RxSwift Basics – Day 5

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RxSwift Basics

- Day 1 – Observable, Operator (Filter, Transform, Combine)
- Day 2 – Subject (flatMap, flatMapFirst, flatMapLatest)
- Day 3 – Two VCs communications with Subject, RxCocoa (Button)
- Day 4 – Sequential, Merged Observable Calls
- **Day 5 – RxCocoa, UI Binding (Button, TextField, Label, TableView)**

Advanced RxSwift

- Day 1 – Protocol-Oriented Programming, Protocol Extension, Associatetype
- Day 2 – Network Call, Generic Enum
- Day 3 – Binding Track Activity (show / hide ‘Loading’)
- Day 4 – Adding a Reactive Extension to Custom UI Element,
- 2 Way Binding, Advanced TableView – RxDataSources
- Day 5 – Schedulers (observeOn, subscribeOn),

  Unit Test (RxTest, RxBlocking)

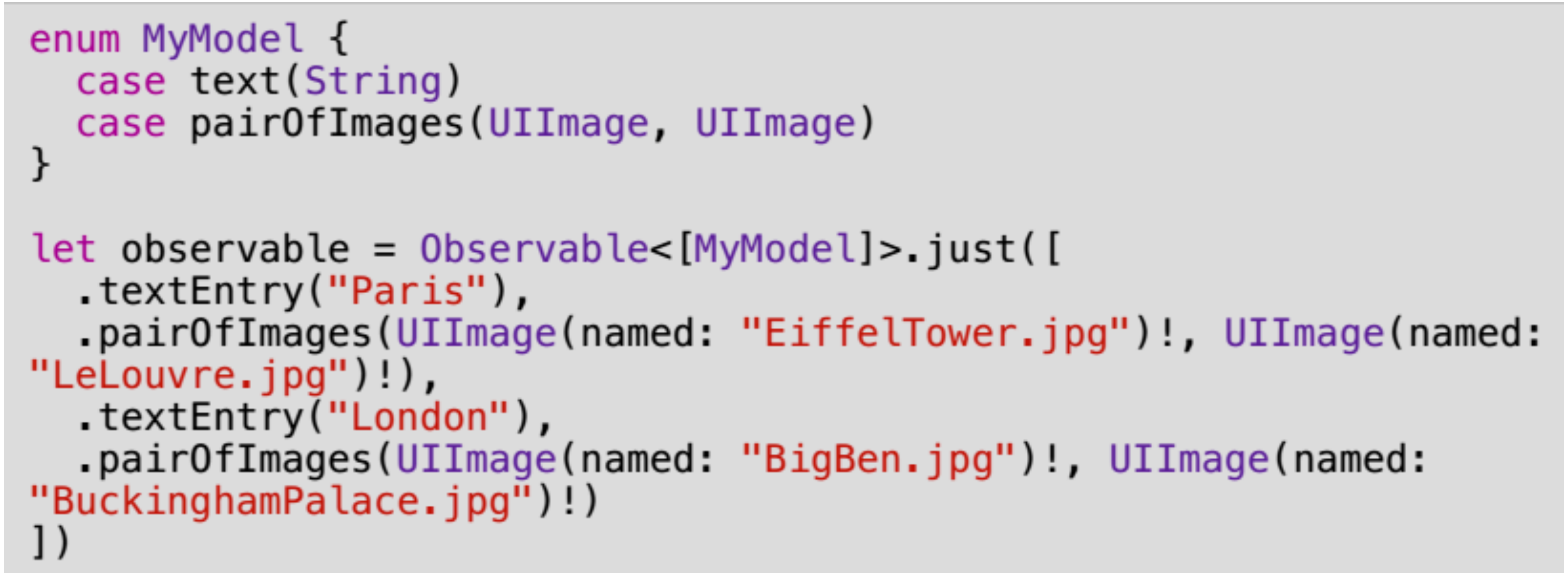
Simple Table View

```swift
@IBOutlet var tableView: UITableView!

func bindTableView() {
  let cities = Observable.of(["Lisbon", "Copenhagen", "London", "Madrid",
"Vienna"])

  cities
    .bind(to: tableView.rx.items) {
      (tableView: UITableView, index: Int, element: String) in
      let cell = UITableViewCell(style: .default, reuseIdentifier:
"cell")
      cell.textLabel?.text = element
      return cell
  }
  .disposed(by: disposeBag)
}
```

