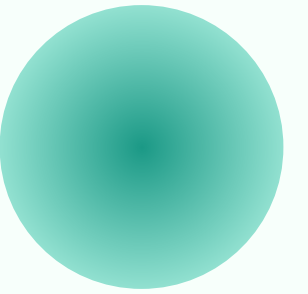




MOBILE PROGRAMMING

KOTLIN PROGRAMMING

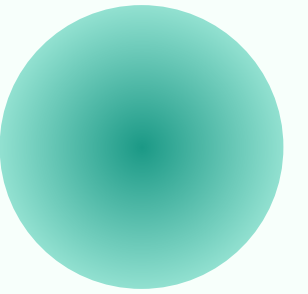
ROBBY TAN



Conditional: if, if-else, if-else if-else

```
1. fun main() {  
2.     val nilaiSiswa = 60  
3.  
4.     if (nilaiSiswa >= 60) {  
5.         println("Lulus")  
6.     } else {  
7.         println("Gagal")  
8.     }  
9. }
```

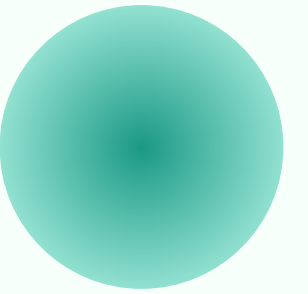
```
1. fun main() {  
2.     val nilaiSiswa = 60  
3.  
4.     if (nilaiSiswa >= 80) {  
5.         println("Lulus dengan nilai A")  
6.     } else if (nilaiSiswa >= 70) {  
7.         println("Lulus dengan nilai B")  
8.     } else if (nilaiSiswa >= 60) {  
9.         println("Lulus dengan nilai C")  
10.    } else {  
11.        println("Gagal")  
12.    }  
13. }
```



Conditional: when (1/2)

```
1. fun main() {  
2.     val nilaiSiswa = 60  
3.  
4.     when {  
5.         nilaiSiswa >= 80 -> println("Lulus dengan nilai A")  
6.         nilaiSiswa >= 70 -> println("Lulus dengan nilai B")  
7.         nilaiSiswa >= 60 -> println("Lulus dengan nilai C")  
8.         else -> println("Gagal")  
9.     }  
10. }
```

```
1. fun main() {  
2.     val hari = 3  
3.  
4.     when (hari) {  
5.         1 -> println("Senin")  
6.         2 -> println("Selasa")  
7.         3 -> println("Rabu")  
8.         4 -> println("Kamis")  
9.         5 -> println("Jumat")  
10.        6 -> println("Sabtu")  
11.        7 -> println("Minggu")  
12.        else -> println("Nomor hari tidak valid")  
13.    }  
14. }
```

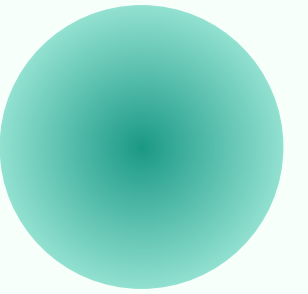


Conditional: when (2/2)

```
1. fun main() {  
2.     val angka = 5  
3.  
4.     when (angka) {  
5.         2, 3, 5, 7 -> println("$angka adalah bilangan prima")  
6.         in 1..10 -> println("$angka bukan bilangan prima")  
7.         else -> println("$angka tidak dalam rentang 1 hingga 10")  
8.     }  
9. }
```



Loop: for

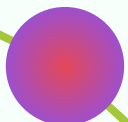


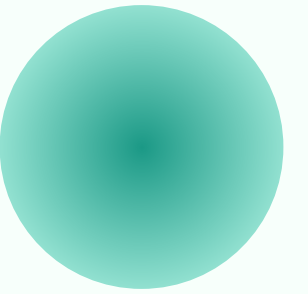
```
1. fun main() {  
2.     for (i in 0..10 step 2) {  
3.         println(i)  
4.     }  
5. }
```

Note: *step n pada for pertama bersifat opsional*

```
1. fun main() {  
2.     val fruits = listOf("Apple", "Banana", "Mango", "Grape")  
3.  
4.     for (fruit in fruits) {  
5.         println(fruit)  
6.     }  
7. }
```

```
1. fun main() {  
2.     val fruits = listOf("Apple", "Banana", "Mango", "Grape")  
3.  
4.     fruits.forEach { fruit ->  
5.         println(fruit)  
6.     }  
7. }
```



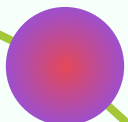


Loop: while, do-while, repeat

```
1. fun main() {  
2.     var i = 1  
3.     while (i <= 5) {  
4.         println(i)  
5.         i++  
6.     }  
7. }
```

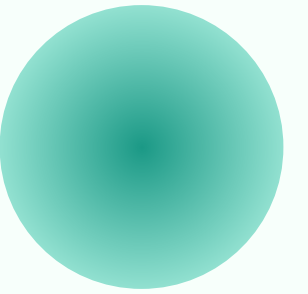
```
1. fun main() {  
2.     var i = 1  
3.     do {  
4.         println(i)  
5.         i++  
6.     } while (i <= 5)  
7. }
```

```
1. fun main() {  
2.     repeat(5) {  
3.         println("Hello, Kotlin!")  
4.     }  
5. }
```





Null in Kotlin

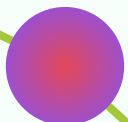


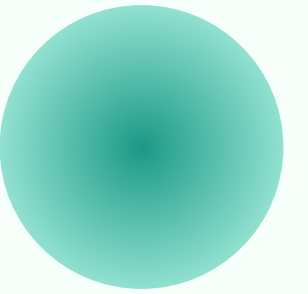
- Secara default, sebuah variabel pada Kotlin tidak dapat berisi null.
- Kode program di bawah akan memunculkan **error** jika dijalankan.
 - **Null cannot be a value of a non-null type 'String'.**

```
1. fun main() {  
2.     var name: String = "John Doe"  
3.     print(name)  
4.     name = null  
5. }
```

- Solution

```
1. fun main() {  
2.     var name: String? = "John Doe"  
3.     println(name)  
4.     name = null  
5.     println(name)  
6. }
```





Handling null in Kotlin

- Kotlin null safety >> ?
- Diletakkan sebelum kita memanggil method yang berkenaan dengan objek tersebut.
- Solusi lain adalah menggunakan **if (variable != null)**

```
1. fun main() {  
2.     var number: Int? = 10_000  
3.     println(number)  
4.     println(number?.plus(20))  
5.     number = null  
6.     println(number)  
7.     println(number?.plus(20))  
8. }
```




Thank You

ROBBY.TAN@IT.MARANATHA.EDU