

```

1 // Simplest way to declare class
2 class Deposit {}
3
4 // example usage of 'constructor' keyword, and making 'instance'.
5 // Declare class Person1
6 class Person1 constructor(val firstName: String, val lastName: String, val age: Int?) {
7     /* code */
8 }
9 // Make Instance of Person1
10 val person1 = Person1("Alex", "Smith", 29) // No need to say 'new' keyword!
11
12 // example usage of 'init', 'require', secondary constructor
13 // Declare class Person2
14 class Person2( val firstName: String, val lastName: String, val age: Int? ) { // 'constructor' keyword is
    // optional for primary constructor.
15     // Initialize
16     init {
17         // Check input values via standard library function 'require'
18         require(firstName.trim().length > 0) { "Invalid firstName argument." }
19         require(lastName.trim().length > 0) { "Invalid lastName argument." }
20         if (age != null) {
21             require(age >= 0 && age < 150) { "Invalid age argument." }
22         }
23     }
24     // secondary constructor
25     constructor(firstName: String, lastName: String) : this(firstName, lastName, null) {}
26 }
27 // Make Instance of Person2
28 val person3 = Person2("Inha", "Woo") // age will be null
29
30 // Nested Class
31 class Outer {
32     private var privateInt = 3
33     class staticNestedClass { // Equivalent to static nested class in Java
34         init {
35             // println("Outer's static nested class : ${privateInt}") // ERROR! Cannot access private
member.
36         }
37     }
38     inner class innerNestedClass { // Equivalent to non-static(inner) nested class in Java
39         init {
40             println("Outer's inner nested class : ${privateInt}") // OK
41         }
42     }
43 }
44
45 // this@label
46 class A {
47     var myVal = 1
48     inner class B {
49         var myVal = 2
50         init {
51             println("Field <myVal> from B: " + this.myVal) // 2
52             println("Field <myVal> from B: " + this@B.myVal) // 2
53             println("Field <myVal> from A: " + this@A.myVal) // 1
54         }
55     }
56 }
57
58 // enum class
59 enum class Day { MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY }
60 enum class Planet(val mass: Double, val radius: Double) {
61     MERCURY(3.303e+23, 2.4397e6),
62     VENUS(4.869e+24, 6.0518e6),
63     EARTH(5.976e+24, 6.37814e6),
64     MARS(6.421e+23, 3.3972e6),
65     JUPITER(1.9e+27, 7.1492e7),
66     SATURN(5.688e+26, 6.0268e7),
67     URANUS(8.686e+25, 2.5559e7),
68     NEPTUNE(1.024e+26, 2.4746e7)
69 }
70
71 // Singleton class ('Object' in Kotlin)
72 object myButton {
73     private var count = 0
74     fun press() {

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75     println("Calling myButton.press() : ${++count}")
76 }
77 }
78
79 fun main() {
80     val tmpOuter = Outer()
81     val tmpInner = tmpOuter.innerNestedClass() // Outer's inner nested class : 3
82
83     val tmpA = A()
84     val tmpB = tmpA.B() // A.B.init() is called in here
85     println("${tmpB.myVal}") // 2
86
87     val venus = Planet.valueOf("VENUS")
88     println("VENUS : mass(${venus.mass}), radius(${venus.radius})") // VENUS : mass(4.869E24), radius(
6051800.0)
89
90     val myButtonInstance = myButton // Not myButton()
91     val myButtonInstance2 = myButton // Not myButton()
92     myButtonInstance.press() // 1
93     myButtonInstance2.press() // 2
94     myButton.press() // 3
95     myButton.press() // 4
96
97 }
98
99
100
```