


More about properties



Property in interface

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```
interface User {  
    val nickname: String  
}
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interface User {  
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```

```
class FacebookUser(val accountId: Int) : User {  
    override val nickname = getFacebookName(accountId)  
}
```

```
class SubscribingUser(val email: String) : User {  
    override val nickname: String  
        get() = email.substringBefore('@)  
}
```



Which property is calculated on each access?

1. FacebookUser.nickname
2. SubscribingUser.nickname

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    val nickname: String  
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class SubscribingUser(val email: String) : User {  
    override val nickname: String  
        get() = email.substringBefore('@')  
}
```

Open property can't be used in smart casts

```
interface Session {  
    val user: User  
}
```

```
fun analyzeUserSession(session: Session) {  
    if (session.user is FacebookUser) {  
        println(session.user.accountId)  
    }  
}
```

Compiler error: Smart cast to 'FacebookUser' is impossible, because 'session.user' is a property that has open or custom getter

Open property can't be used in smart casts

```
interface Session {  
    val user: User  
}
```

```
fun analyzeUserSession(session: Session) {  
    val user = session.user  
    if (user is FacebookUser) {  
        println(user.accountId)  
    }  
}
```





Extension properties

Extension properties

```
val String.lastIndex: Int  
    get() = this.length - 1
```

```
val String.indices: IntRange  
    get() = 0..lastIndex
```

```
"abc".lastIndex    // 2  
"abc".indices      // 0..2
```



How many times “Calculating...”
will be printed?

```
val String.medianChar
get(): Char? {
    println("Calculating...")
    return getOrNull(length / 2)
}
```

```
fun main(args: Array<String>) {
    val s = "abc"
    println(s.medianChar)
    println(s.medianChar)
}
```

1. 1
2. 2





How many times “Calculating...”
will be printed?

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val String.medianChar  
get(): Char? {  
    println("Calculating...")  
    return getOrNull(length / 2)  
}
```

```
fun main(args: Array<String>) {  
    val s = "abc"  
    println(s.medianChar)  
    println(s.medianChar)  
}
```

1. 1

2. 2

Mutable extension properties

```
var StringBuilder.lastChar: Char
    get() = get(length - 1)
    set(value: Char) {
        this.setCharAt(length - 1, value)
    }
```

```
val sb = StringBuilder("Kotlin?")
sb.lastChar = '!'
println(sb)           // Kotlin!
```