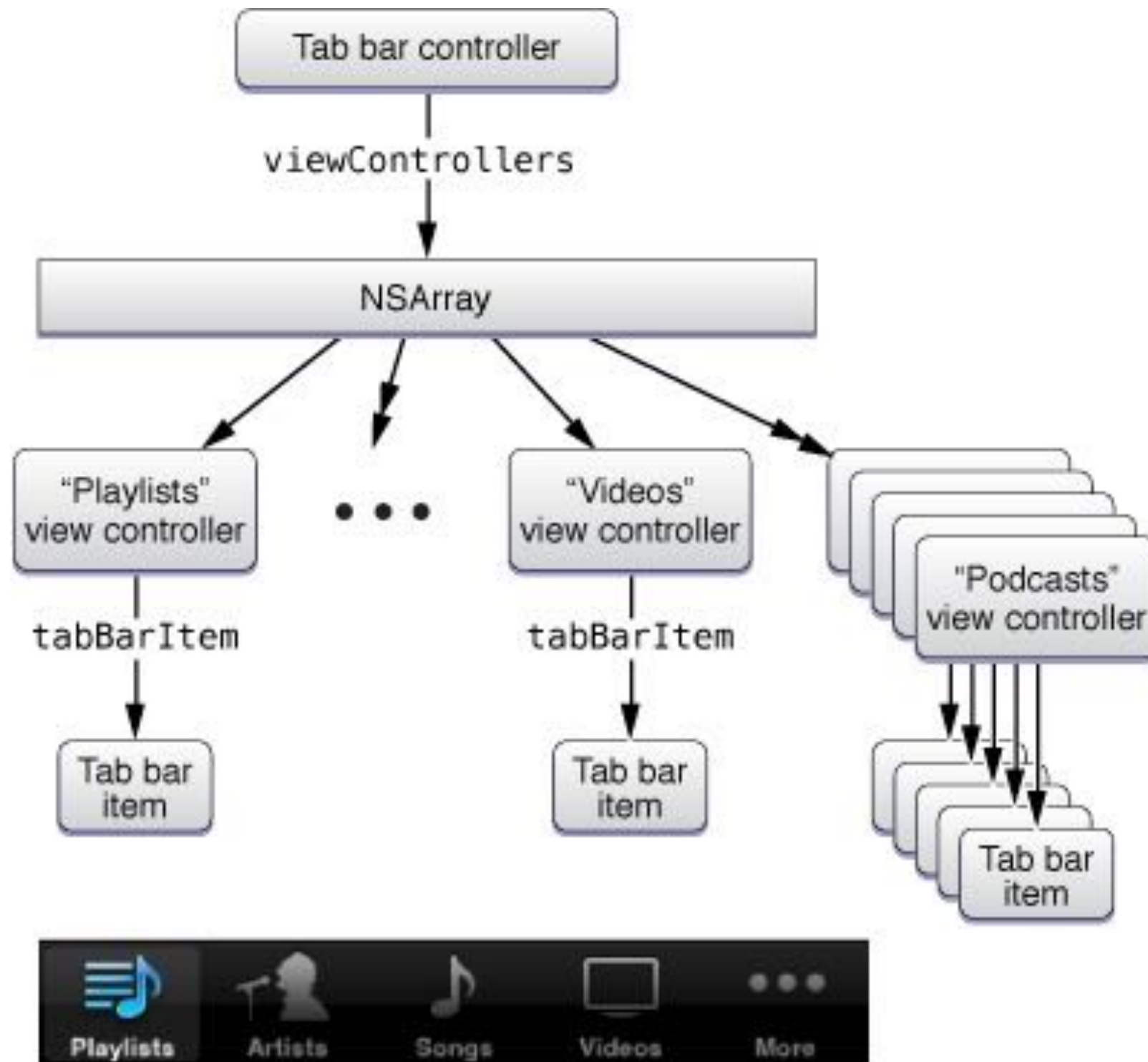# TabbarController

TabBarController

- UITabBarContoller Class
- TabBarController manage multiple distinct interfaces,

TabBarController - 구조

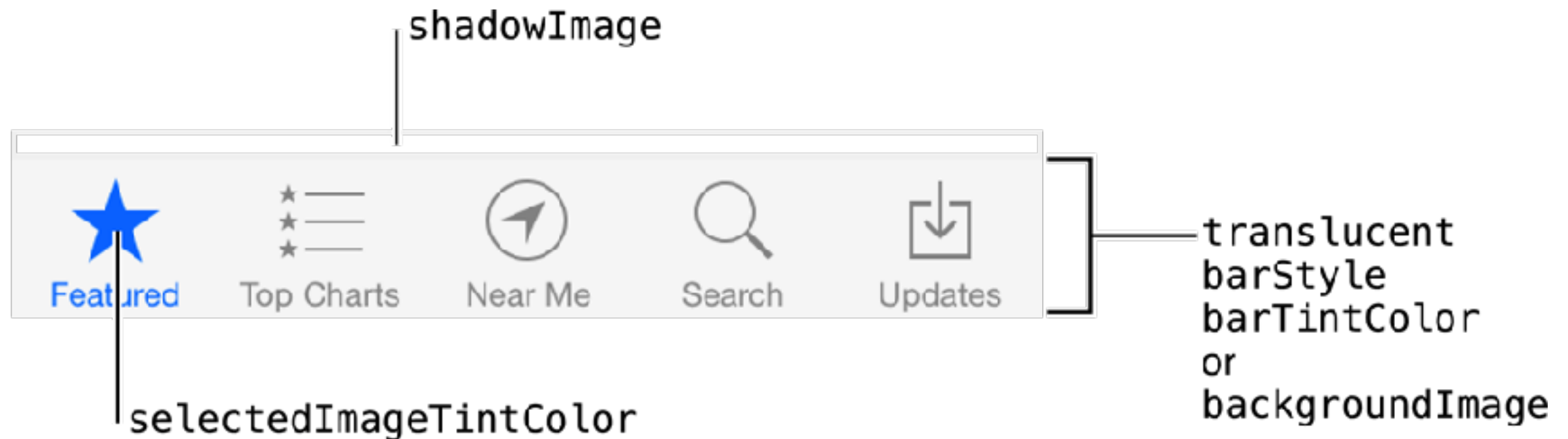# TabBarController Interface

Tab bar controller view

Custom content

Tab bar

TabBarController 예제 – 스토리 보드

- ViewController OR NavigationController 선택

- Editor -> Embad in -> TabBarController

- TabBarController inital 지정

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Tab Bar Item

- 각각의 ViewController를 각 TabBar Item에 매칭 되어 있다.

