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//
// ViewController.swift
// TipCalculator
//
// Created by David Hincapie on 11/6/15.
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//

// ViewController.swift
// Implements the tip calculator's logic
import UIKit

class ViewController: UIViewController {
    // properties for programmatically interacting with GUI components
    @IBOutlet weak var billAmountLabel: UILabel!
    @IBOutlet weak var customTipPercentLabel1: UILabel!
    @IBOutlet weak var customTipPercentageSlider: UISlider!
    @IBOutlet weak var customTipPercentLabel2: UILabel!
    @IBOutlet weak var tip15Label: UILabel!
    @IBOutlet weak var total15Label: UILabel!
    @IBOutlet weak var tipCustomLabel: UILabel!
    @IBOutlet weak var totalCustomLabel: UILabel!
    @IBOutlet weak var inputTextField: UITextField!

    // NSDecimalNumber constants used in the calculateTip method
    let decimal100 = NSDecimalNumber(string: "100.0")
    let decimal15Percent = NSDecimalNumber(string: "0.15")

    // called when the view loads
    override func viewDidLoad() {
        super.viewDidLoad()

        // select inputTextField so keypad displays when the view loads
        inputTextField.becomeFirstResponder()
    }

    // called when the user edits the text in the inputTextField
    // or moves the customTipPercentageSlider's thumb
    @IBAction func calculateTip(sender: AnyObject) {
        let inputString = inputTextField.text // get user input

        // convert slider value to an NSDecimalNumber
        let sliderValue =
            NSDecimalNumber(integer: Int(customTipPercentageSlider.value))

        // divide sliderValue by decimal100 (100.0) to get tip %
        let customPercent = sliderValue / decimal100

        // did customTipPercentageSlider generate the event?
        if sender is UISlider {
            // thumb moved so update the Labels with new custom percent
            customTipPercentLabel1.text =
                NSNumberFormatter.localizedStringFromNumber(customPercent,
                    numberStyle: NSNumberFormatterStyle.PercentStyle)
            customTipPercentLabel2.text = customTipPercentLabel1.text
        }

        // if there is a bill amount, calculate tips and totals
        if !inputString!.isEmpty {
            // convert to NSDecimalNumber and insert decimal point

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    let billAmount =
        NSDecimalNumber(string: inputString) / decimal100

    // did inputTextField generate the event?
    if sender is UITextField {
        // update billAmountLabel with currency formatted total
        billAmountLabel.text = " " + formatAsCurrency(billAmount)

        // calculate and display the 15% tip and total
        let fifteenTip = billAmount * decimal15Percent
        tip15Label.text = formatAsCurrency(fifteenTip)
        total15Label.text =
            formatAsCurrency(billAmount + fifteenTip)
    }

    // calculate custom tip and display custom tip and total
    let customTip = billAmount * customPercent
    tipCustomLabel.text = formatAsCurrency(customTip)
    totalCustomLabel.text =
        formatAsCurrency(billAmount + customTip)
}
else { // clear all Labels
    billAmountLabel.text = ""
    tip15Label.text = ""
    total15Label.text = ""
    tipCustomLabel.text = ""
    totalCustomLabel.text = ""
}
}

// convert a numeric value to localized currency string
func formatAsCurrency(number: NSNumber) -> String {
    return NSNumberFormatter.localizedStringFromNumber(
        number, numberStyle: NSNumberFormatterStyle.CurrencyStyle)
}

// overloaded + operator to add NSDecimalNumbers
func +(left: NSDecimalNumber, right: NSDecimalNumber) -> NSDecimalNumber {
    return left.decimalNumberByAdding(right)
}

// overloaded * operator to multiply NSDecimalNumbers
func *(left: NSDecimalNumber, right: NSDecimalNumber) -> NSDecimalNumber {
    return left.decimalNumberByMultiplyingBy(right)
}

// overloaded / operator to divide NSDecimalNumbers
func /(left: NSDecimalNumber, right: NSDecimalNumber) -> NSDecimalNumber {
    return left.decimalNumberByDividingBy(right)
}

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iPhone 6 - iPhone 6 / iOS 9.1 (13B137)

Carrier 5:45 PM

Bill Amount

Custom Tip Percentage: 18%

15%18%

Tip

Total

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
	0	

iPhone 6 - iPhone 6 / iOS 9.1 (13B137)

Carrier 5:46 PM

Bill Amount

\$100.00

Custom Tip Percentage: 18%

15% 18%

Tip	\$15.00	\$18.00
Total	\$115.00	\$118.00

iPhone 6 - iPhone 6 / iOS 9.1 (13B137)

Carrier 5:46 PM

Bill Amount

\$100.00

Custom Tip Percentage: 23%

15% 23%

Tip	\$15.00	\$23.00
Total	\$115.00	\$123.00

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
	0	< x

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
	0	< x