

TUGAS INDIVIDU KOTLIN

RASYID RAMADHANI
MOBILE MORNING

APRIL 2023

Nama : Rasyid Ramadhani

Sesi Kelas : Morning

Program : Android Mobile Dev

Source code : [oXceeds/LearnKotlin_SIB_InfiniteLearning](https://github.com/oXceeds/LearnKotlin_SIB_InfiniteLearning): Belajar Kotlin di Infinite Learning (github.com)

KOTLIN FUNDAMENTAL

1.	Data Types
Code	<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // String 9 val firstWord = "Infinite" 10 val secondWord = "Learning" 11 println("\$firstWord \$secondWord") //--> Infinite Learning 12 13 // Char 14 println("\nChar Section\t\t:") 15 var grade = 'A' 16 println("Grade " + grade++) // B 17 println("Grade " + grade++) // C 18 println("Grade " + grade++) // D 19 println("Grade " + grade--) // C 20 println("Grade " + grade--) // B 21 println("Grade " + grade--) // A 22 23 // String with Index 24 println("\nString with Index\t:") 25 val indexString = "Kotlin Language" 26 val firstChar = indexString[0] 27 println("Karakter Pertama dari \$indexString adalah \$firstChar") 28 29 // String with Escaped String 30 println("\nString with Escaped String\t:") 31 val escapedString = "Kampus Merdeka \nby \"Infinite Learning\"" 32 println(escapedString) 33 34 // String with Raw String 35 println("\nString with Raw String\t:") 36 val rawString = """ 37 Belajar Bahasa Kotlin 38 ----- 39 Di Infinite Learning 40 Bersama Kampus Merdeka 41 """ 42 println(rawString) 43 44 // Boolean 45 println("\nBoolean\t:") 46 var x = true 47 var y = false 48 println("x && y = " + (x && y)) // --> false 49 println("x y = " + (x y)) // --> true 50 println("!y = " + (!y)) // --> true 51 52 // Boolean Expression 53 println("\nBoolean Expression\t:") 54 val a: Int = 50 55 val b: Int = 25 56 println("a > b = " + (a > b)) 57 println("a < b = " + (a < b)) 58 println("a >= b = " + (a >= b)) 59 println("a <= b = " + (a <= b))</pre>

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```
58     println("a >= b = " + (a >= b))
59     println("a <= b = " + (a <= b))
60     println("a == b = " + (a == b))
61     println("a != b = " + (a != b))
62
63     // Boolean Function
64     println("\nBoolean Function\t\t: ")
65     val e: Boolean = true
66     val f: Boolean = false
67     val g: Boolean = true
68     println("e.and (f) = " + e.and(f))
69     println("e.or(f) = " + e.or(f))
70     println("e.and(g) = " + e.and(g))
71
72     // Numbers
73     println("\nNumbers\t\t\t: ")
74     val h: Int = 10000
75     val i: Double = 100.00
76     val j: Float = 100.00f
77     val k: Long = 1000000004L
78     val l: Short = 10
79     val m: Byte = Byte.MAX_VALUE
80
81     println("Int Value is " + h)
82     println("Double Value is " + i)
83     println("Float Value is " + j)
84     println("Long Value is " + k)
85     println("Short Value is " + l)
86     println("Byte Value is " + m)
87
88     // Array
89     println("\nArray\t\t\t: ")
90     val groups = arrayOf<String>("Group 1", "Group 2", "Group 3", "Group 4")
91
92     // Get Value
93     groups[0]
94     groups.get(0)
95
96     // Set Value
97     groups [0]= "Group 1"
98     groups.set(1, "Group Dua")
99
100    // Array with Get & Set
101    println("\nArray with Get & Set\t\t: ")
102    val group = arrayOf<String>("Group 1", "Group 2", "Group 3", "Group 4")
103    println(group [0] )
104    println(group.get(1) )
105    println("-----")
106
107    group [0] = "Group Satu"
108    group.set(1, "Group Dua")
109
110    println(group[0] )
111    println(group.get(1))
112    println(group.get(2))
113
114    // Array with Primitive type Arrays
115    println("\nPrimitive Type Arrays\t\t: ")
116    val groupie = intArrayOf(1, 2, 3, 4)
117    val intArray = intArrayOf(2, 9, 11, 15) // [2, 9, 11, 15]
118    intArray[2] = 30 // [2, 9, 30, 15]
119    print(intArray[2])
120 }
```

Output

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```
Infinite Learning

Char Section :
Grade A
Grade B
Grade C
Grade D
Grade C
Grade B

String with Index :
Karakter Pertama dari Kotlin Language adalah K

String with Escaped String :
Kampus Merdeka
by "Infinite Learning"

String with Raw String :

    Belajar Bahasa Kotlin
    -----
    Di Infinite Learning
    Bersama Kampus Merdeka

Boolean :
x && y = false
x || y = true
!y = true

Boolean Expression :
a > b = true
a < b = false
a >= b = true
a <= b = false
a == b = false
a != b = true

Boolean Function :
e.and(f) = false
e.or(f) = true
e.and(g) = true

Numbers :
Int Value is 10000
Double Value is 100.0
Float Value is 100.0
Long Value is 1000000004
Short Value is 10
Byte Value is 127

Array :

Array with Get & Set :
Group 1
Group 2
-----
Group Satu
Group Dua
Group 3

Primitive Type Arrays :
30
Process finished with exit code 0
```

