When

When represents replacement for Java's *switch / case*. *When* can be used either as an expression or as a statement.

When matches its argument against all branches sequentially until some branch condition is satisfied. If it is used as an expression, the value of the satisfied branch becomes the value of the overall expression. If it is used as a statement, the values of individual branches are ignored.

The *else* branch is evaluated if none of the other branch conditions are satisfied. If *When* is used as an expression, the *else* branch is mandatory, unless the compiler can prove that all possible cases are covered with branch conditions. If many cases should be handled in the same way, the branch conditions can be combined with a comma.

Let's check out the following examples (*When.kt*) and see what we can do with *When*:

```
// ----- example 1:

fun whenExample(userType: Int) {
    when (userType) {
        0 -> println("Registered user")
        1 -> print("Administrator")
        else -> {
            println("Unknown")
        }
    }
}

// ----- example 2:

fun whenExample2(userType: Int) {
    when (userType) {
        0, 1 -> println("Welcome user.")
        else -> println("Permission denied.")
    }
}

// ----- example 3:

fun whenExample3(userType: Int){
    when (userType) {
        filterUserType(userType) -> {
            println("Subtype ok")
```

```
            whenExample2(userType)
        }
        else -> print("Subtype not ok")
    }
}

fun filterUserType(userType: Int): Int {
    if(userType >= 0 && userType < 2){
        return userType;
    }
    return -1
}
// ----- example 4:

// Checking ranges:
fun whenExample4(x: Int) {
    val from = 0
    val to = 100
    when (x) {
        in from..to -> println("PRECISE")
        in (from / 2)..(to / 2) -> print("VERY PRECISE")
        50 -> print("STRAIGHT IN TARGET")
        else -> print("MISSED")
    }
}

// ----- example 5:

fun whenExample5(fullName: String) {
    val isJohn = when (fullName) {
        is String -> fullName.startsWith("John ")
        else -> false
    }
}

// ----- example 6:

fun whenExample6(fullName: String) {
    when {
        fullName.length == 0 -> println("Please enter your name.")
        fullName.substring(0, 2).equals("X ") -> println("Hello Mr. X")
        fullName.startsWith("John ") && !fullName.endsWith(" Smith") -> println("Hello
John!")
        fullName.endsWith(" Smith") -> println("Hello agent Smith.")
        else -> println("Only secret agents allowed!")
    }
}
```