Nullablity

fun main(){  
 val ListOfNullability : List<Int> = (2,1,2,null)  
}

Mutable/Immutable

fun main( ){

val hewan : Set<String> = setOf("zebra","kucing")

println(hewan)

val buah : Set<String> = setOf("apel","jeruk")

println(buah)

}

Immutable set

fun main() {

// Immutable Set

val animals: Set<String> = setOf("Zebra", "Kucing")

println(animals)

println("Size : ${animals.size}")

println("Is Empty : ${animals.isEmpty()}")

println("Contains : ${animals.contains("Kucing")}")

println("Contains All : ${animals.containsAll(listOf("Zebra"))}")

val animalIterator = animals.iterator()

while (animalIterator.hasNext()) {

println("Animal : ${animalIterator.next()}")

}

}

fun main() {

val animals: MutableSet<String> = mutableSetOf()

animals.add("Kucing")

animals.add("Zebra")

println("Setelah add: $animals")

animals.addAll(listOf("Ayam", "Ikan", "Burung"))

println("Setelah addAll: $animals")

animals.remove("Kucing")

println("Setelah remove: $animals")

animals.removeAll(listOf("Ikan", "Burung"))

println("Setelah removeAll: $animals")

animals.retainAll(listOf("Zebra"))

println("Setelah retainAll: $animals")

animals.clear()

println("Setelah clear: $animals")

}

fun main() {

// Immutable Map

val buah: Map<String, Int> = mapOf(

"jeruk" to 10,

"apel" to 3

)

println(buah["jeruk"])

// Mutable Map

val buah2: MutableMap<String, Int> = mutableMapOf(

"jeruk" to 10,

"apel" to 3

)

println(buah2)

}

Collection and function

fun main() {

// Immutable Map

val buah: Map<String, Int> = mapOf(

"jeruk" to 10,

"apel" to 3

)

println("Contains Key : ${buah.containsKey("jeruk")}")

println("Contains Value : ${buah.containsValue(10)}")

println("Get : ${buah.get("apel")}")

println("Get Or Default : ${buah.getOrDefault("pisang", 0)}")

println(buah.keys)

println(buah.values)

println(buah.entries)

buah.entries.forEach { (key, value) ->

println("Key: $key, Value: $value")

}

}

fun main() {

// Immutable Map

val buah: Map<String, Int> = mapOf(

"jeruk" to 10,

"apel" to 3

)

buah["jeruk"] = 12

println(buah.entries)

buah.remove("jeruk")

buah.putAll(mapOf("anggur" to 2))

println(buah.entries)

buah.clear()

println(buah.entries)

}

Latihan

fun main() {

// --- 1. Inisialisasi Data ---

val daftarJudulBuku = listOf(

"Laskar Pelangi",

"Bumi Manusia",

"Filosofi Teras",

"Laskar Pelangi"

)

val koleksiGenre: MutableSet<String> = mutableSetOf(

"Novel",

"Filsafat",

"Sejarah",

"Novel"

)

val inventarisBuku: MutableMap<String, String> = mutableMapOf(

"978-602-03-8591-6" to "Laskar Pelangi",

"978-979-3062-79-2" to "Bumi Manusia",

"978-602-06-3534-7" to "Filosofi Teras"

)

println("--- 1. Inisialisasi Data ---")

println("List judul buku:")

daftarJudulBuku.forEach { println("- $it") }

println("\nSet genre:")

koleksiGenre.forEach { println("- $it") }

println("\nMap inventaris buku:")

inventarisBuku.forEach { (isbn, judul) ->

println("$isbn -> $judul")

}

println("-----------------------------------\n")

// --- 2. Manipulasi dan Analisis Data ---

println("--- 2. Manipulasi dan Analisis Data ---")

val isbnDicari = "978-979-3062-79-2"

println("Judul buku dengan ISBN $isbnDicari adalah: ${inventarisBuku[isbnDicari]}")

inventarisBuku["978-623-91289-8-2"] = "Atomic Habits"

println("Buku baru 'Atomic Habits' berhasil ditambahkan.")

println("Isi inventaris sekarang:")

inventarisBuku.forEach { (isbn, judul) ->

println("$isbn -> $judul")

}

println("Jumlah genre unik yang ada di toko: ${koleksiGenre.size}\n")

println("Daftar semua judul buku yang tercatat:")

daftarJudulBuku.forEach { println("- $it") }

}