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2.	Functions
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 val hasil = setUser(name: "Rasyid Ramadhani", age: 21) 9 println(hasil) // --> Nama kamu adalah Rasyid Ramadhani, dan umur kamu 21 tahun 10 } 11 fun setUser(name: String, age: Int): String { 12 return "Nama kamu adalah \$name, dan umur kamu \$age tahun" 13 }</pre>	
Output	
<pre>Nama kamu adalah Rasyid Ramadhani, dan umur kamu 21 tahun Process finished with exit code 0</pre>	

3.	If Expressions
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // If Statement 9 println("\nIf Statement\t\t: ") 10 val condition = true 11 12 if (condition) { 13 println("code block to be executed if condition is true") 14 } else { 15 println("code block to be executed if condition is false") 16 } 17 18 // If...else Expression 19 println("\nIf...else Expression\t\t: ") 20 val timeOpen = 8 21 val timeClose = 12 22 val timeNow = 7 23 24 val classStatus = if (timeNow >= timeClose) { 25 "Class already closed" 26 } else if (timeNow >= timeOpen) { 27 "Class is open" 28 } else { 29 "Class is not open yet" 30 } 31 println(classStatus) 32 }</pre>	
Output	
<pre>If Statement : code block to be executed if condition is true If...else Expression : Class is not open yet Process finished with exit code 0</pre>	

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4.	Nullable Types
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // val text: String = null // Null can not be a value of a non-null type String [ERROR] 9 val text: String? = null // [SUCCESS] 10 11 val texts: String? = null 12 if(texts != null) { 13 println(texts.length) 14 } 15 } 16</pre>	
Output	
<pre>Process finished with exit code 0</pre>	

5.	Safe Calls and Elvis Operator
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 val safeText: String? = null 9 safeText?.length 10 11 var dateOut: String? = null 12 var status = "Booked" 13 status = "Checkout" 14 if (status.equals("Checkout")) { 15 dateOut = "28/10/2022 12:05:00" 16 } 17 println(dateOut) 18 }</pre>	
Output	
<pre>28/10/2022 12:05:00 Process finished with exit code 0</pre>	

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6.	String Template
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 val company = "Infinite Learning" 9 // print("We are studying in " + \$company) 10 print("We are studying in \$company") 11 12 val score = 80 13 print("Results: \${ if(score >= 80) "You win!" else "Please try again!" }") 14 } 15</pre>	
Output	
<pre>We are studying in Infinite LearningResults: You win! Process finished with exit code 0</pre>	

7.	Variable
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // Penggunaan var dalam inisialisasi 9 var company: String = "Infinite Learning" 10 company = "Nongsa Digital" 11 println(company) 12 13 // Penggunaan val dalam inisialisasi 14 val companyies: String = "Nongkrong Digital" 15 // companyies = "Nongsa Digital" --> Akan error, karena inisialisasi dengan val tidak bisa mengubah isi data variabel 16 println(companyies) 17 }</pre>	
Output	
<pre>Nongsa Digital Nongkrong Digital Process finished with exit code 0</pre>	

