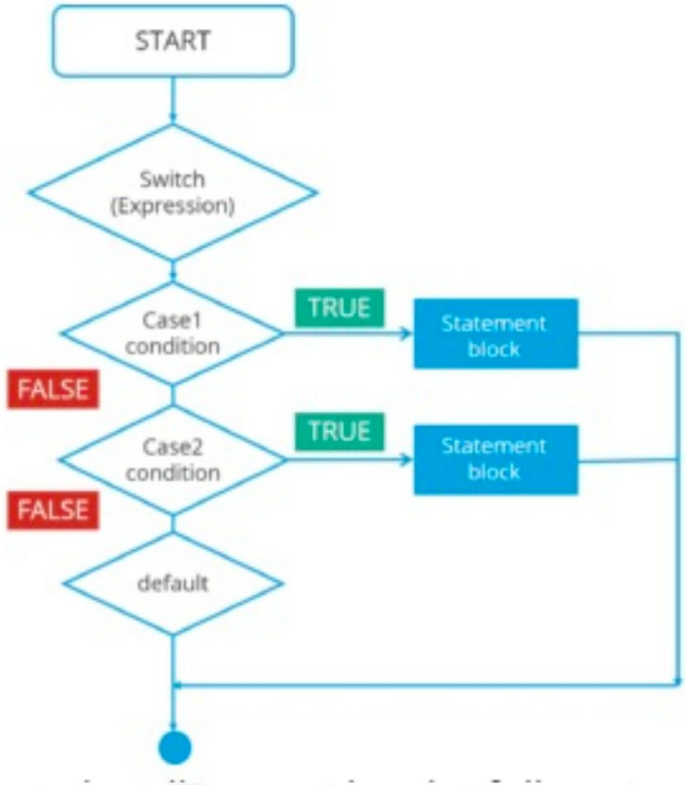


if-else statements



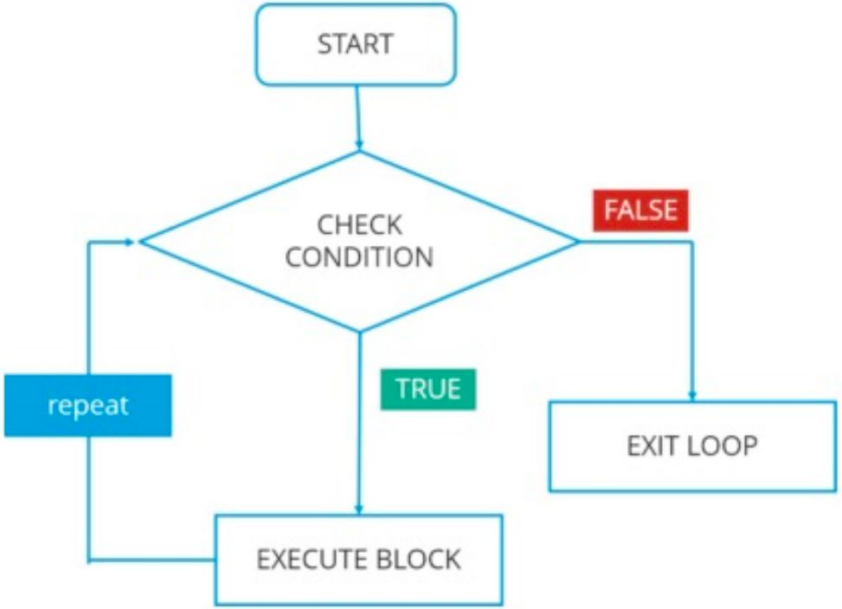

```java
public class Compare {
     int a=10,
     int b=5;

if(a>b)
      {  // if condition
     System.out.println(" A is greater than B");
      }
else
      {     // else condition
      System.out.println(" B is greater");
      }
}
```

