N01390445

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ViewController class

```
//
//  ViewController.swift
//  Calculator
//
//  Created by user202327 on 9/24/21.
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//

import UIKit

class ViewController: UIViewController {

      @IBOutlet weak var calculatorResults: UILabel!
     var flag=false

   @IBOutlet weak var History: UITextView!
   override func viewDidLoad() {
       super.viewDidLoad()

   }

var calObject = Calculator.init()

   @IBAction func btn1(_ sender: UIButton){
       if( sender.tag == 0){

       calculatorResults.text! += "0"
```

```
    calObject.push(s: "0")}
 else  if( sender.tag == 1){
 calculatorResults.text! += "1"
    calObject.push(s: "1")}
 else if ( sender.tag == 2){

 calculatorResults.text! += "2"
    calObject.push(s: "2")}
else if( sender.tag == 3){
 calculatorResults.text! += "3"
    calObject.push(s: "3")}
  else if( sender.tag == 4){
 calculatorResults.text! += "4"
    calObject.push(s: "4")}
 else if( sender.tag == 5){

 calculatorResults.text! += "5"
    calObject.push(s: "5")}
 else if( sender.tag == 6){
 calculatorResults.text! += "6"
    calObject.push(s: "6")}

 else if( sender.tag == 7){
 calculatorResults.text! += "7"
    calObject.push(s: "7")}
 else if( sender.tag == 8){

 calculatorResults.text! += "8"
    calObject.push(s: "8")

 }
```

```
  else if( sender.tag == 9){
 calculatorResults.text! += "9"
   calObject.push(s: "9")}
else if( sender.tag == 10){
 calculatorResults.text! += "+"
   calObject.push(s: "+")}
 else if( sender.tag == 11){
 calculatorResults.text! += "-"
   calObject.push(s: "-")}
 else if( sender.tag == 12){
 calculatorResults.text! += "*"
   calObject.push(s: "*")}
 else if( sender.tag == 13){
 calculatorResults.text! += "/"
   calObject.push(s: "/")}
 else if( sender.tag == 14){
   if calObject.checkValues() {
      var result = calObject.calc()
   calculatorResults.text! += "= \(result)"
   if flag
{
History.text += calculatorResults.text! + "\n"

   }
}
else
{
let alert = UIAlertController(title: "Input Alert", message: "Please Enter Valid Input.",
preferredStyle: UIAlertController.Style.alert) // add an action (button)
alert.addAction(UIAlertAction(title: "OK", style: UIAlertAction.Style.default, handler:nil))
// show the alert
```

```
        self.present(alert, animated: true, completion: nil)
          }
        }
        else if( sender.tag == 15){
          calObject.clean()
          calculatorResults.text! = ""}
        else if( sender.tag == 16){
        if sender.currentTitle == "Advance - With History" {
          sender.setTitle("Standard - No History", for: .normal); History.isHidden = false
        flag = true
        } else{
          sender.setTitle("Advance - With History", for: .normal); History.isHidden = true
        History.text = ""
        flag = false
        }
       }
    }
    }
```

Calculator class

```
//
//  Calculator.swift
//  Calculator
//
//  Created by user202327 on 9/30/21.
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//

import Foundation
class Calculator{
```

```
var values = [String]()
func  push(s: String){
   values.append(s)
   print(values)
}

func calc() -> Int {
   var num1 = 0
   var num2 = 0
   var calResult = 0
   for stringIndex in 0...(values.count-1)
   {

      if( values[stringIndex] == "+" ){

         if num1 == 0 && num2 == 0{
         num1 = Int(values[stringIndex-1])!
         num2 = Int(values[stringIndex+1])!
         calResult = num1 + num2
         num1 = calResult
         }
         else
         {
         num2 = Int(values[stringIndex+1])!
         calResult = num1 + num2
         num1 = calResult
         }
      }

      if( values[stringIndex] == "-" ){
         if num1 == 0 && num2 == 0{
```

```
    num1 = Int(values[stringIndex-1])!
    num2 = Int(values[stringIndex+1])!
    calResult = num1 - num2
    num1 = calResult
    }
    else
    {
       num2 = Int(values[stringIndex+1])!
       calResult = num1 - num2
       num1 = calResult
    }
}
if( values[stringIndex] == "*" ){
    if num1 == 0 && num2 == 0{
    num1 = Int(values[stringIndex-1])!
    num2 = Int(values[stringIndex+1])!
    calResult = num1 * num2
    num1 = calResult
    }
    else
    {
  num2 = Int(values[stringIndex+1])!
    calResult = num1 * num2
    num1 = calResult
    }
}

if( values[stringIndex] == "/" ){
    if num1 == 0 && num2 == 0{
      num1 = Int(values[stringIndex-1])!
      num2 = Int(values[stringIndex+1])!
```

```
            calResult = num1 / num2
            num1 = calResult
            }
            else
            {
           num2 = Int(values[stringIndex+1])!
            calResult = num1 / num2
            num1 = calResult
            }
       }
  }

   values.removeAll()
   return calResult
}
func checkValues() -> Bool {
var operatorIndex = 1
   var numIndex = 0
if values[0] == "+" && values[0] == "-" && values[0] == "*" && values[0] == "/"
{
values.removeAll()
   return false
}
for index in 1...(values.count-1){
if( values[index] == "+" ){
if operatorIndex == index-1 || operatorIndex == index+1 {
values.removeAll()
return false
}
else
{
```

```
operatorIndex = index
   continue
   }}
 if( values[index] == "-" ){
if operatorIndex == index-1 || operatorIndex == index+1 {
values.removeAll()

return false
}
else
{
operatorIndex = index
   continue
}
   }
if( values[index] == "*" ){
if operatorIndex == index-1 || operatorIndex == index+1 {
values.removeAll()
return false
}
else
{
operatorIndex = index
   continue
}
   }
 if( values[index] == "/" ){
if operatorIndex == index-1 || operatorIndex == index+1 {
values.removeAll()
return false
}
```

```
    else
    {
    operatorIndex = index
       continue
       }


       }
    if( values[index] == "=" ){
    return false
       }
    else{
    if numIndex == index-1 ||    numIndex == index+1 {
    values.removeAll()
    return false
    }


       else
    {
    numIndex = index
       continue
    }
       }


       }
       return true
    }
    func clean() {
    values.removeAll() }
}
```