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KOTLIN CONTROL FLOW

1.	If Else Expressions
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // val timeClose = 8 9 // val timeNow = 8 10 // val isClosed = if(timeNow >= timeClose) "Class already closed" else "Class is open" 11 // println(isClosed) 12 13 // another 14 val timeOpen = 8 15 val timeClose = 12 16 val timeNow = 7 17 val classStatus = if (timeNow >= timeClose) { 18 "Class already closed" 19 } else if (timeNow >= timeOpen) { 20 "Class is open" 21 } else { 22 "Class is not open yet" 23 } 24 println(classStatus) 25 }</pre>	
Output	
<pre>Class is not open yet Process finished with exit code 0</pre>	

2.	When Expressions
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 03/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 val day = 1 9 val result = when (day) { 10 1 -> "Monday" 11 2 -> "Tuesday" 12 3 -> "Wednesday" 13 4 -> "Thursday" 14 5 -> "Friday" 15 6 -> "Saturday" 7 -> "Sunday" 16 else -> "Invalid day." 17 } 18 println(result) 19 20 // Multiply Condition 21 val days = 2 22 when (days) { 23 1, 2, 3, 4, 5 -> println("Weekday") 24 else -> println("Weekend") 25 }</pre>	

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```
27 // Example
28 val dayz = 2
29 when (dayz) {
30     1 -> { println("First day of the week")
31         println("Monday")
32     } 2 -> {
33         println("Second day of the week")
34         println("Tuesday")
35     }
36     3 -> {
37         println("Third day of the week")
38         println("Wednesday")
39     }
40     4 -> println("Thursday")
41     5 -> println("Friday")
42     6 -> println("Saturday")
43     7 -> println("Sunday")
44     else -> println("Invalid day.")
45 }
46 }
```

Output

```
Monday
Weekday
Second day of the week
Tuesday

Process finished with exit code 0
```

3. Range

Code

```
2  /*
3      Created by Rasyid Ramadhani [20104099] - 04/04/2023
4      Telkom Institute of Technology Purwokerto
5      SIB#4 Infinite Learning_Morning_Android Mobile Dev
6  */
7  fun main() {
8      val rangeInt = 1..10
9      print(rangeInt.toList())
10     println("Step: " + rangeInt.step)
11
12     // Using rangeTo().
13     println("\nMenggunakan rangeTo()\t\t:")
14     val rangeInts = 1.rangeTo(10)
15     println("Step: " + rangeInts.step)
16     print(rangeInts.toList())
17
18     // Using step
19     println("\nMenggunakan step\t\t:")
20     val rangeIntz = 1..10 step 2
21     println("Step: ${rangeIntz.step}")
22     print(rangeIntz.toList())
```

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```
24 // rangeTo()
25 println("\nMenggunakan rangeTo()\t\t: ")
26 var i = 4
27 if (i in 1.rangeTo( other: 10)) { // equivalent of i >= 1 && i <= 10
28     println("Value 4 available in Range")
29 }
30
31 // downTo()
32 println("\nMenggunakan downTo()\t\t: ")
33 var j = 20
34 if (j in 10.downTo( to: 1)) {
35     println("Value 4 is not available in Range")
36 }
37
38 }
```

Output

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]Step: 1
```

```
Menggunakan rangeTo()      :
Step: 1
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Menggunakan step           :
Step: 2
[1, 3, 5, 7, 9]
Menggunakan rangeTo()      :
Value 4 available in Range
```

```
Menggunakan downTo()      :

Process finished with exit code 0
```

4. Looping For

Code

```
2  /*
3   Created by Rasyid Ramadhani [20104099] - 04/04/2023
4   Telkom Institute of Technology Purwokerto
5   SIB#4 Infinite Learning_Morning_Android Mobile Dev
6  */
7  fun main() {
8      // Looping For untuk Range Expressions
9      println("\nFor untuk Range Expressions \t\t: ")
10     for (i in 1..20){
11         println("Value is $i")
12     }
13
14     // Looping For untuk Iterasi Array
15     println("\nFor untuk Range Expressions \t\t: ")
16     val days = arrayOf("Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday")
17     for (day in days) {
18         println(day)
19     }
20
21     // Looping for dengan with index
22     println("\nFor dengan withIndex \t\t: ")
23     val dayz = arrayOf("Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday")
24     for ((index, value) in dayz.withIndex()) {
25         println("value $value with index $index")
26     }
```

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```
27
28 // Looping for dengan forEach
29 println("\nFor dengan forEach \t\t: ")
30 val daye = arrayOf("Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday")
31 daye.forEach { value-> println("Day is $value") }
32
33 // Looping for dengan forEachIndexed
34 println("\nFor dengan forEachIndexed \t\t: ")
35 val dayc = arrayOf("Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday")
36 dayc.forEachIndexed { index, value -> println("Day $value with index: $index") }
37
38 }
```

