

# Body Mass Index (BMI) App

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## objective

Create app to compute the BMI

Display BMI in 3 categories with different colors

Give an advice to each BMI category

Apply MVC, segue, classes, structs, optionals in app

## An Overview of the Application

This app consists of the following UI and Features:

View

Background Image

Background Color

StackView

Label

Slider

Button

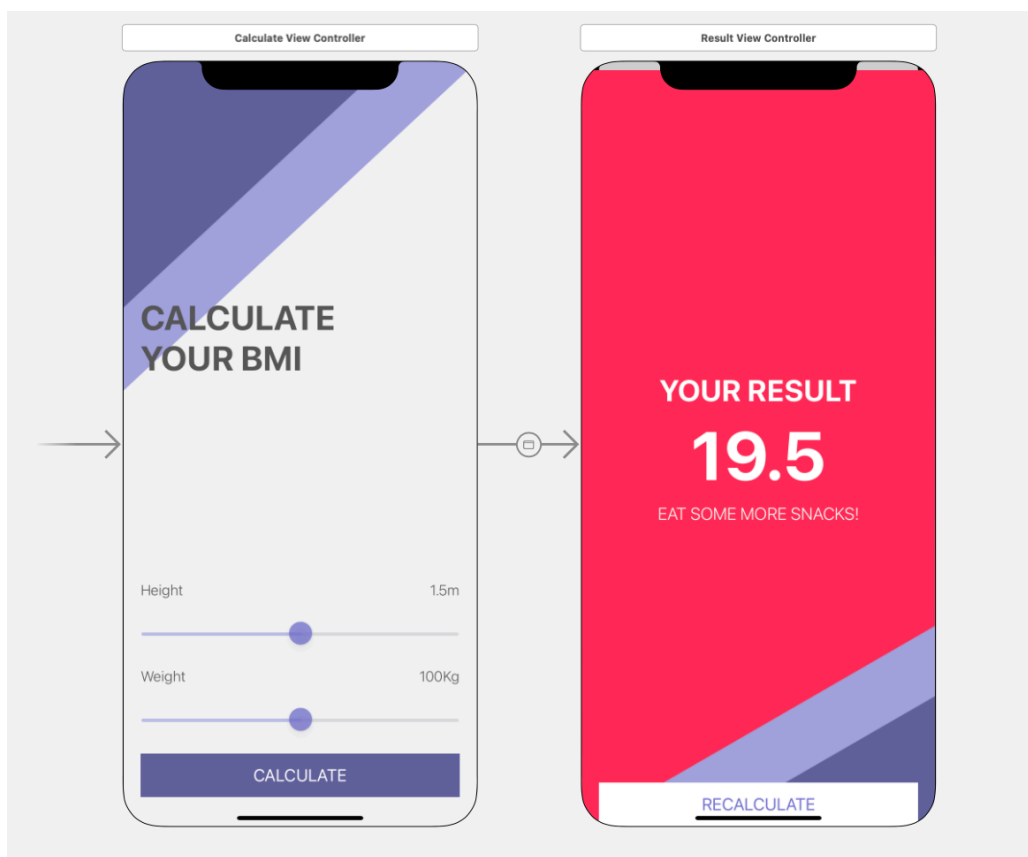
Segue

MVC

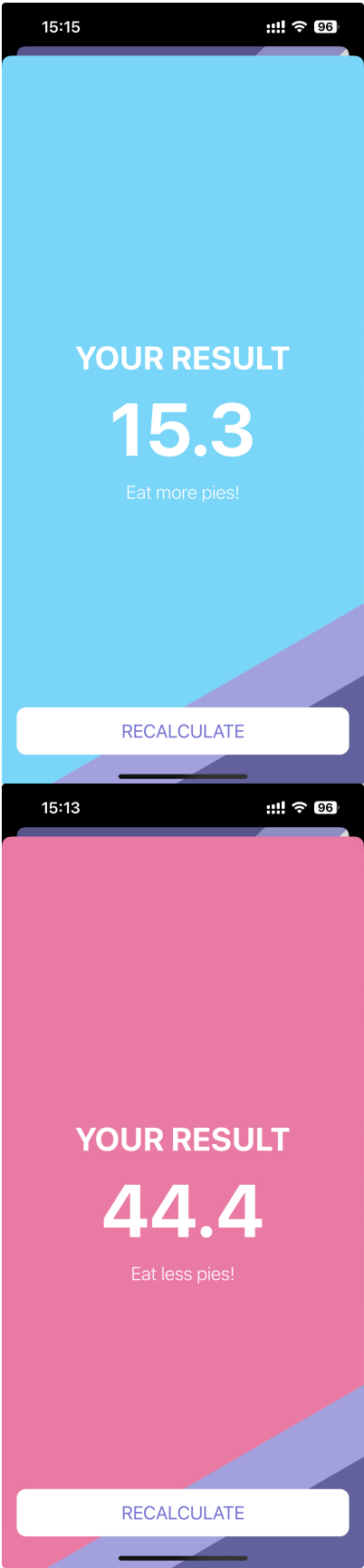
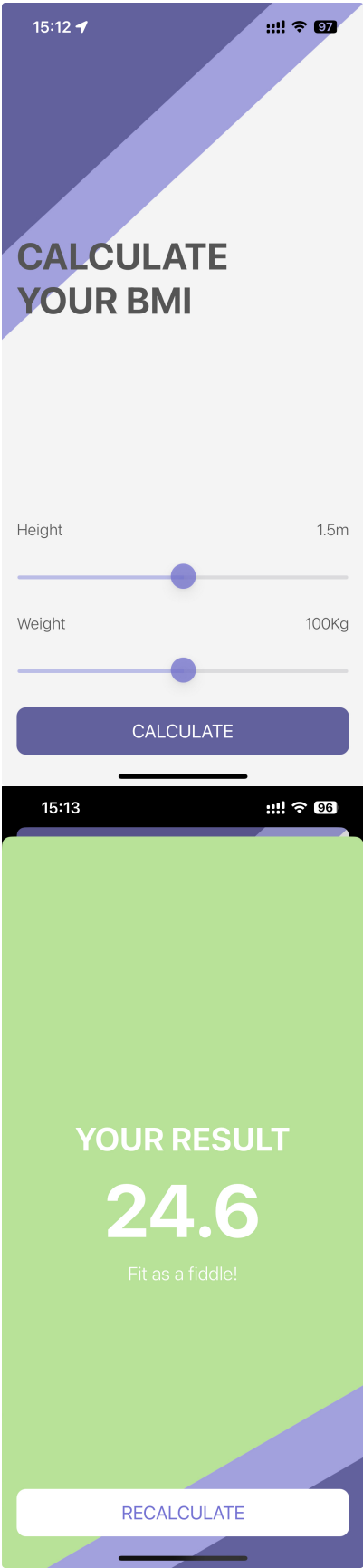
Class

