1. Thông báo qua thiết bị di động

```
fun main() {
    val morningNotification = 51
    val eveningNotification = 135

    printNotificationSummary(morningNotification)
    printNotificationSummary(eveningNotification)
}

fun printNotificationSummary(numberOfMessages: Int) {
    if (numberOfMessages < 100) {
        println("You have ${numberOfMessages} notifications.")
    } else {
        println("Your phone is blowing up! You have 99+ notifications.")
    }
}
```

2. Giá vé xem phim

```
fun main() {
    val child = 5
    val adult = 28
    val senior = 87

    val isMonday = true

    println("The movie ticket price for a person aged $child is \$${ticketPrice(child,
isMonday)}.")
    println("The movie ticket price for a person aged $adult is \$${ticketPrice(adult,
isMonday)}.")
    println("The movie ticket price for a person aged $senior is \$${ticketPrice(senior,
isMonday)}.")
}

fun ticketPrice(age: Int, isMonday: Boolean): Int {
    return when(age) {
        in 0..12 -> 15
        in 13..60 -> if (isMonday) 25 else 30
        in 61..100 -> 20
        else -> -1
    }
}
```

3. Bộ chuyển đổi nhiệt độ

```
fun main() {
        printFinalTemperature(27.0, "Celsius", "Fahrenheit") { 9.0 / 5.0 * it + 32 }
        printFinalTemperature(350.0, "Kelvin", "Celsius") { it - 273.15 }
        printFinalTemperature(10.0, "Fahrenheit", "Kelvin") { 5.0 / 9.0 * (it - 32) + 273.15 }
}

fun printFinalTemperature(
    initialMeasurement: Double,
    initialUnit: String,
    finalUnit: String,
    conversionFormula: (Double) -> Double
) {
    val finalMeasurement = String.format("%.2f", conversionFormula(initialMeasurement)) // two decimal places
    println("$initialMeasurement degrees $initialUnit is $finalMeasurement degrees $finalUnit.")
}
```

4. Danh mục bài hát

```
fun main() {
    val brunoSong = Song("We Don't Talk About Bruno", "Encanto Cast", 2022, 1_000_000)
    brunoSong.printDescription()
    println(brunoSong.isPopular)
}

class Song(
    val title: String,
    val artist: String,
    val yearPublished: Int,
    val playCount: Int
){
    val isPopular: Boolean
        get() = playCount >= 1000

    fun printDescription() {
        println("$title, performed by $artist, was released in $yearPublished.")
    }
}
```

5. Hồ sơ trên Internet

```
fun main() {
    val amanda = Person("Amanda", 33, "play tennis", null)
    val atiqah = Person("Atiqah", 28, "climb", amanda)

    amanda.showProfile()
    atiqah.showProfile()
}

class Person(val name: String, val age: Int, val hobby: String?, val referrer: Person?) {
    fun showProfile() {
        println("Name: $name")
        println("Age: $age")
        if(hobby != null) {
            print("Likes to $hobby. ")
        }
        if(referrer != null) {
            print("Has a referrer named ${referrer.name}")
            if(referrer.hobby != null) {
                print(", who likes to ${referrer.hobby}.")
            } else {
                print(".")
            }
        } else {
            print("Doesn't have a referrer.")
        }
        print("\n\n")
    }
}
```

6. Điện thoại có thể gập lại

```
open class Phone(var isScreenLightOn: Boolean = false){
    open fun switchOn() {
        isScreenLightOn = true
    }

    fun switchOff() {
        isScreenLightOn = false
    }

    fun checkPhoneScreenLight() {
        val phoneScreenLight = if (isScreenLightOn) "on" else "off"
        println("The phone screen's light is $phoneScreenLight.")
    }
}

class FoldablePhone(var isFolded: Boolean = true): Phone() {
    override fun switchOn() {
        if (!isFolded) {
            isScreenLightOn = true
        }
    }
    fun fold() {
        isFolded = true
    }

    fun unfold() {
        isFolded = false
    }
}

fun main() {
    val newFoldablePhone = FoldablePhone()

    newFoldablePhone.switchOn()
    newFoldablePhone.checkPhoneScreenLight()
    newFoldablePhone.unfold()
    newFoldablePhone.switchOn()
    newFoldablePhone.checkPhoneScreenLight()
}
```

7. Phiên đấu giá đặc biệt

```
fun main() {
    val winningBid = Bid(5000, "Private Collector")

    println("Item A is sold at ${auctionPrice(winningBid, 2000)}.")
    println("Item B is sold at ${auctionPrice(null, 3000)}.")
}

class Bid(val amount: Int, val bidder: String)

fun auctionPrice(bid: Bid?, minimumPrice: Int): Int {
    return bid?.amount ?: minimumPrice
}
```