- TabBarItem은 이미지와 텍스트를 넣을수 있다.

- 각 TabBar Item은 해당 ViewController의 tabBarItem 프로퍼티로 접근 가능하다.

TabBarController 실습

- TabBarController 프로젝트 만들기

- TabBarController 화면 전환

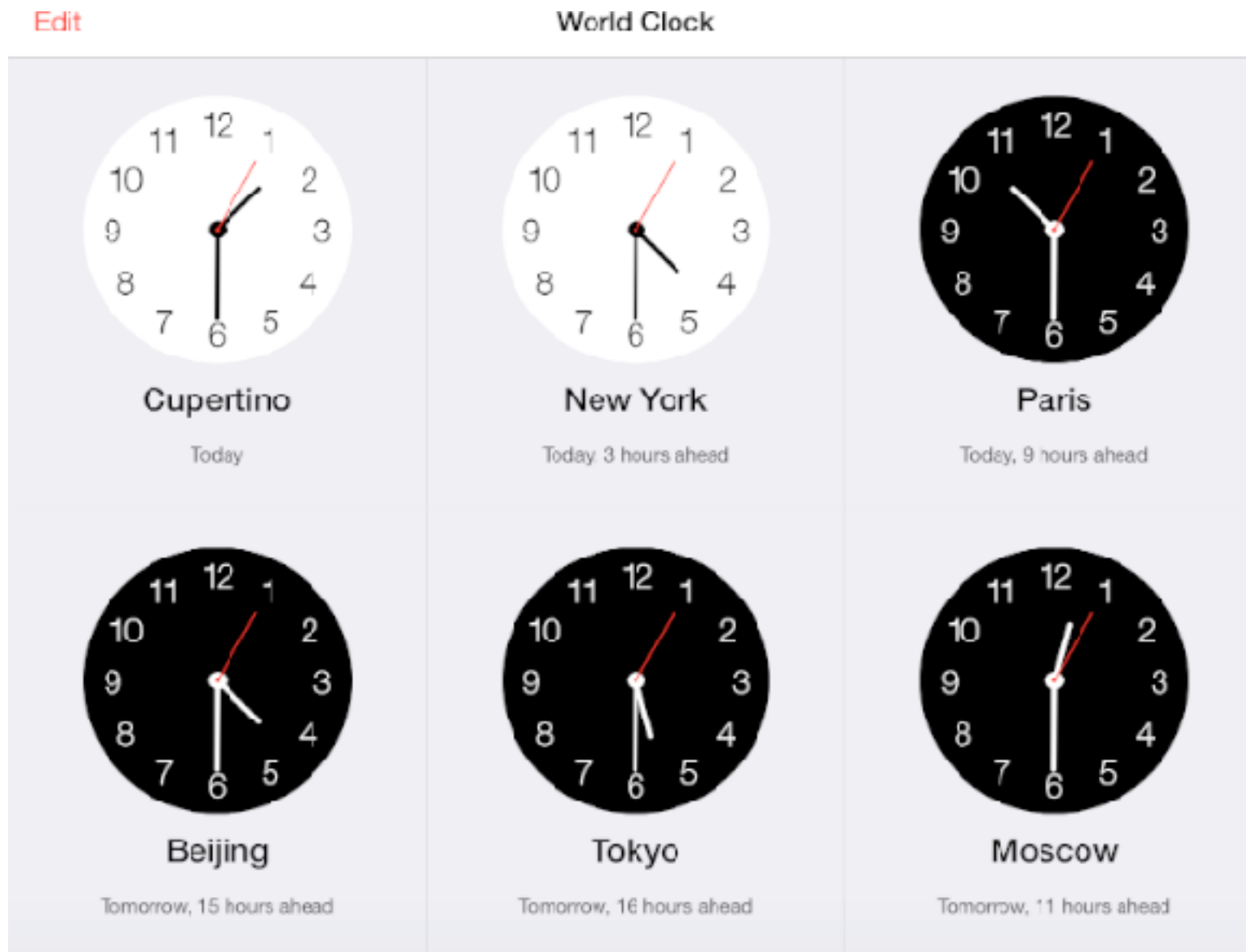- View Life Cycle 알아보기

- Tabbar Item 꾸미기

UICollection