Output

```
For untuk Range Expressions      :
Value is 1
Value is 2
Value is 3
Value is 4
Value is 5
Value is 6
Value is 7
Value is 8
Value is 9
Value is 10
Value is 11
Value is 12
Value is 13
Value is 14
Value is 15
Value is 16
Value is 17
Value is 18
Value is 19
Value is 20

For untuk Range Expressions      :
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

For dengan withIndex             :
value Monday with index 0
value Tuesday with index 1
value Wednesday with index 2
value Thursday with index 3
value Friday with index 4
value Saturday with index 5
value Sunday with index 6

For dengan forEach               :
Day is Monday
Day is Tuesday
Day is Wednesday
Day is Thursday
Day is Friday
Day is Saturday
Day is Sunday
```

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```
For dengan forEachIndexed      :  
Day Monday with index: 0  
Day Tuesday with index: 1  
Day Wednesday with index: 2  
Day Thursday with index: 3  
Day Friday with index: 4  
Day Saturday with index: 5  
Day Sunday with index: 6  
  
Process finished with exit code 0
```

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5.	Looping While
<div><h3>Code</h3><pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 04/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // Looping dengan While Do 9 println("\nFor dengan While Do \t\t: ") 10 var i = 0 11 while (i < 10) { 12 println("Loop to: \$i") 13 i++ 14 } 15 16 // Looping dengan Do While 17 println("\nFor dengan Do While \t\t: ") 18 var k = 0 19 do { 20 println("\$k Kampus Merdeka") 21 k++ 22 } while (i <= 8) 23 24 }</pre></div> <div><h3>Output</h3><pre>For dengan While Do : Loop to: \$1 Loop to: \$1 Loop to: \$1 Loop to: \$1 Loop to: \$1 Loop to: \$1 Loop to: \$1 Loop to: \$1 Loop to: \$1 Loop to: \$1 For dengan Do While : 0 Kampus Merdeka Process finished with exit code 0</pre></div>	

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6.	Break
<div><h3>Code</h3><pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 04/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // Example 1 9 println("\nExample 1 \t\t: ") 10 var i = 0 11 while (true) { 12 println("Break \$i") 13 i++ 14 if (i > 10) { 15 break 16 } 17 } 18 19 // Example 2 20 val c = 2 21 for (b in 1..10) { 22 println("Sayang...") 23 if (b == c) { 24 println("Putus!") 25 break 26 } 27 } 28 }</pre></div> <div><h3>Output</h3><pre>Example 1 : Break 0 Break 1 Break 2 Break 3 Break 4 Break 5 Break 6 Break 7 Break 8 Break 9 Break 10 Sayang... Sayang... Putus! Process finished with exit code 0</pre></div>	

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7.	Continue
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 04/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // Example 1 9 println("\nExample 1 \t\t: ") 10 val listInt = listOf(1, 2, null, 4, 5, null, 7) 11 for (i in listInt) { 12 if (i == null) continue 13 print(i) 14 } 15 16 // Example 2 17 println("\nExample 2 \t\t: ") 18 println("Print odd numbers") 19 for (i in 1 ..> 20) { 20 if (i % 2 == 0) { 21 continue 22 } 23 println("\$i is an odd number") 24 } 25 }</pre>	
Output	
<pre>Example 1 : 12457 Example 2 : Print odd numbers 1 is an odd number 3 is an odd number 5 is an odd number 7 is an odd number 9 is an odd number 11 is an odd number 13 is an odd number 15 is an odd number 17 is an odd number 19 is an odd number Process finished with exit code 0</pre>	

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KOTLIN COLLECTION

1.	List
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 04/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // listOf() 9 val numberList = listOf("One", "Two", "Tree") 10 println(numberList) 11 12 // mutableListOf() 13 val numberList2 = mutableListOf(1, 2, 3) 14 println(numberList2) 15 numberList2[2] = 5 16 // error --> numberList2[2] = "Three" 17 // error karena beda tipe datanya yang mau diubah 18 println(numberList2) 19 20 // List <Any> 21 val numberList3 = mutableListOf<Any>(false, "One", 2, 3.5) 22 println(numberList3) 23 24 numberList3.remove(element: false) 25 numberList3.set(0, 1) 26 numberList3[2] = 3 27 numberList3.add(index: 3, element: 4) 28 println(numberList3) 29 }</pre>	
Output	
<pre>[One, Two, Tree] [1, 2, 3] [1, 2, 5] [false, One, 2, 3.5] [1, 2, 3, 4] Process finished with exit code 0</pre>	

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2.	Set
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 04/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 // setOf(), Check value exist in set 9 val setA = setOf<Int>(1, 2, 4, 2, 1, 5) 10 val setB = setOf<Int>(1, 2, 4, 5) 11 val setC = setOf<Int>(1, 3, 2, 4) 12 val setD = setOf<Int>(1, 3, 2, 4, 4, 1, 2) 13 println(setA == setB) // true 14 15 val hasil = setA == setB 16 println(hasil) 17 18 val hasil2 = setC == setB 19 println(hasil2) 20 21 // angka 4, 1, 2 di tiga terakhir tidak muncul karena bersifat tidak mencetak data duplikat (redundansi data) 22 println(setD) 23 24 // Union and Intersect 25 val list1 = listOf(1, 1, 2, 3, 5, 8, -1) 26 val list2 = setOf(1, 1, 2, 2, 3, 5) 27 val list3 = mutableSetOf(6, 7) 28 29 val intersect = list1 intersect list2 30 val union = list1 union list2 union list3 31 32 println(intersect) // Will display the same data println(union) 33 println(union) // Merge data and eliminate duplicates 34 }</pre>	
Output	
<pre>true true false [1, 3, 2, 4] [1, 2, 3, 5] [1, 2, 3, 5, 8, -1, 6, 7] Process finished with exit code 0</pre>	

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3. Map

Code

