1. ***In thông báo***

```
fun main() {
    println("Use the val keyword when the value doesn't change.")
    println("Use the var keyword when the value can change.")
    println("When you define a function, you define the parameters that can be passed to it.")
    println("When you call a function, you pass arguments for the parameters.")
}
```

2. ***Sửa lỗi biên dịch***

Trước:

```
fun main() {
    println("New chat message from a friend'}
}
```

Sau:

```
fun main() {
    println("New chat message from a friend")
}
```

3. ***Mẫu chuỗi***

```
fun main() {
    var discountPercentage: Int = 0
    var offer: String = ""
    var item = "Google Chromecast"
    discountPercentage = 20
    offer = "Sale - Up to $discountPercentage% discount on $item! Hurry up!"

    println(offer)
}
```

4. ***Ghép chuỗi***

Trước:

```
fun main() {
    val numberOfAdults = "20"
    val numberOfKids = "30"
    val total = numberOfAdults + numberOfKids
    println("The total party size is: $total")
}
```

Vì kiểu biến đang ở dạng chuỗi nên dấu cộng có tác dụng ghép chuỗi. Để chuyển thành tổng ta đổi kiểu biến thành Int.

Sau:

```
fun main() {
    val numberOfAdults = 20
```

```
    val numberOfKids = 30
    val total = numberOfAdults + numberOfKids
    println("The total party size is: $total")
}
```

5. ***Định dạng thông báo***

Trước:

```
fun main() {
    val baseSalary = 5000
    val bonusAmount = 1000
    val totalSalary = "$baseSalary + $bonusAmount"
    println("Congratulations for your bonus! You will receive a total of $totalSalary (additional
bonus).")
}
```

Sau:

```
fun main() {
    val baseSalary = 5000
    val bonusAmount = 1000
    val totalSalary = $baseSalary + $bonusAmount
    println("Congratulations for your bonus! You will receive a total of $totalSalary (additional
bonus).")
}
```

6. ***Triển khai cách phép toán cơ bản***

Trước:

```
fun main() {
    val firstNumber = 10
    val secondNumber = 5

    println("$firstNumber + $secondNumber = $result")
}
```

Sau:

Cách 1:

```
fun main() {
    val firstNumber = 10
    val secondNumber = 5

    println("$firstNumber + $secondNumber = ${firstNumber + secondNumber}")
}
```

Cách 2:

```
fun main() {
    val firstNumber = 10
    val secondNumber = 5
    var result = firstNumber + secondNumber
```

```
    println("$firstNumber + $secondNumber = $result")
}
```

7. ***Tham số mặc định***

```
fun main() {
    val firstUserEmailId = "user_one@gmail.com"

    // The following line of code assumes that you named your parameter as emailId.
    // If you named it differently, feel free to update the name.
    println(displayAlertMessage("Unknown OS", firstUserEmailId))
    println()

    val secondUserOperatingSystem = "Windows"
    val secondUserEmailId = "user_two@gmail.com"

    println(displayAlertMessage(secondUserOperatingSystem, secondUserEmailId))
    println()

    val thirdUserOperatingSystem = "Mac OS"
    val thirdUserEmailId = "user_three@gmail.com"

    println(displayAlertMessage(thirdUserOperatingSystem, thirdUserEmailId))
    println()
}
// Define your displayAlertMessage() below this line.
fun displayAlertMessage(operatingSystem: String, emailId: String): String {
    return "There's a new sign-in request on $operatingSystem for your Google Account
$emailId."
}
```

8. ***Máy đếm bước***

```
fun main() {
    val steps = 4000
    val caloriesBurned = stepsToCalories(steps)
    println("Walking $steps steps burns $caloriesBurned calories")
}

fun stepsToCalories(numberOfSteps: Int): Double {
    val caloriesPerStep = 0.04
    return numberOfSteps * caloriesPerStep
}
```

9. ***So sánh 2 số***

```
fun main() {
    val timeSpentToday = 300
    val timeSpentYesterday = 250
```

```
    println(compareTime(timeSpentToday, timeSpentYesterday))
}

fun compareTime(today: Int, yesterday: Int): Boolean {
    return today > yesterday
}
```

10. Di chuyển mã trùng lặp vào 1 hàm

```
fun main() {
    printWeatherForCity("Ankara", 27, 31, 82)
    printWeatherForCity("Tokyo", 32, 36, 10)
    printWeatherForCity("Cape Town", 59, 64, 2)
    printWeatherForCity("Guatemala City", 50, 55, 7)
}

fun printWeatherForCity(cityName: String, lowTemp: Int, highTemp: Int, chanceOfRain: Int) {
    println("City: $cityName")
    println("Low temperature: $lowTemp, High temperature: $highTemp")
    println("Chance of rain: $chanceOfRain%")
    println()
}
```