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CollectionView

- Cell

- Decoration view

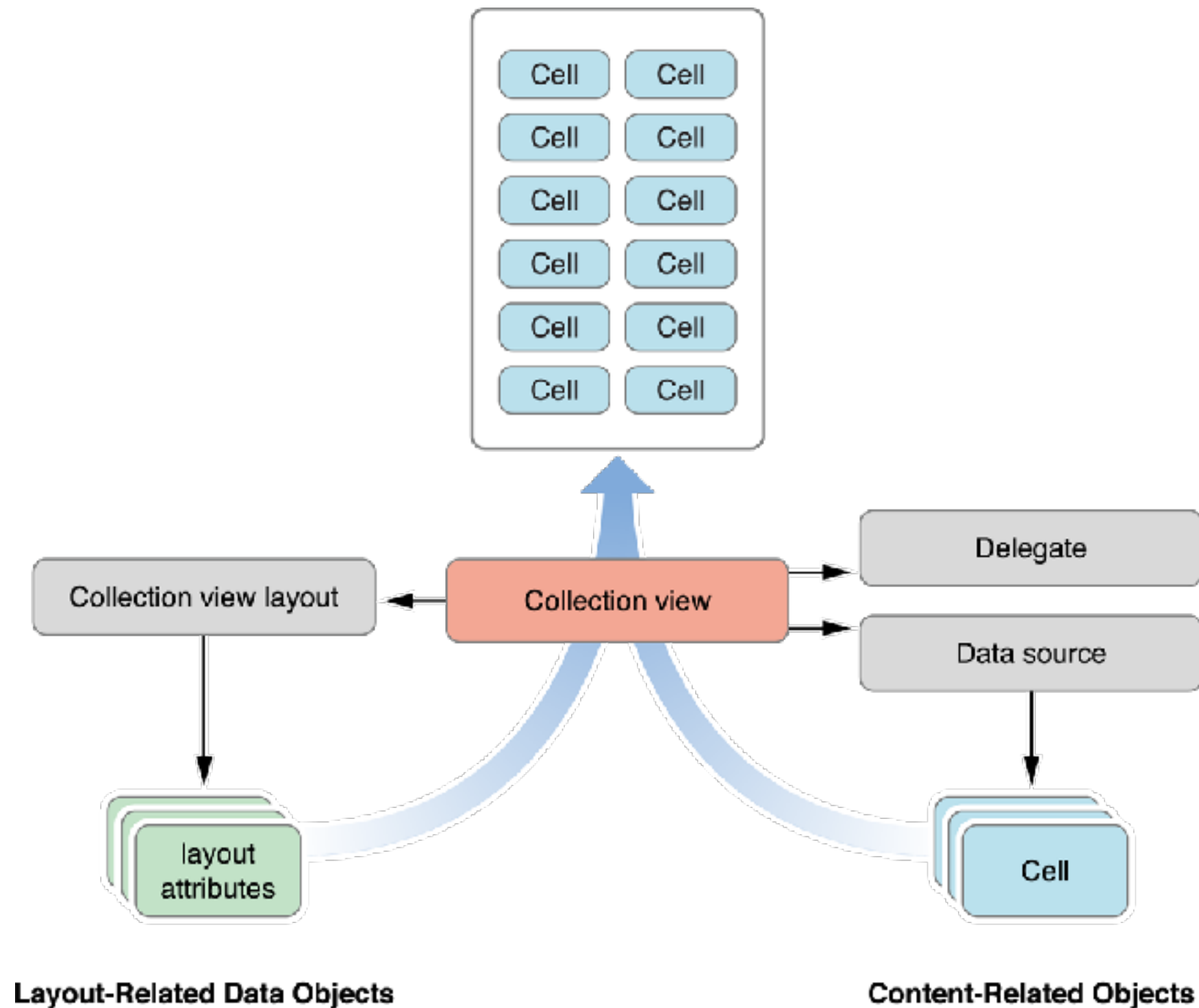- Supplementary view

UICollectionView

- 데이터 항목의 정렬 된 컬렉션을 관리하고 사용자 정의 레이아웃을 사용하여 데이터 항목을 제공하는 객체입니다
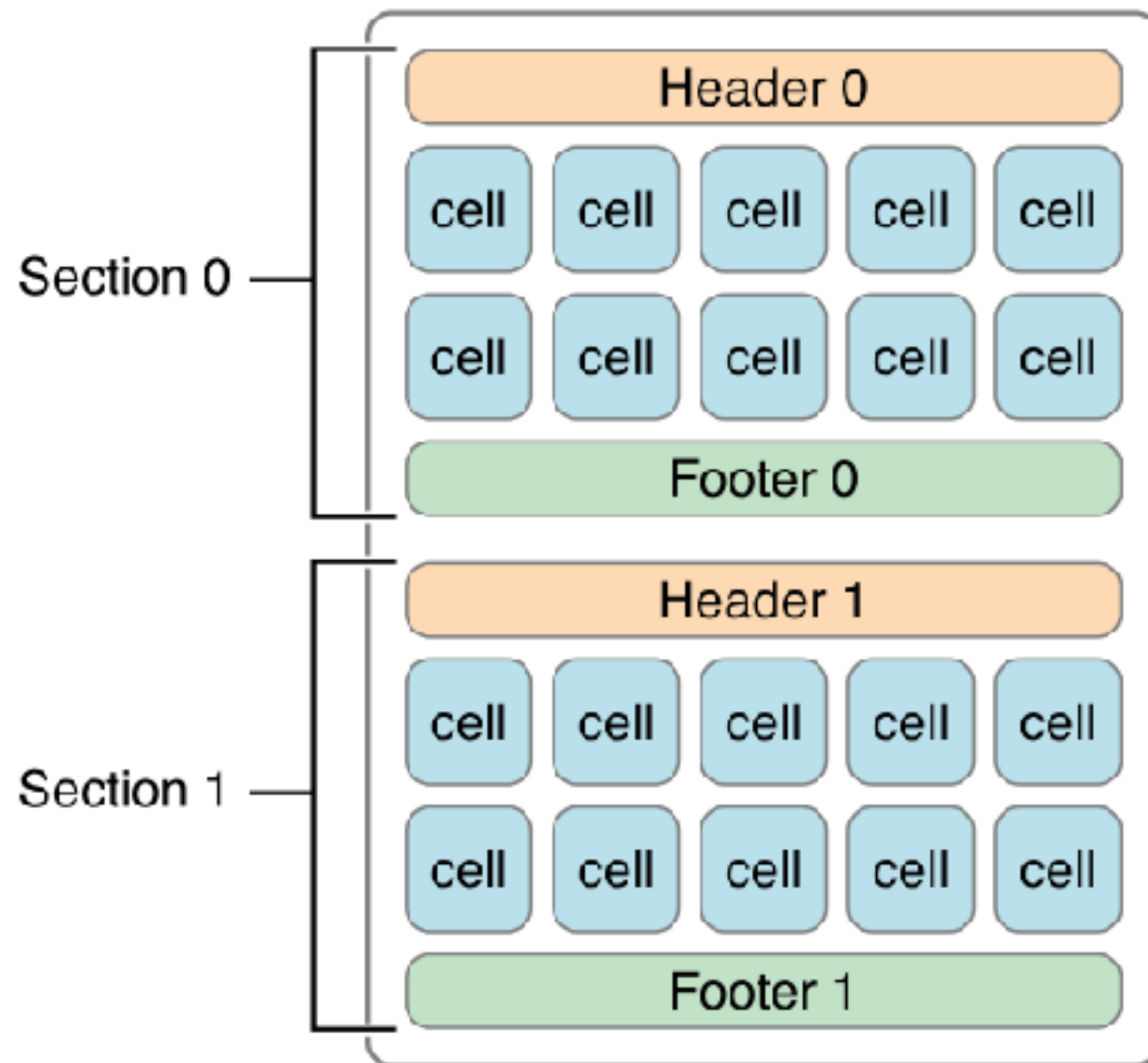
UICollectionView