Simple Table View

```
tableView.rx
   .modelSelected(String.self)
   .subscribe(onNext: { model in
     print("\(model) was selected")
   })
   .disposed(by: disposeBag)
```

Table View – Multi Cell

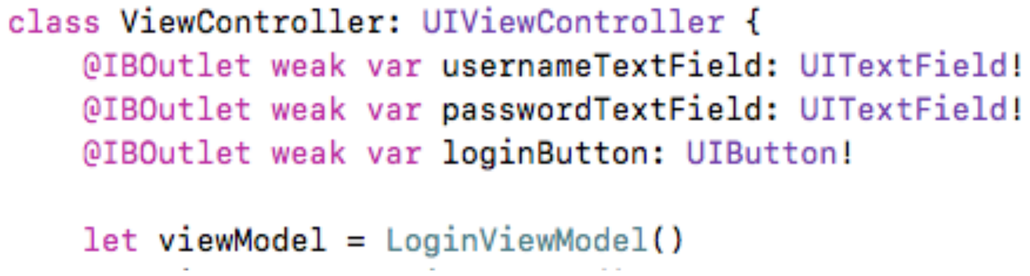


```
enum MyModel {
  case text(String)
  case pairOfImages(UIImage, UIImage)
}

let observable = Observable<[MyModel]>.just([
  .textEntry("Paris"),
  .pairOfImages(UIImage(named: "EiffelTower.jpg")!, UIImage(named:
"LeLouvre.jpg")!),
  .textEntry("London"),
  .pairOfImages(UIImage(named: "BigBen.jpg")!, UIImage(named:
"BuckinghamPalace.jpg")!)
])
```

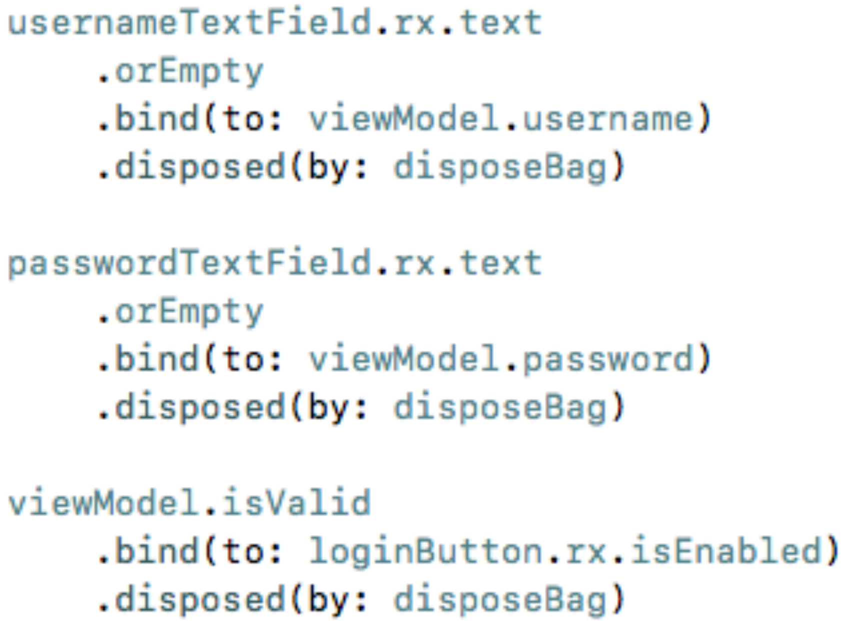
Table View – Multi Cell

```
observable.bind(to: tableView.rx.items) {
  (tableView: UITableView, index: Int, element: MyModel) in
  let indexPath = IndexPath(item: index, section: 0)

  switch element {
  case .textEntry(let title):
    let cell = tableView.dequeueReusableCell(withIdentifier: "titleCell",
for: indexPath) as! TextCell
    cell.titleLabel.text = title
    return cell
  case .pairOfImages(let firstImage, let secondImage):
    let cell = tableView.dequeueReusableCell(withIdentifier:
"pairOfImagesCell", for: indexPath) as! ImagesCell
    cell.leftImage.image = firstImage
    cell.rightImage.image = secondImage
    return cell
  }
}
.disposed(by: disposeBag)
```

