Setup XCode project:

- Open Xcode → "Create a new Xcode project".
- Under the **"iOS"** Tab, click on **"App"**, then click "Next".
- Interface: "Storyboard"; Organizational Identifier: "memo.com" → "Next"
- Choose a location to save the project (preferably *Desktop)*

Storyboard Layout:

- Click `Main.Storyboard` (left column), click [+] (top right button), drag and drop necessary labels, text fields, control bars, etc.
- "Attributes Inspector": Specify the name of the "label"/"text fields"/... by typing onto the "Text" on the right column.

Connect Storyboard elements to ViewController:

- Click "Add Editor" button (top right) → click the yellow folder → click "`ViewController.swift`" ⇒ A new window with codes appears
- Click "Adjust Editor" (next to "Add Editor") → click "Assistant" from the drop-down menu
- To connect UI elements (from step 2) to the ViewController by press + hold "control" key on the keyboard, choose an element, drag it to the position under **class** ViewController: UIViewController {. and right before **override func** viewDidLoad() {. An arrow appears to connect between storyboard layout and swift code. There is a set-up tab popped up ⇒ Change the field name here.
  - Example:

```
class ViewController: UIViewController {
        @IBOutlet weak var billAmountTextField: UITextField!
        @IBOutlet weak var tipAmountLabel: UILabel!
        @IBOutlet weak var tipControl: UISegmentedControl!
        @IBOutlet weak var totalLabel: UILabel!

    override func viewDidLoad() {
```

- If something is an action ⇒ press and hold "control", then drag it to the place under "**override func** viewDidLoad() {",
  - Example:

```
override func viewDidLoad() {
```

```swift
        super.viewDidLoad()
        // Do any additional setup after loading the view.
    }

    @IBAction func calculateTip(_ sender: Any) {
    }
```

Add Logics to Apps:

- Add logic (codes) to the "action" part
  - Example:

```swift
@IBAction func calculateTip(_ sender: Any) {
    // Get bill amount from text field input
    let bill = Double(billAmountTextField.text) ?? 0

    // Get Total tip by multiplying tip * tipPercentage
    let tipPercentages = [0.15, 0.18, 0.2]
    let tip = bill * tipPercentages[tipControl.selectedSegmentIndex]
    let total = bill + tip

    // Update Tip Amount Label
    tipAmountLabel.text = String(format: "$%.2f", tip)
    // Update Total Amount
    totalLabel.text = String(format: "$%.2f", total)

}
```

Run a simulator of your project:

- Choose what type of products you want to run your project on (ex: pick Iphone 11, click run button (arrow-to-the-right)

Create a GIF of your simulator:

- https://hackmd.io/@codepath-tfs/record-gifs-quicktime
  - Command + Shift + 5 ⇒ This helps open a video recorder
  - Select "Record Selected Portion"
  - Click "Stop" or "Command + Shift + 5" to stop recording
  - Convert .mov file into .gif by using https://ezgif.com/video-to-gif
  - Include your work in README.md