- The classes and protocols for implementing collection views

  - Manager
    - UICollectionView
    - UICollectionViewController

  - Protocol
    - UICollectionViewDataSource
    - UICollectionViewDelegate

  - Presentation
    - UICollectionReusableView
    - UICollectionViewCell

  - Layout
    - UICollectionViewLayout
    - UICollectionViewLayoutAttributes
    - UICollectionViewUpdateItem

  - Flow Layout
    - UICollectionViewFlowLayout
    - UICollectionViewDelegateFlowLayout
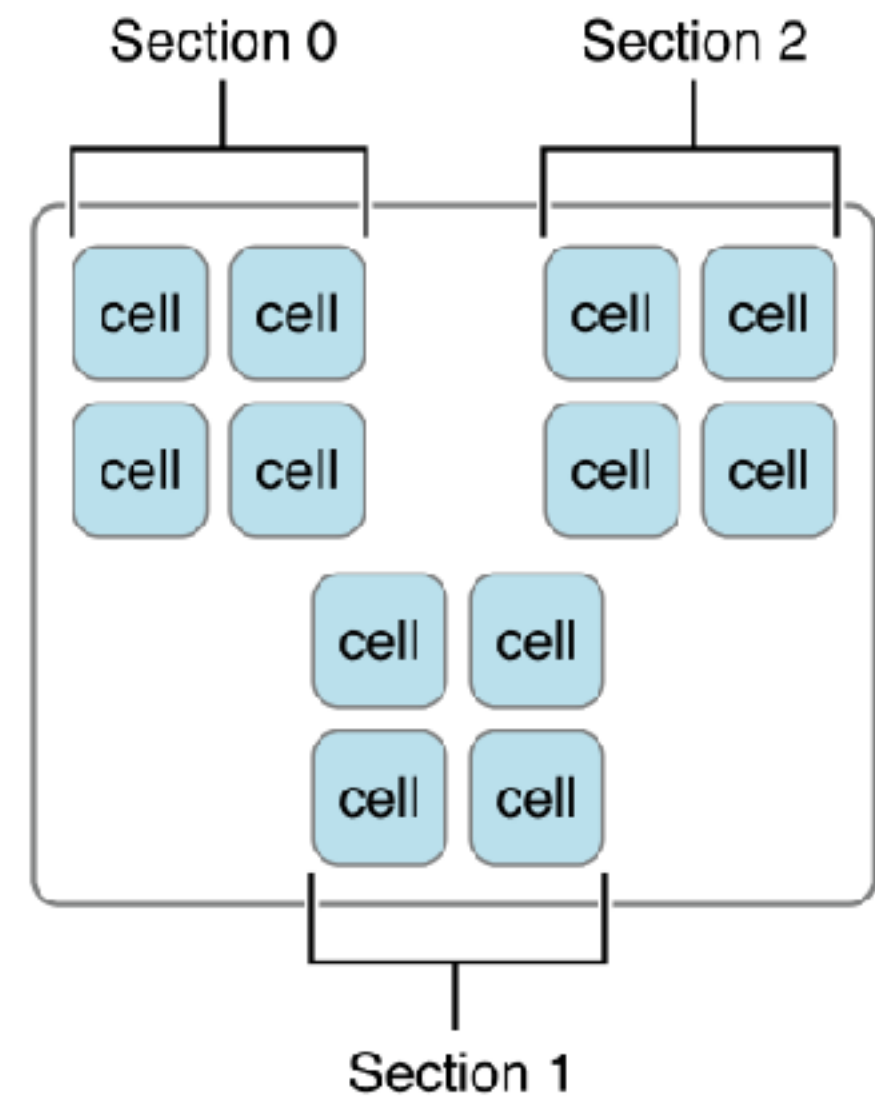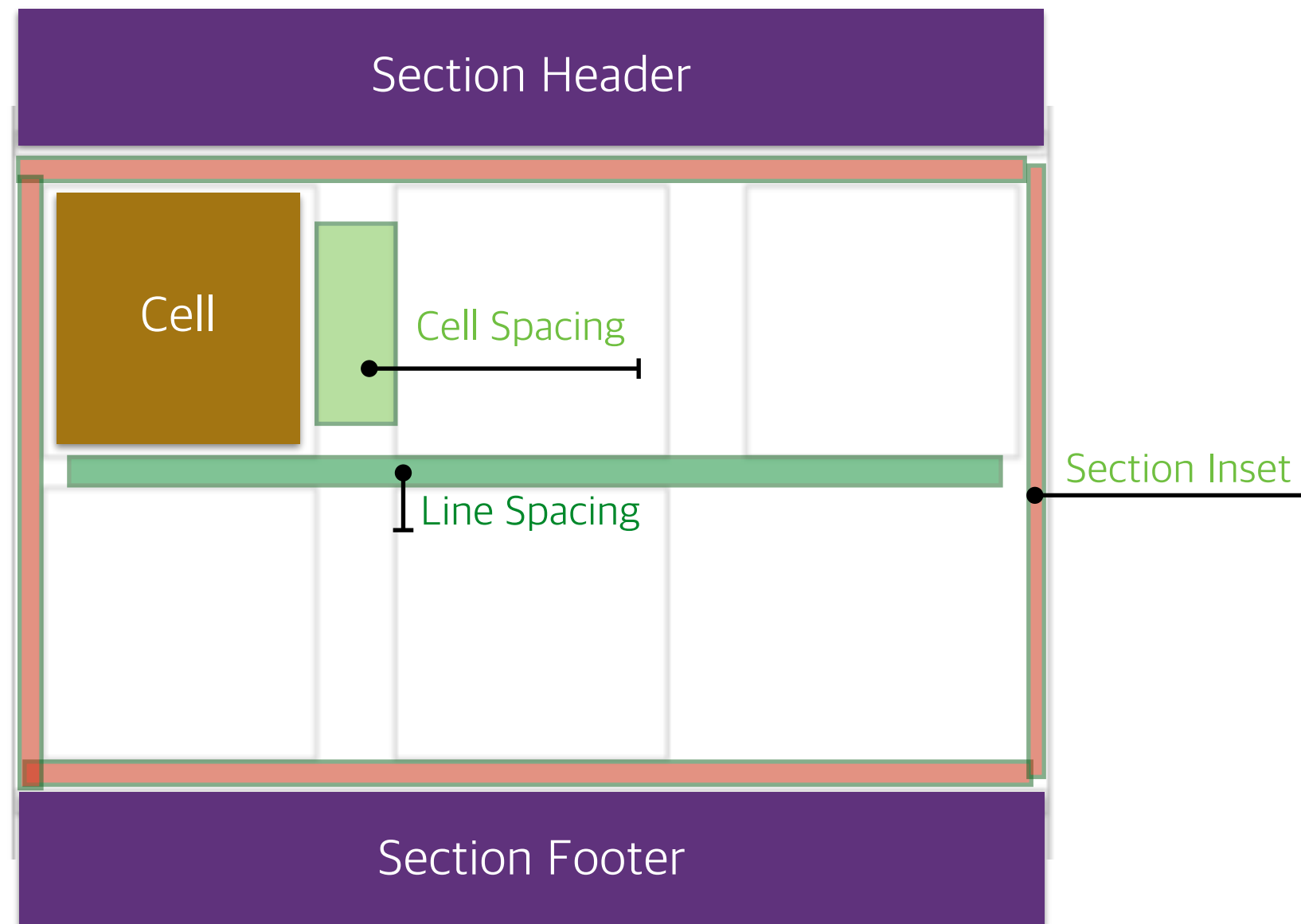
UICollectionView