Struct

Optional

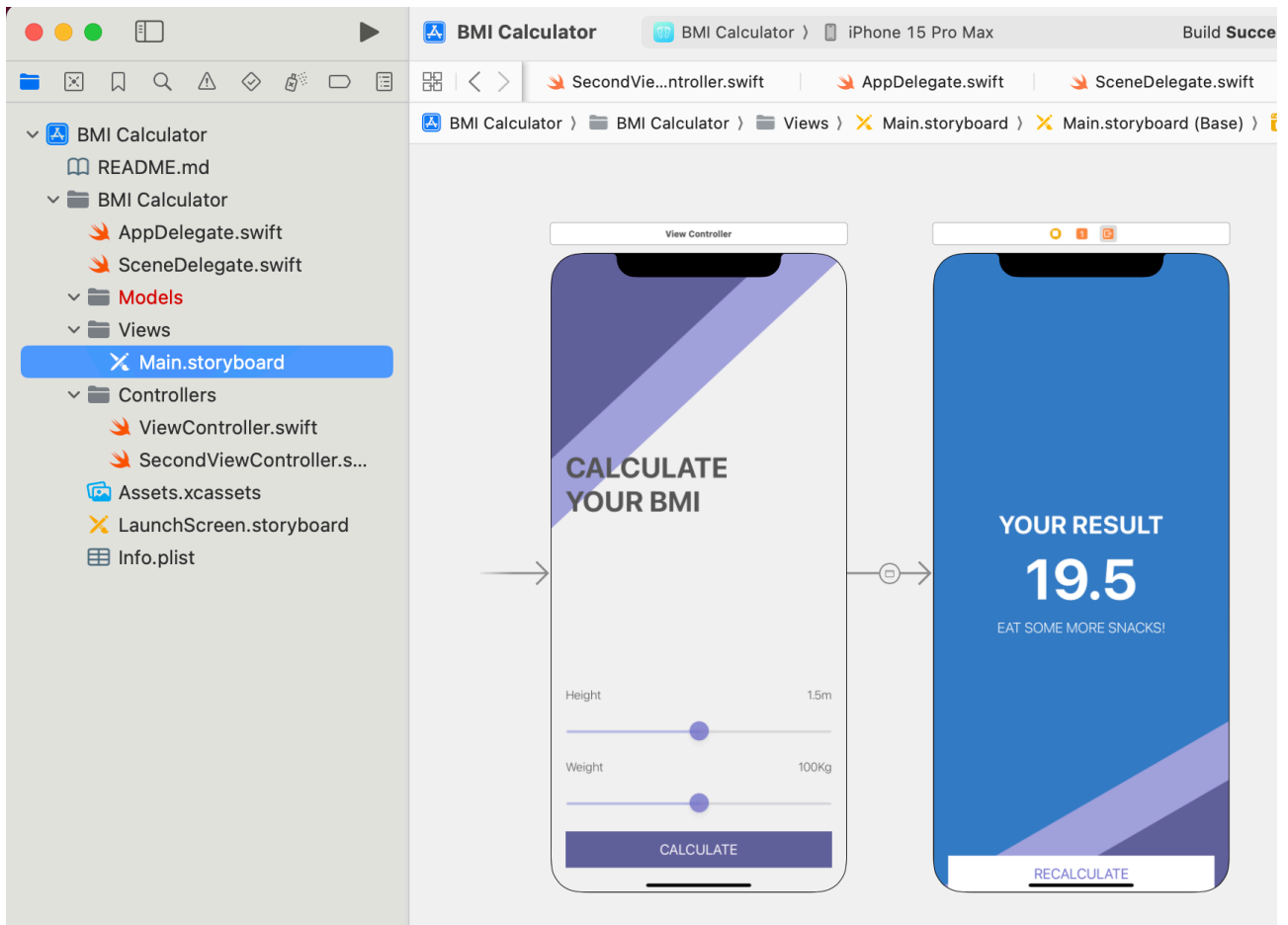


Final App

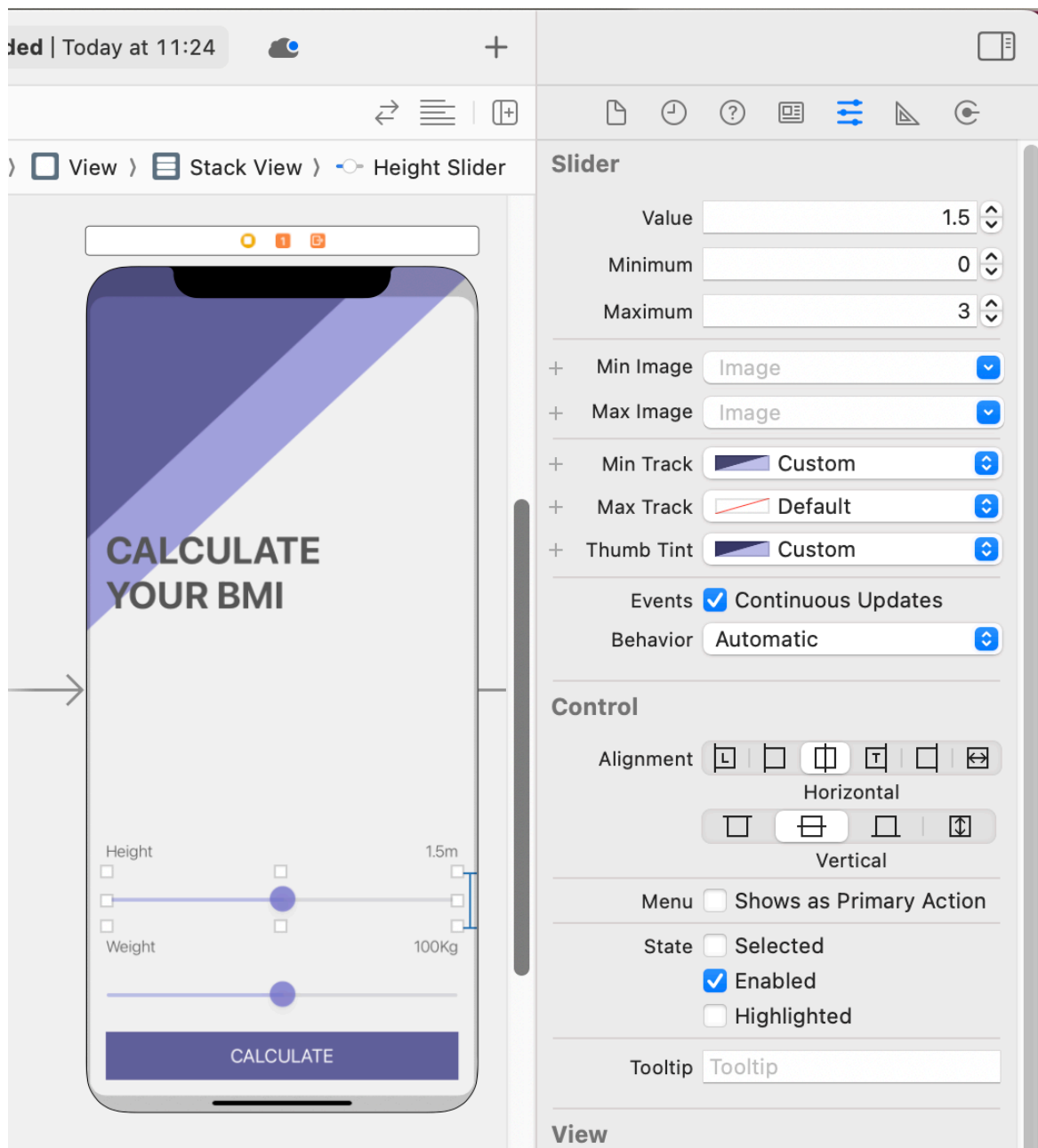


## Steps:

1. Begin with a given starting project.



## 2. Exercise with sliders.



### 3. Create outlets and actions.

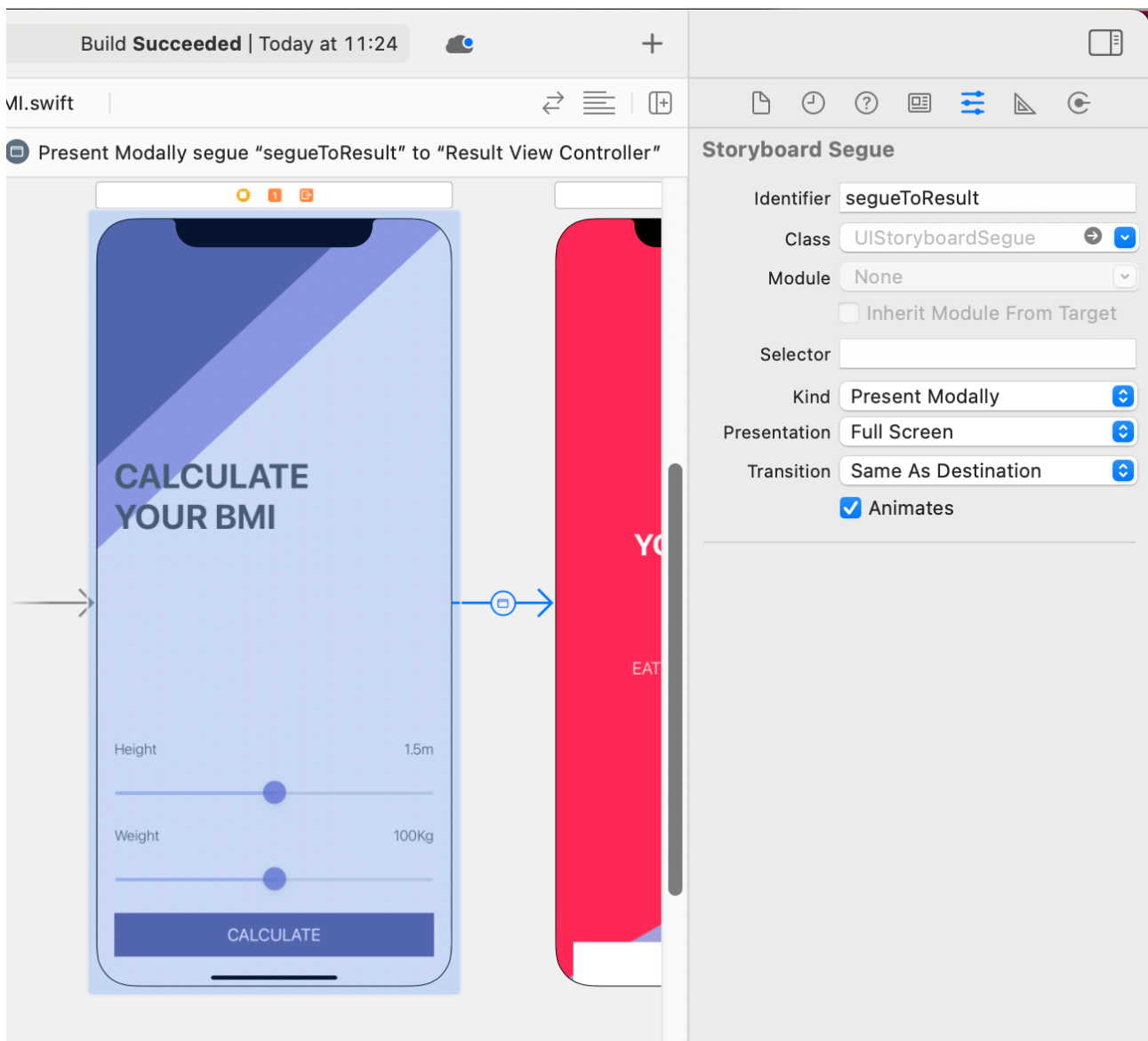
```
@IBOutlet weak var heightLabel: UILabel!  
@IBOutlet weak var weightLabel: UILabel!  
@IBOutlet weak var heightSlider: UISlider!  
@IBOutlet weak var weightSlider: UISlider!
```

```
@IBAction func heightSliderChanged(_ sender: UISlider) {  
    let height = String(format: "%.2f", sender.value)  
    heightLabel.text = "\(height)m"  
}
```

```
@IBAction func weightSliderChanged(_ sender: UISlider) {  
    let weight = String(format: "%.0f", sender.value)  
    weightLabel.text = "\(weight)Kg"  
}
```

```
@IBAction func calculatePressed(_ sender: UIButton) {  
    let height = heightSlider.value  
    let weight = weightSlider.value  
  
    calculatorBrain.calculateBMI(height: height, weight: weight)  
    performSegue(withIdentifier: "goToResult", sender: self)  
}
```

