

Kotlin if ...else...if Expression

In this lesson, you will learn to use if ... else...if....expressions in Kotlin with the help of examples.

Traditional Usage of if...else

The syntax of if...else is:

```
if (testExpression) {  
    // codes to run if testExpression is true  
}  
else {  
    // codes to run if testExpression is false  
}
```

if executes a certain section of code if the *testExpression* is evaluated to true. It can have optional *else* clause. Codes inside *else* clause are executed if the *testExpression* is false.

Example: Traditional Usage of if...else

```
fun main(args: Array<String>) {  
    val number: Double = -10  
  
    if (number > 0) {  
        println("Positive number")  
    } else {  
        println("Negative number")  
    }  
}
```

//TEST AT <https://play.kotlinlang.org>

When you run the program, the output will be:

Negative number

Kotlin if expression

Unlike other many programming languages), if can be used an expression in Kotlin; it returns a value.

Here is an example:

Example: Kotlin if expression

```
fun main(args: Array<String>) {  
    val number: Int = -10  
  
    val result = if (number > 0) {  
        "Positive number"  
    } else {  
        "Negative number"  
    }  
  
    println(result)  
}
```

When you run the program, the output will be:

Negative number

The `else` branch is mandatory when using `if` as an expression.

NB: Either you use traditional approach or kotlin approach with return its all the same

Continuation... if/else

`if/else` works the same way as in Python, but it's `else if` instead of `elif`, the conditions are enclosed in parentheses, and the bodies are enclosed in curly braces:

```
fun main(args: Array<String>) {  
    val age: Int = 42  
    if (age < 10) {  
        println("You're too young to watch this movie")  
    } else if (age < 13) {  
        println("You can watch this movie with a parent")  
    } else {  
        println("You can watch this movie")  
    }  
}  
}  
//end
```

Example: if block With Multiple Expressions

If the block of `if` branch contains more than one expression, the last expression is returned as the value of the block.

```
fun main(args: Array<String>) {  
    val marks: Double = 20.0  
  
    if(marks < 30){  
        println("You scored $marks")  
        println("Failed")  
    }  
}
```

//TEST AT <https://play.kotlinlang.org>

You scored 20.0
Failed

You can return a block of code among many blocks in Kotlin using `if..else...if` ladder.

```
/**
 * You can edit, run, and share this code.
 * play.kotlinlang.org
 */
```

//TEST AT <https://play.kotlinlang.org>

This program checks whether *number* is positive number, negative number, or zero.

The output of the program is

It is zero 0

Kotlin Nested if Expression

An *if* expression can be inside the block of another *if* expression known as nested if expression.

```
/**
 * You can edit, run, and share this code.
 * play.kotlinlang.org
 */
fun main(args: Array<String>) {
    val age:Double = 2.0
    val weight:Double = 56.4
    //below we have if inside another if , its said to be nested
    if (age <=18){
        if(weight>=50){
            println("You can donate blood")
        }
        else {
            println("You can't donate blood")
        }
    }
    //end first if
    else
    {
        println("You are Over 18")
    }
}
//end
```

The output of above program is

You can donate blood

TEST ALL THE CODES IN THIS DOCUMENT AT <https://play.kotlinlang.org>