```
2  /*
3      Created by Rasyid Ramadhani [20104099] - 04/04/2023
4      Telkom Institute of Technology Purwokerto
5      SIB#4 Infinite Learning_Morning_Android Mobile Dev
6  */
7  fun main() {
8      // Example 1
9      val groupMap = mapOf<Int, String>(
10         1 to "Group 1",
11         2 to "Group 2",
12         3 to "Group 3",
13         4 to "Group 4",
14         5 to "Group 5",
15         6 to "Group 6",
16         7 to "Group 3",
17     )
18     println(groupMap)
19     println(groupMap[3])
20     println(groupMap.getValue(key=3))
21     println(groupMap.values)
22     println(groupMap.keys)
23
24     // Example 2
25     val numberList = listOf(1, 2, 3, 4, 5)
26     val multipliedBy5 = numberList.map { it * 5 } // [5, 10, 15, 20, 25] print(multipliedBy5)
27 }
```

Output

```
{1=Group 1, 2=Group 2, 3=Group 3, 4=Group 4, 5=Group 5, 6=Group 6, 7=Group 3}
Group 3
Group 3
[Group 1, Group 2, Group 3, Group 4, Group 5, Group 6, Group 3]
[1, 2, 3, 4, 5, 6, 7]

Process finished with exit code 0
```

4. Filter()

Code

```
1  package com.Rasyid.kotlinInfinite.week1.collection
2  /*
3      Created by Rasyid Ramadhani [20104099] - 04/04/2023
4      Telkom Institute of Technology Purwokerto
5      SIB#4 Infinite Learning_Morning_Android Mobile Dev
6  */
7  fun main() {
8      val numberList = listOf(11, 12, 13, 14, 15, 1, 2, 3, 4, 5, 6, 2, 4, 8)
9      val eventList = numberList.filter { it % 2 == 0 } // [12, 14, 2, 4, 6, 2, 4, 8]
10     val notEventList = numberList.filterNot { it % 2 == 0 } // [11, 13, 15, 1, 3, 5]
11
12     println(numberList)
13     println(eventList)
14     println(notEventList)
15 }
```

Output

```
[11, 12, 13, 14, 15, 1, 2, 3, 4, 5, 6, 2, 4, 8]
[12, 14, 2, 4, 6, 2, 4, 8]
[11, 13, 15, 1, 3, 5]