Switch case



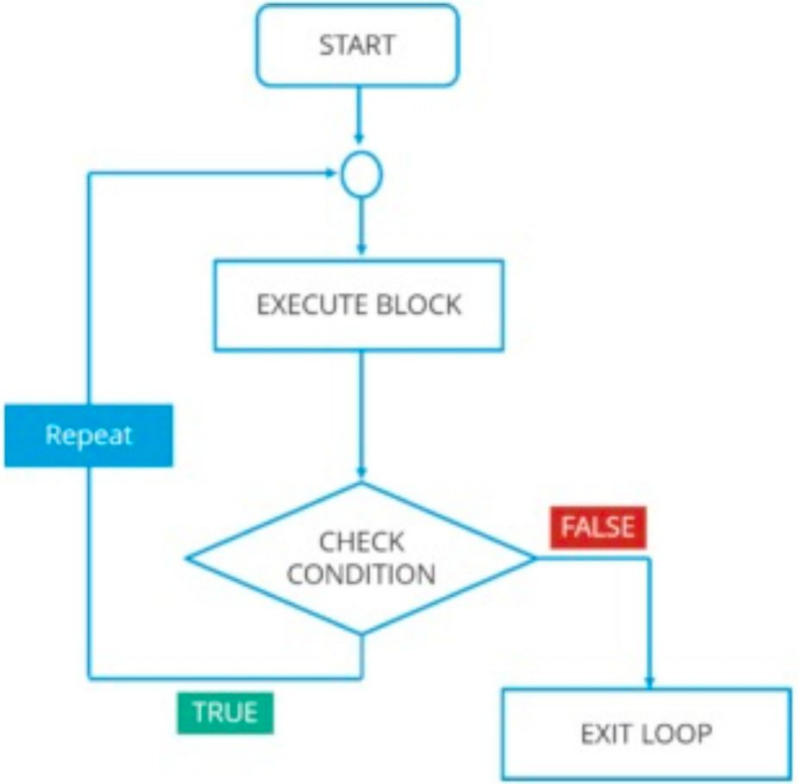

```
1  public class SwitchExample {
2       int week=7;
3       String weeknumber;
4
5  switch(week){     // switch case
6  case 1:
7            weeknumber="Monday";
8          break;
9
10 case2:
11           weeknumber="tuesday";
12         break;
13
14 case3:
15           weeknumber="wednesday";
16         break;
17
18 default:          // default case
19           weeknumber="invalid week";
20         break;
21      }
22    System.out.println(weeknumber);
23      }
24 }
```

While statement



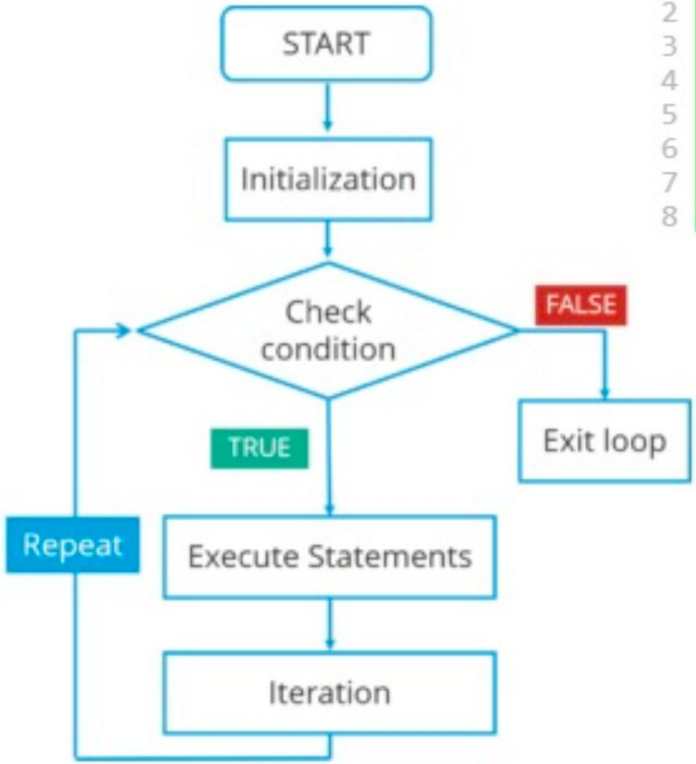

```java
public class WhileExample {
      public static void main(String args[]) {
         int a=5;
   while(a<10)   //while condition
         {
         System.out.println("value of a" +a);
         a++;
   System.out.println("
");
         }
    }
}
```

