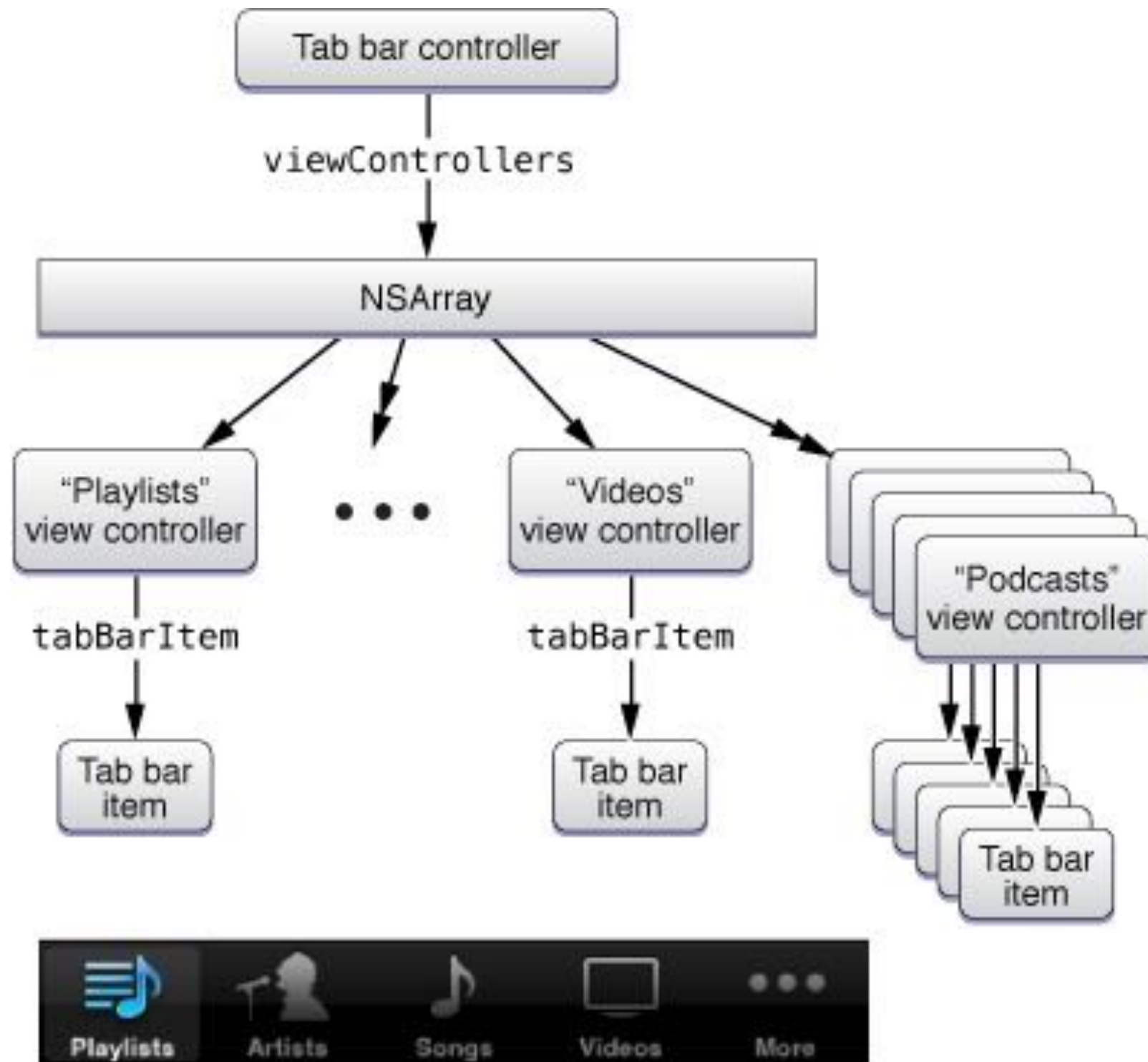

TabbarController

TabBarController

- UITabBarController Class
- TabBarController manage multiple distinct interfaces,



