### **Lab Exercise: Complete Registration in iOS Swift**

**Objective:**

To print the registration form data, we need to handle the user inputs and display the collected information when the user taps the "Register" button. This involves capturing the values from each form field and then outputting these values in a readable format.

* Below is an extended version of the code that prints the collected data from the registration form:

import UIKit

class ViewController: UIViewController, UIPickerViewDelegate, UIPickerViewDataSource {

// UI Elements

let nameTextField = UITextField()

let emailTextField = UITextField()

let passwordTextField = UITextField()

let datePicker = UIDatePicker()

let toggleSwitch = UISwitch()

let genderPickerView = UIPickerView()

let dropdownButton = UIButton(type: .system)

let registerButton = UIButton(type: .system)

let genderOptions = ["Male", "Female", "Non-binary", "Other"]

var selectedGender: String?

let dropdownOptions = ["Option 1", "Option 2", "Option 3"]

var selectedOption: String?

override func viewDidLoad() {

super.viewDidLoad()

view.backgroundColor = .white

setupUI()

}

func setupUI() {

// Configure Name TextField

nameTextField.placeholder = "Name"

nameTextField.borderStyle = .roundedRect

nameTextField.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(nameTextField)

// Configure Email TextField

emailTextField.placeholder = "Email"

emailTextField.keyboardType = .emailAddress

emailTextField.borderStyle = .roundedRect

emailTextField.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(emailTextField)

// Configure Password TextField

passwordTextField.placeholder = "Password"

passwordTextField.isSecureTextEntry = true

passwordTextField.borderStyle = .roundedRect

passwordTextField.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(passwordTextField)

// Configure DatePicker

datePicker.datePickerMode = .date

datePicker.preferredDatePickerStyle = .compact

datePicker.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(datePicker)

// Configure Toggle Switch

toggleSwitch.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(toggleSwitch)

// Configure Gender PickerView

genderPickerView.delegate = self

genderPickerView.dataSource = self

genderPickerView.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(genderPickerView)

// Configure Dropdown Button

dropdownButton.setTitle("Select Option", for: .normal)

dropdownButton.addTarget(self, action: #selector(dropdownButtonTapped), for: .touchUpInside)

dropdownButton.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(dropdownButton)

// Configure Register Button

registerButton.setTitle("Register", for: .normal)

registerButton.addTarget(self, action: #selector(registerButtonTapped), for: .touchUpInside)

registerButton.translatesAutoresizingMaskIntoConstraints = false

view.addSubview(registerButton)

// Set up constraints

NSLayoutConstraint.activate([

// Name TextField Constraints

nameTextField.centerXAnchor.constraint(equalTo: view.centerXAnchor),

nameTextField.topAnchor.constraint(equalTo: view.safeAreaLayoutGuide.topAnchor, constant: 20),

nameTextField.widthAnchor.constraint(equalToConstant: 300),

nameTextField.heightAnchor.constraint(equalToConstant: 40),

// Email TextField Constraints

emailTextField.centerXAnchor.constraint(equalTo: view.centerXAnchor),

emailTextField.topAnchor.constraint(equalTo: nameTextField.bottomAnchor, constant: 20),

emailTextField.widthAnchor.constraint(equalToConstant: 300),

emailTextField.heightAnchor.constraint(equalToConstant: 40),

// Password TextField Constraints

passwordTextField.centerXAnchor.constraint(equalTo: view.centerXAnchor),

passwordTextField.topAnchor.constraint(equalTo: emailTextField.bottomAnchor, constant: 20),

passwordTextField.widthAnchor.constraint(equalToConstant: 300),

passwordTextField.heightAnchor.constraint(equalToConstant: 40),

// DatePicker Constraints

datePicker.centerXAnchor.constraint(equalTo: view.centerXAnchor),

datePicker.topAnchor.constraint(equalTo: passwordTextField.bottomAnchor, constant: 20),

// Toggle Switch Constraints

toggleSwitch.centerXAnchor.constraint(equalTo: view.centerXAnchor),

toggleSwitch.topAnchor.constraint(equalTo: datePicker.bottomAnchor, constant: 20),