Layout-Related Data Objects   Content-Related Objects
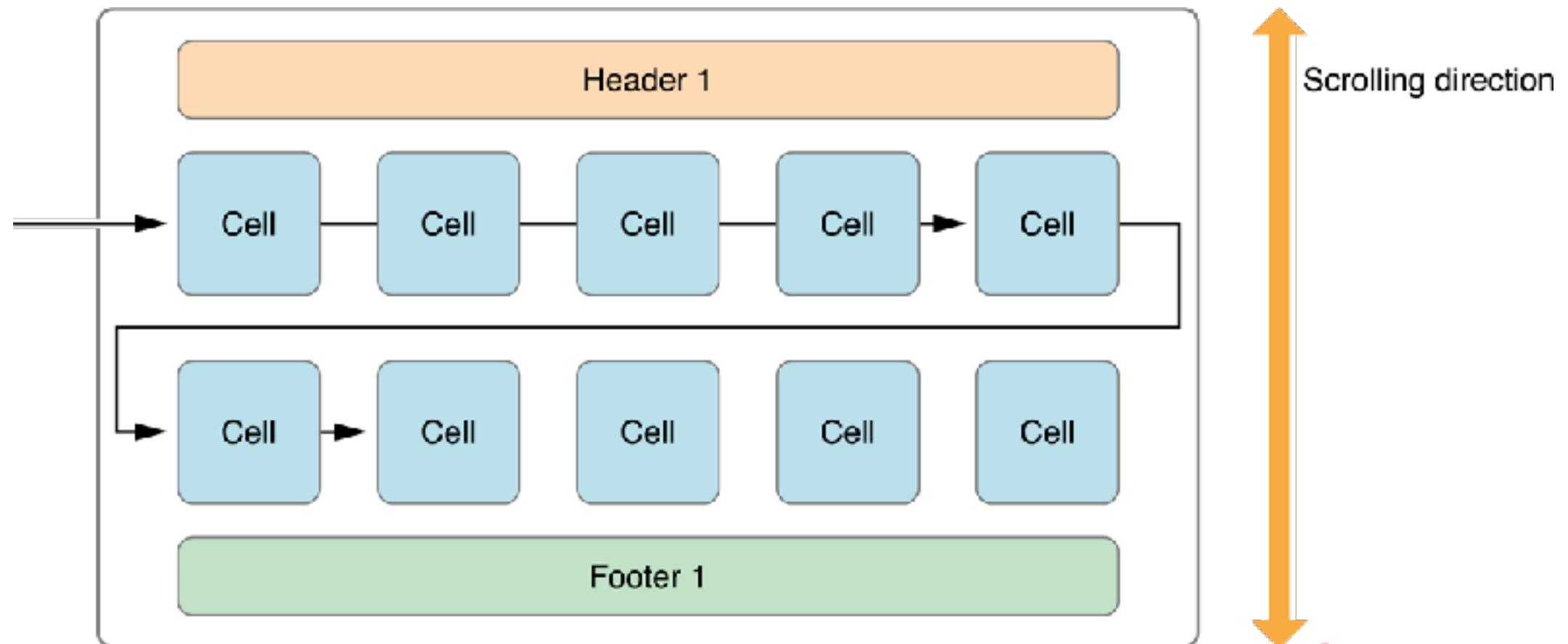
Layout