Process finished with exit code 0
```

Nama : Rasyid Ramadhani

Sesi Kelas : Morning

Program : Android Mobile Dev

Source code : [oXeedz/LearnKotlin_SIB_InfiniteLearning: Belajar Kotlin di Infinite Learning \(github.com\)](#)

Nama : Rasyid Ramadhani

Sesi Kelas : Morning

Program : Android Mobile Dev

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5.	Find(), firstOrNull(), dan lastOrNull()
Code	
<pre>1 package com.Rasyid.kotlinInfinite.week1.collection 2 3 /* 4 Created by Rasyid Ramadhani [20104099] - 04/04/2023 5 Telkom Institute of Technology Purwokerto 6 SIB#4 Infinite Learning_Morning_Android Mobile Dev 7 */ 8 9 fun main() { 10 // Example 2 11 val numberList2 = listOf(11, 12, 13, 14, 15, 1, 2, 3, 4, 5, 6, 2, 4, 8) 12 val oddNumber = numberList2.find { it % 2 == 1 } // 11 13 val firstOrNullNumber = numberList2.firstOrNull { it % 2 == 3 } // null 14 val lastOrNullNumber = numberList2.lastOrNull { it % 2 == 3 } // null 15 16 println(oddNumber) 17 println(firstOrNullNumber) 18 println(lastOrNullNumber) 19 }</pre>	
Output	
<pre>11 null null Process finished with exit code 0</pre>	

6.	First() & Last()
Code	
<pre>1 package com.Rasyid.kotlinInfinite.week1.collection 2 3 /* 4 Created by Rasyid Ramadhani [20104099] - 04/04/2023 5 Telkom Institute of Technology Purwokerto 6 SIB#4 Infinite Learning_Morning_Android Mobile Dev 7 */ 8 9 fun main() { 10 val fruit = arrayOf(12, "Apple", "Orange", "Mango", "Melon", 11, "Juminten") 11 val firstData = fruit.first() 12 val latestData = fruit.last() 13 14 println(firstData) // Monday 15 println(latestData) // Sunday 16 }</pre>	
Output	
<pre>12 Juminten Process finished with exit code 0</pre>	

Nama : Rasyid Ramadhani

Sesi Kelas : Morning

Program : Android Mobile Dev

Source code : [oXceeds/LearnKotlin_SIB_InfiniteLearning: Belajar Kotlin di Infinite Learning \(github.com\)](https://github.com/oXceeds/LearnKotlin_SIB_InfiniteLearning)

7.	Sum()
Code	
<pre>2 /* 3 Created by Rasyid Ramadhani [20104099] - 04/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 val numberList = listOf(1, 3, 2, 6, 5, 4) 9 10 val total = numberList.sum() 11 print(total) // 21 12 }</pre>	
Output	
<pre>21 Process finished with exit code 0</pre>	

8.	Sorted()
Code	
<pre>1 package com.Rasyid.kotlinInfinite.week1.collection 2 /* 3 Created by Rasyid Ramadhani [20104099] - 04/04/2023 4 Telkom Institute of Technology Purwokerto 5 SIB#4 Infinite Learning_Morning_Android Mobile Dev 6 */ 7 fun main() { 8 val numberList = listOf(1, 3, 2, 6, 5, 4) 9 val hackerChar = listOf('h', 'a', 'c', 'k', 'e', 'r') 10 11 // Ascending Sorted 12 val ascendingSort1 = numberList.sorted() 13 val ascendingSort2 = hackerChar.sorted() 14 15 println(ascendingSort1) // [1, 2, 3, 4, 5, 6] 16 println(ascendingSort2) // [a, c, e, h, k, r] 17 18 // Descending Sorted 19 val descendingSort1 = numberList.sortedDescending() 20 val descendingSort2 = hackerChar.sortedDescending() 21 22 println(descendingSort1) // [6, 5, 4, 3, 2, 1] 23 println(descendingSort2) // [r, k, h, e, c, a] 24 }</pre>	
Output	
<pre>[1, 2, 3, 4, 5, 6] [a, c, e, h, k, r] [6, 5, 4, 3, 2, 1] [r, k, h, e, c, a] Process finished with exit code 0</pre>	