TextField – Binding

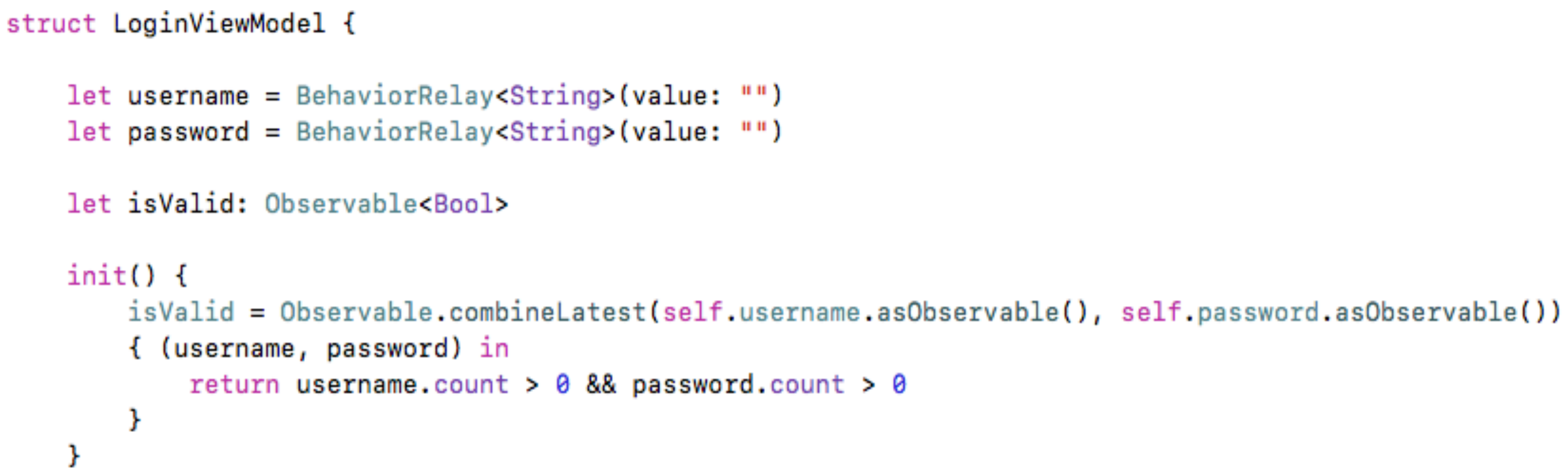


```swift
class ViewController: UIViewController {
    @IBOutlet weak var usernameTextField: UITextField!
    @IBOutlet weak var passwordTextField: UITextField!
    @IBOutlet weak var loginButton: UIButton!

    let viewModel = LoginViewModel()
```



```swift
usernameTextField.rx.text
    .orEmpty
    .bind(to: viewModel.username)
    .disposed(by: disposeBag)

passwordTextField.rx.text
    .orEmpty
    .bind(to: viewModel.password)
    .disposed(by: disposeBag)

viewModel.isValid
    .bind(to: loginButton.rx.isEnabled)
    .disposed(by: disposeBag)
```

TextField – Binding



```swift
struct LoginViewModel {

    let username = BehaviorRelay<String>(value: "")
    let password = BehaviorRelay<String>(value: "")

    let isValid: Observable<Bool>

    init() {
        isValid = Observable.combineLatest(self.username.asObservable(), self.password.asObservable())
        { (username, password) in
            return username.count > 0 && password.count > 0
        }
    }
```

Comprehensive Lab

Observable

- Create login and get profile observables

Sequential Call – Two Observables

RxCocoa UI Binding – button, textfield, TableView

Subject, Relay