Section Layout

FlowLayout

- UICollectionViewFlowLayout Class에 정의

- Scroll Direction

  1. Vertical

  2. Horizontal

Flow Layout Attributes 정의

- UICollectionViewDelegateFlowLayout protocol 이용

- UICollectionViewDelegate가 정의된 인스턴스에서 작성.

```swift
func collectionView(_ collectionView: UICollectionView, layout
collectionViewLayout: UICollectionViewLayout, sizeForItemAt indexPath:
IndexPath) -> CGSize

func collectionView(_ collectionView: UICollectionView, layout
collectionViewLayout: UICollectionViewLayout,
minimumInteritemSpacingForSectionAt section: Int) -> CGFloat

func collectionView(_ collectionView: UICollectionView, layout
collectionViewLayout: UICollectionViewLayout,
minimumLineSpacingForSectionAt section: Int) -> CGFloat

func collectionView(_ collectionView: UICollectionView, layout
collectionViewLayout: UICollectionViewLayout, insetForSectionAt
section: Int) -> UIEdgeInsets
```
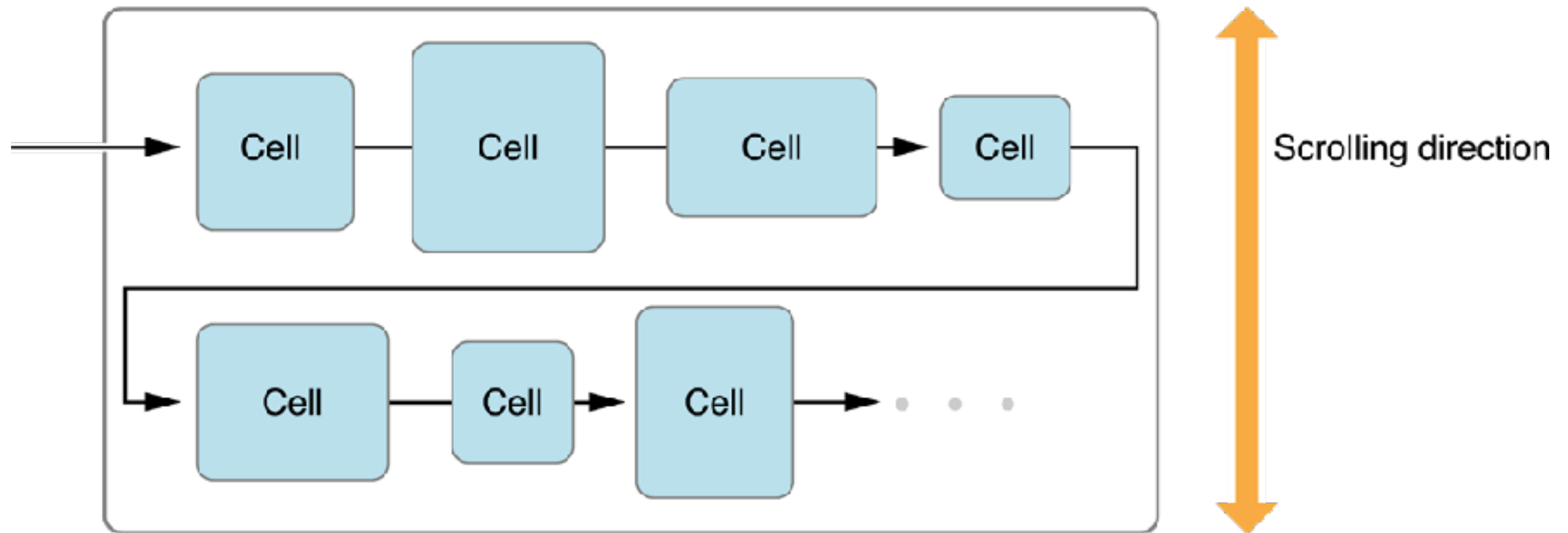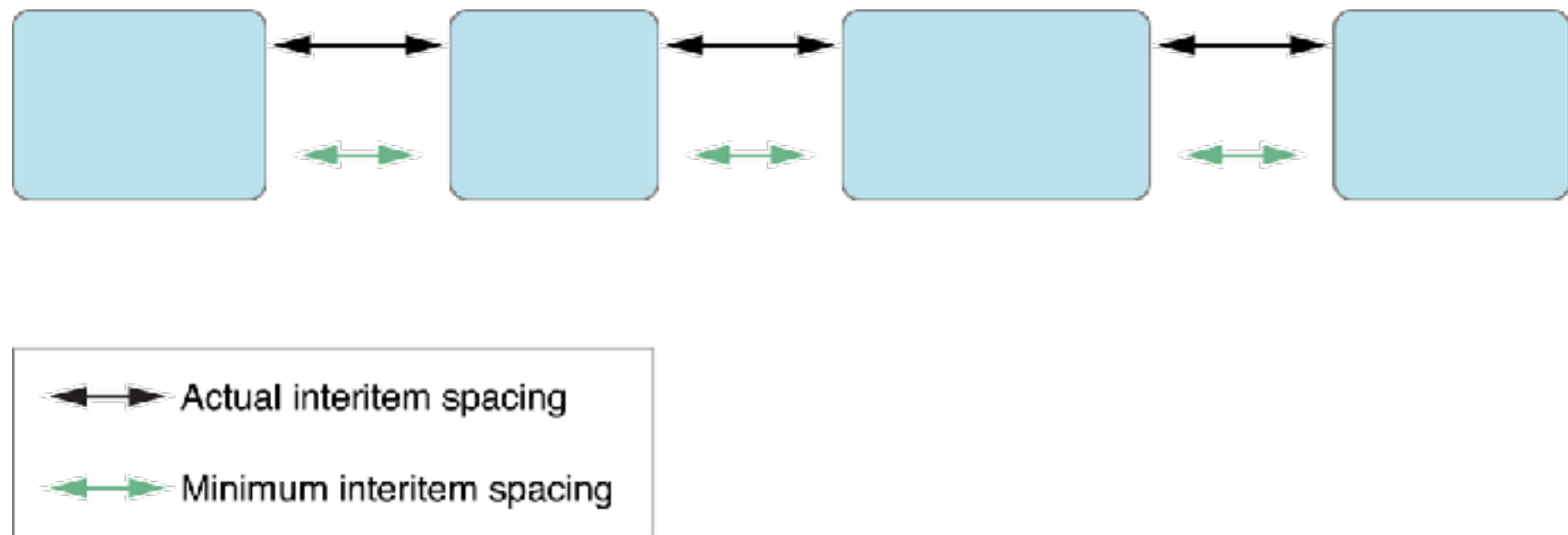
Item Size


```
func collectionView(_ collectionView: UICollectionView,
        layout collectionViewLayout: UICollectionViewLayout,
            sizeForItemAt indexPath: IndexPath) -> CGSize
```