// Gender PickerView Constraints

genderPickerView.centerXAnchor.constraint(equalTo: view.centerXAnchor),

genderPickerView.topAnchor.constraint(equalTo: toggleSwitch.bottomAnchor, constant: 20),

genderPickerView.widthAnchor.constraint(equalToConstant: 300),

genderPickerView.heightAnchor.constraint(equalToConstant: 100),

// Dropdown Button Constraints

dropdownButton.centerXAnchor.constraint(equalTo: view.centerXAnchor),

dropdownButton.topAnchor.constraint(equalTo: genderPickerView.bottomAnchor, constant: 20),

dropdownButton.widthAnchor.constraint(equalToConstant: 200),

dropdownButton.heightAnchor.constraint(equalToConstant: 40),

// Register Button Constraints

registerButton.centerXAnchor.constraint(equalTo: view.centerXAnchor),

registerButton.topAnchor.constraint(equalTo: dropdownButton.bottomAnchor, constant: 30),

registerButton.widthAnchor.constraint(equalToConstant: 100),

registerButton.heightAnchor.constraint(equalToConstant: 40)

])

}

@objc func registerButtonTapped() {

// Handle registration logic here

guard let name = nameTextField.text, !name.isEmpty else {

showAlert(message: "Please enter your name.")

return

}

guard let email = emailTextField.text, !email.isEmpty, isValidEmail(email) else {

showAlert(message: "Please enter a valid email address.")

return

}

guard let password = passwordTextField.text, !password.isEmpty, password.count >= 6 else {

showAlert(message: "Password must be at least 6 characters long.")

return

}

let birthDate = datePicker.date

let isSubscribed = toggleSwitch.isOn

let selectedGender = genderOptions[genderPickerView.selectedRow(inComponent: 0)]

let selectedOption = self.selectedOption ?? "None"

print("Name: \(name)")

print("Email: \(email)")

print("Password: \(password)")

print("Birthdate: \(birthDate)")

print("Subscribed: \(isSubscribed ? "Yes" : "No")")

print("Gender: \(selectedGender)")

print("Option: \(selectedOption)")

showAlert(message: "Registration Successful\n\n" +

"Name: \(name)\n" +

"Email: \(email)\n" +

"Password: \(password)\n" +

"Birthdate: \(formattedDate(birthDate))\n" +

"Subscribed: \(isSubscribed ? "Yes" : "No")\n" +

"Gender: \(selectedGender)\n" +

"Option: \(selectedOption)")

}

@objc func dropdownButtonTapped() {

let alertController = UIAlertController(title: "Select Option", message: nil, preferredStyle: .actionSheet)

for option in dropdownOptions {

let action = UIAlertAction(title: option, style: .default) { \_ in

self.selectedOption = option

self.dropdownButton.setTitle(option, for: .normal)

}

alertController.addAction(action)

}

let cancelAction = UIAlertAction(title: "Cancel", style: .cancel, handler: nil)

alertController.addAction(cancelAction)

present(alertController, animated: true, completion: nil)

}

func showAlert(message: String) {

let alertController = UIAlertController(title: "Alert", message: message, preferredStyle: .alert)

alertController.addAction(UIAlertAction(title: "OK", style: .default, handler: nil))

present(alertController, animated: true, completion: nil)

}

func isValidEmail(\_ email: String) -> Bool {

let emailRegEx = "[A-Z0-9a-z.\_%+-]+@[A-Za-z0-9.-]+\\.[A-Za-z]{2,64}"

let emailPred = NSPredicate(format:"SELF MATCHES %@", emailRegEx)

return emailPred.evaluate(with: email)

}

func formattedDate(\_ date: Date) -> String {

let dateFormatter = DateFormatter()

dateFormatter.dateStyle = .medium

return dateFormatter.string(from: date)

}

// UIPickerView DataSource and Delegate

func numberOfComponents(in pickerView: UIPickerView) -> Int {

return 1

}

func pickerView(\_ pickerView: UIPickerView, numberOfRowsInComponent component: Int) -> Int {

return genderOptions.count

}

func pickerView(\_ pickerView: UIPickerView, titleForRow row: Int, forComponent component: Int) -> String? {

return genderOptions[row]

}

}