Do-while statement:




```
1  public class DoWhileExample {
2        public static void main(string args[]){
3            int count=1;
4  do {                              // do statement
5       System.out.println("count is:"+count);
6       count++;
7     }
8   while (count<10)                 // while condition
9          }
10   }
```

For statement




```java
public class ForExample {
      public static void main(String args[]) {
          for(int i=0; i<=10; i++)  // for condition
          {
          System.out.println(i);
          }
     }
}
```

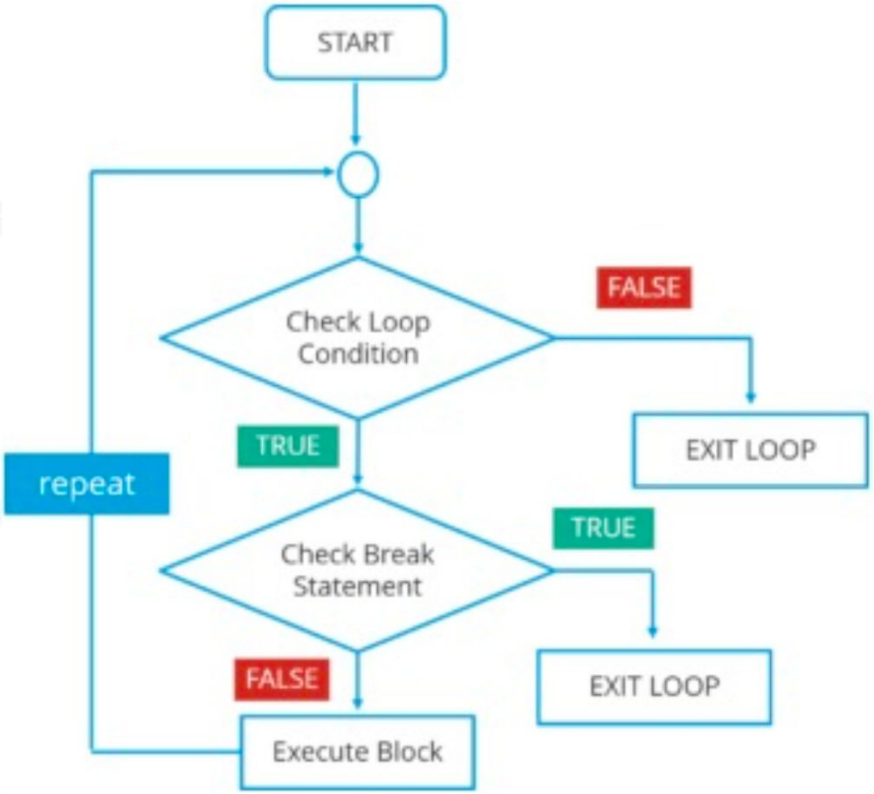
Foreach

- это разновидность цикла for
- используется для перебора элементов массива или коллекции

```
1  class Test {
2
3      public static void main(String[] args) {
4              int[] array = {51,136, 387};
5
6              for (int i = 0; i < array.length; i++)
7              System.out.println(array[i]);
8              }
9      }
10 }
```

```
1  class Test {
2
3      public static void main(String[] args) {
4              int[] array = {51,136,387};
5
6              for (int i:array) {
7              System.out.println(i);
8              }
9      }
10 }
```

Break statement



Continue statement