Item Spacing 입력 된 값 이상으로 맞춤

Actual interitem spacing

Minimum interitem spacing

```swift
func collectionView(_ collectionView: UICollectionView,
        layout collectionViewLayout: UICollectionViewLayout,
          minimumInteritemSpacingForSectionAt section: Int) -> CGFloat
```

FAST campus

Line Spacing

Actual line spacing

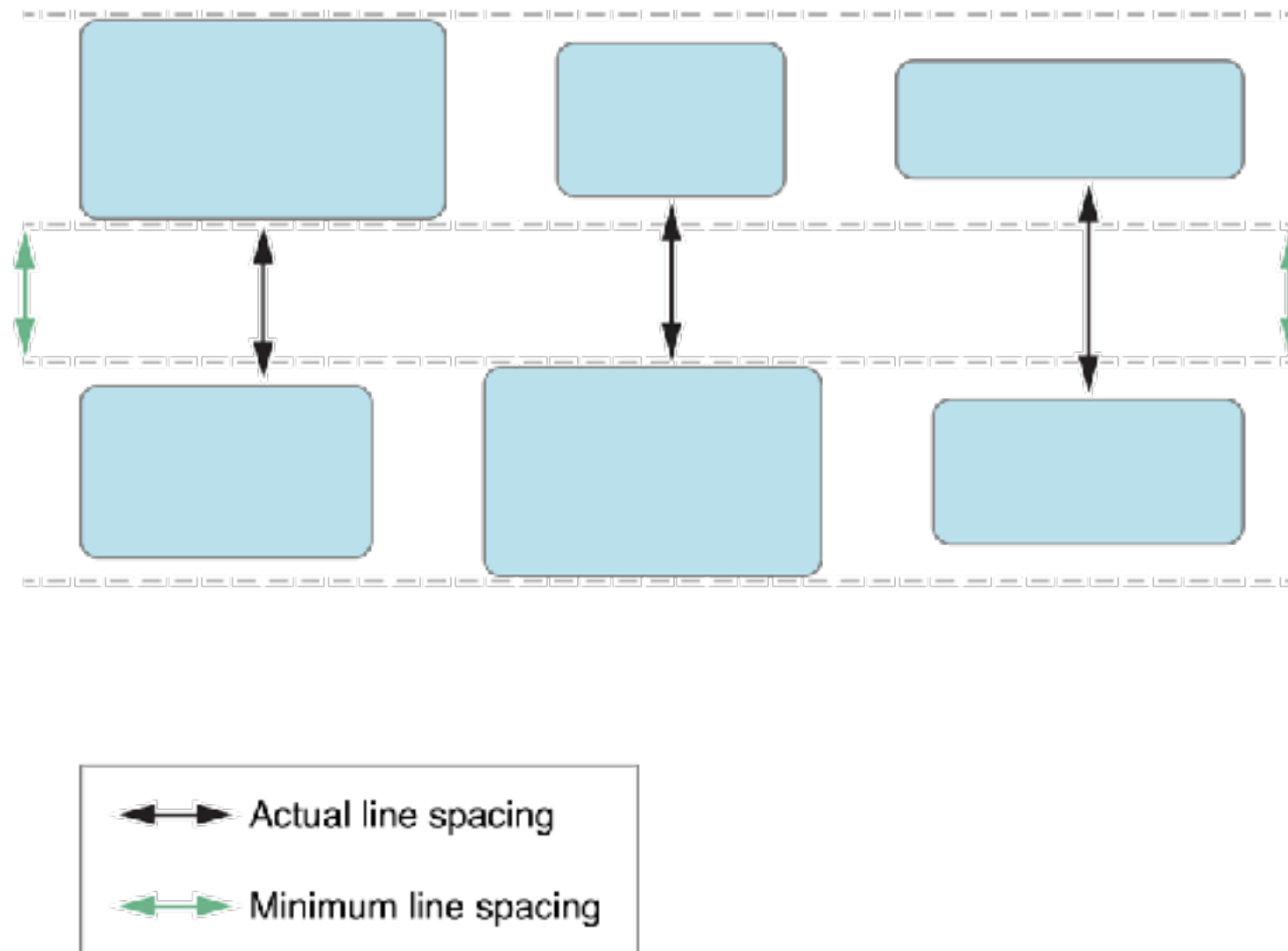Minimum line spacing

```swift
func collectionView(_ collectionView: UICollectionView,
        layout collectionViewLayout: UICollectionViewLayout,
        minimumLineSpacingForSectionAt section: Int) -> CGFloat
```
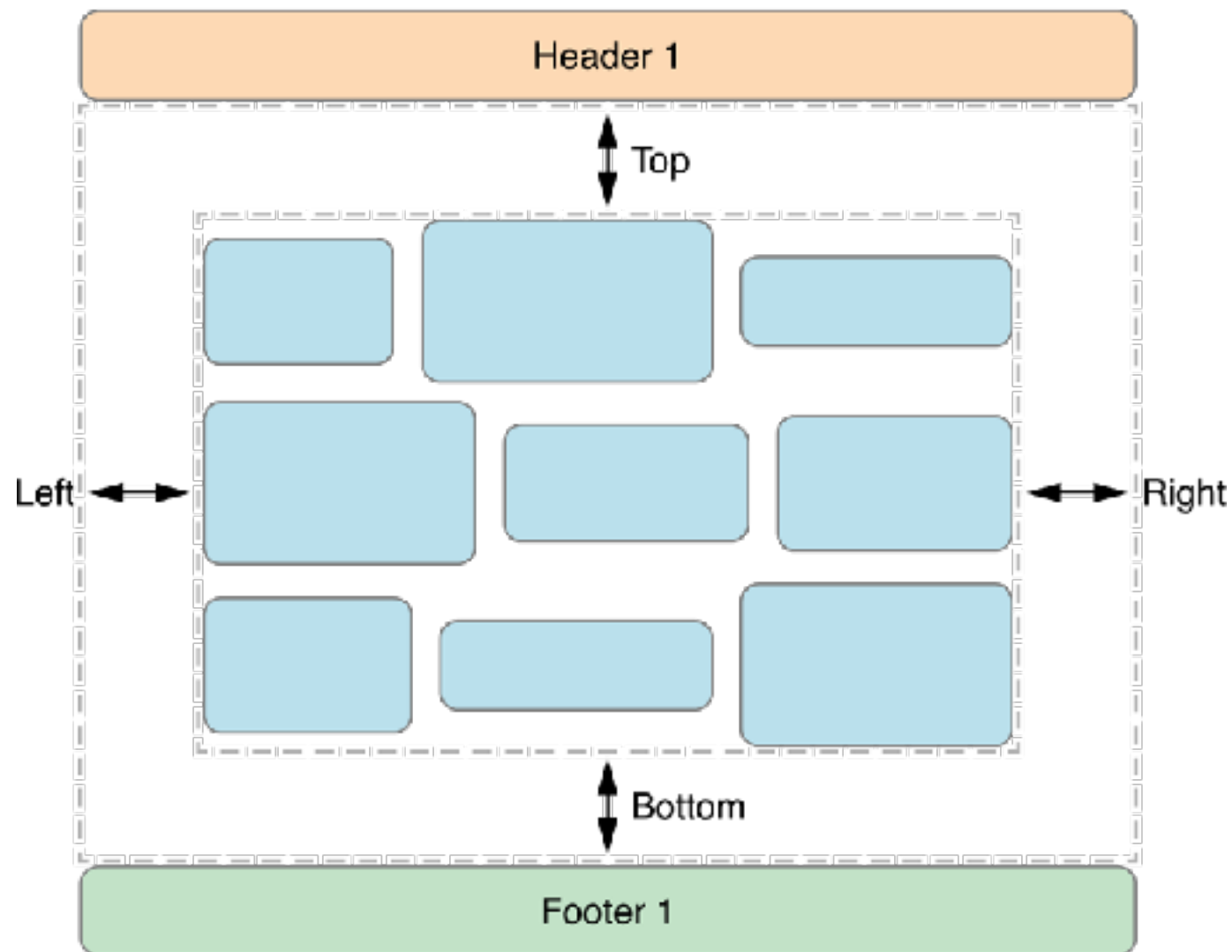
Section Inset

```
inset = UIEdgeInsetsMake(top, left, bottom, right)
```



```swift
func collectionView(_ collectionView: UICollectionView,
        layout collectionViewLayout: UICollectionViewLayout,
        insetForSectionAt section: Int) -> UIEdgeInsets
```

Protocol

- UICollectionViewDataSource

- UICollectionViewDelegate

- UICollectionViewDataSourcePrefetching

UICollectionViewDataSource

```swift
public func collectionView(_ collectionView: UICollectionView,
numberOfItemsInSection section: Int) -> Int

public func collectionView(_ collectionView: UICollectionView,
cellForItemAt indexPath: IndexPath) -> UICollectionViewCell

optional public func numberOfSections(in collectionView: UICollectionView)
-> Int
```

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UICollectionViewDelegate

```swift
optional public func collectionView(_ collectionView: UICollectionView,
shouldHighlightItemAt indexPath: IndexPath) -> Bool

optional public func collectionView(_ collectionView: UICollectionView,
didHighlightItemAt indexPath: IndexPath)

optional public func collectionView(_ collectionView: UICollectionView,
didUnhighlightItemAt indexPath: IndexPath)

optional public func collectionView(_ collectionView: UICollectionView,
shouldSelectItemAt indexPath: IndexPath) -> Bool

optional public func collectionView(_ collectionView: UICollectionView,
shouldDeselectItemAt indexPath: IndexPath) -> Bool // called when the user
taps on an already-selected item in multi-select mode

optional public func collectionView(_ collectionView: UICollectionView,
didSelectItemAt indexPath: IndexPath)

optional public func collectionView(_ collectionView: UICollectionView,
didDeselectItemAt indexPath: IndexPath)
```

컬렉션 뷰 만들기

- 같이 해봐요