#### 4. Create a manual segue.



## 5. Create two model classes

BMI.swift

```
import UIKit
struct BMI {
    let value:Float
    let advice:String
    let color: UIColor
}
```

CalculatorBrain.swift

```
import UIKit
struct CalculatorBrain {
    var bmi: BMI?
    func getBMIValue() -> String {
        return ""
    }
    func getAdvice() -> String {
        return ""
    }
    func getColor() -> UIColor {
        return ""
    }
}
```

## 6. Compute BMI in CalculatorBrain model

```
mutating func calculateBMI(height: Float, weight: Float) {
    let bmiValue = weight / (height * height)

    if bmiValue < 18.5 {
        bmi = BMI(value: bmiValue, advice: "กินเยอะๆหน่อย", color:
#colorLiteral(red: 0.4745098054, green: 0.8392156959, blue:
0.9764705896, alpha: 1))
    } else if bmiValue < 24.9 {
        bmi = BMI(value: bmiValue, advice: "กินแบบนี้แหละ", color:
#colorLiteral(red: 0.721568644, green: 0.8862745166, blue: 0.5921568871,
alpha: 1))
    } else {
        bmi = BMI(value: bmiValue, advice: "กินน้อยๆหน่อย", color:
#colorLiteral(red: 0.9098039269, green: 0.4784313738, blue:
0.6431372762, alpha: 1))
    }
}
```

## 7. Sending the result with segue in CalculateViewController

```
override fun prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if segue.identifier == "goToResult" {
        let destinationVC = segue.destination as!
ResultViewController
        destinationVC.bmiValue = calculatorBrain.getBMIValue()
        destinationVC.advice = calculatorBrain.getAdvice()
        destinationVC.color = calculatorBrain.getColor()
    }
}
```

## 8. Display the resulting BMI in ResultViewController

```
override fun viewDidLoad() {
    super.viewDidLoad()

    bmiLabel.text = bmiValue
    adviceLabel.text = advice
    view.backgroundColor = color
}
```