TabBarController - 구조



TabBarController Interface

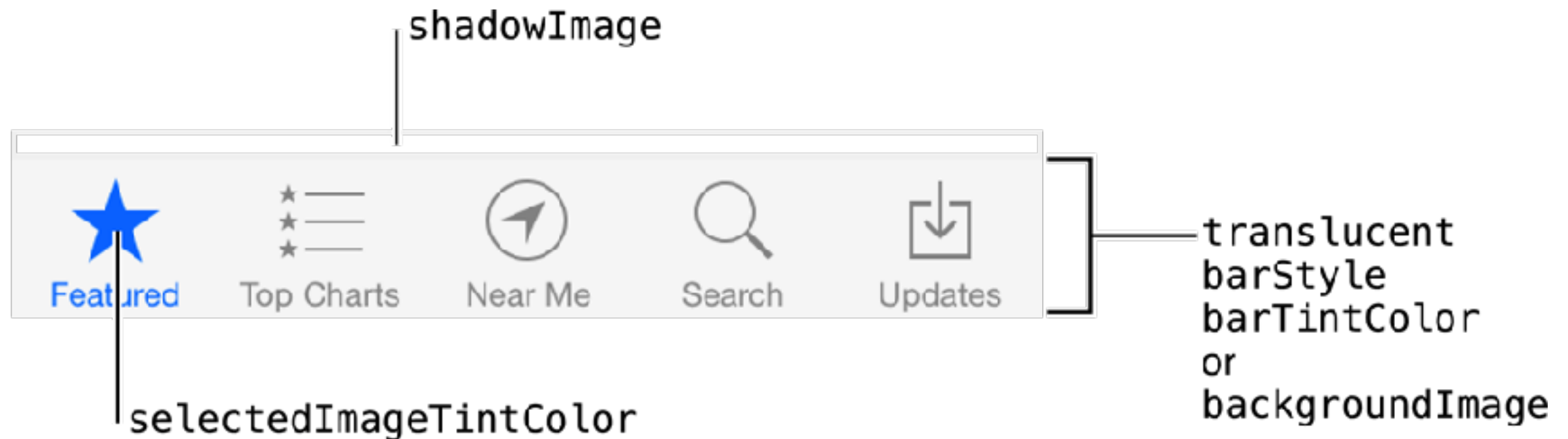


TabBarController 예제 - 스토리 보드

- ViewController OR UINavigationController 선택
- Editor -> Embed in -> TabBarController
- TabBarController initial 지정

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

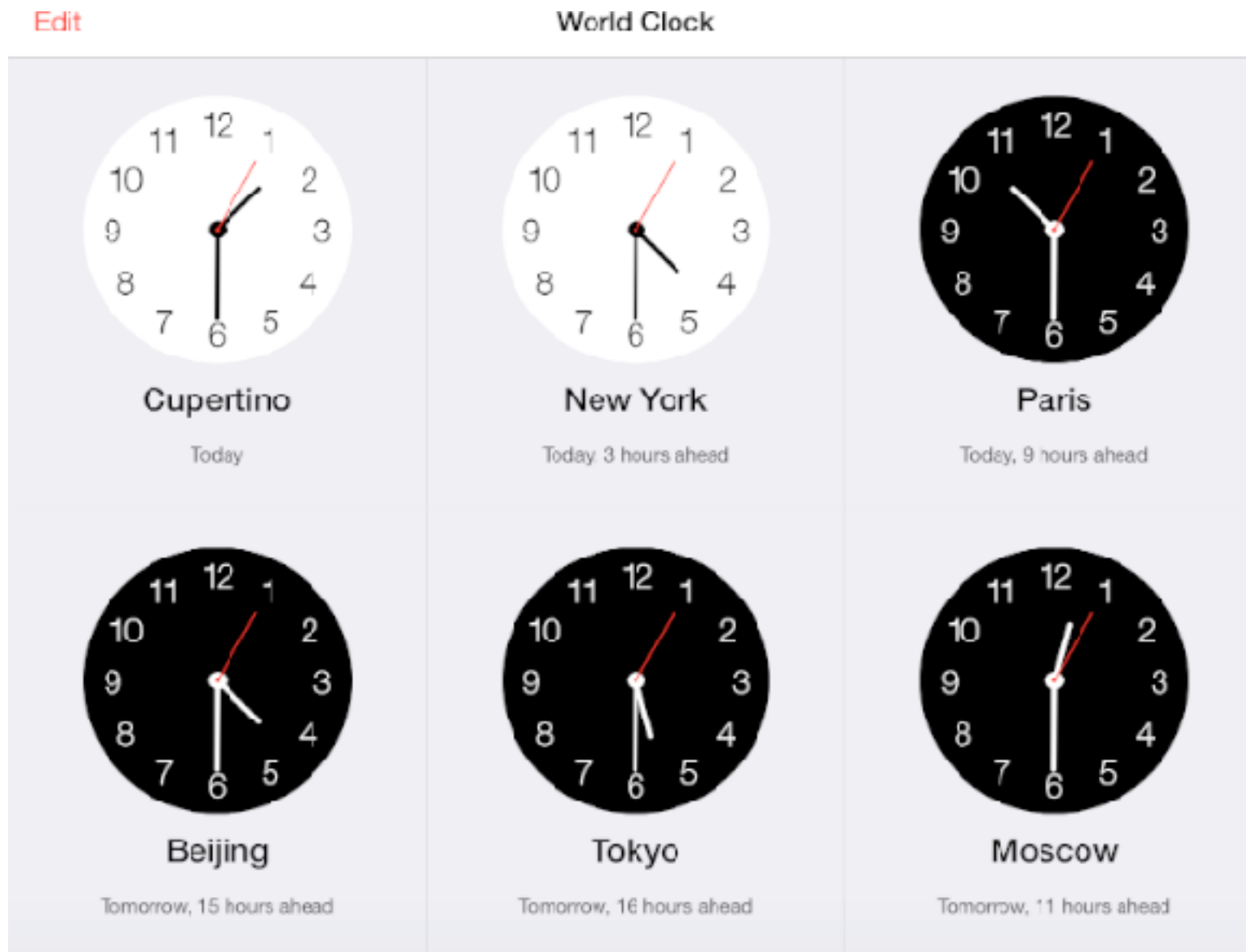
UICollectionView

CollectionView

- Cell
- Decoration view
- Supplementary view

UICollectionView

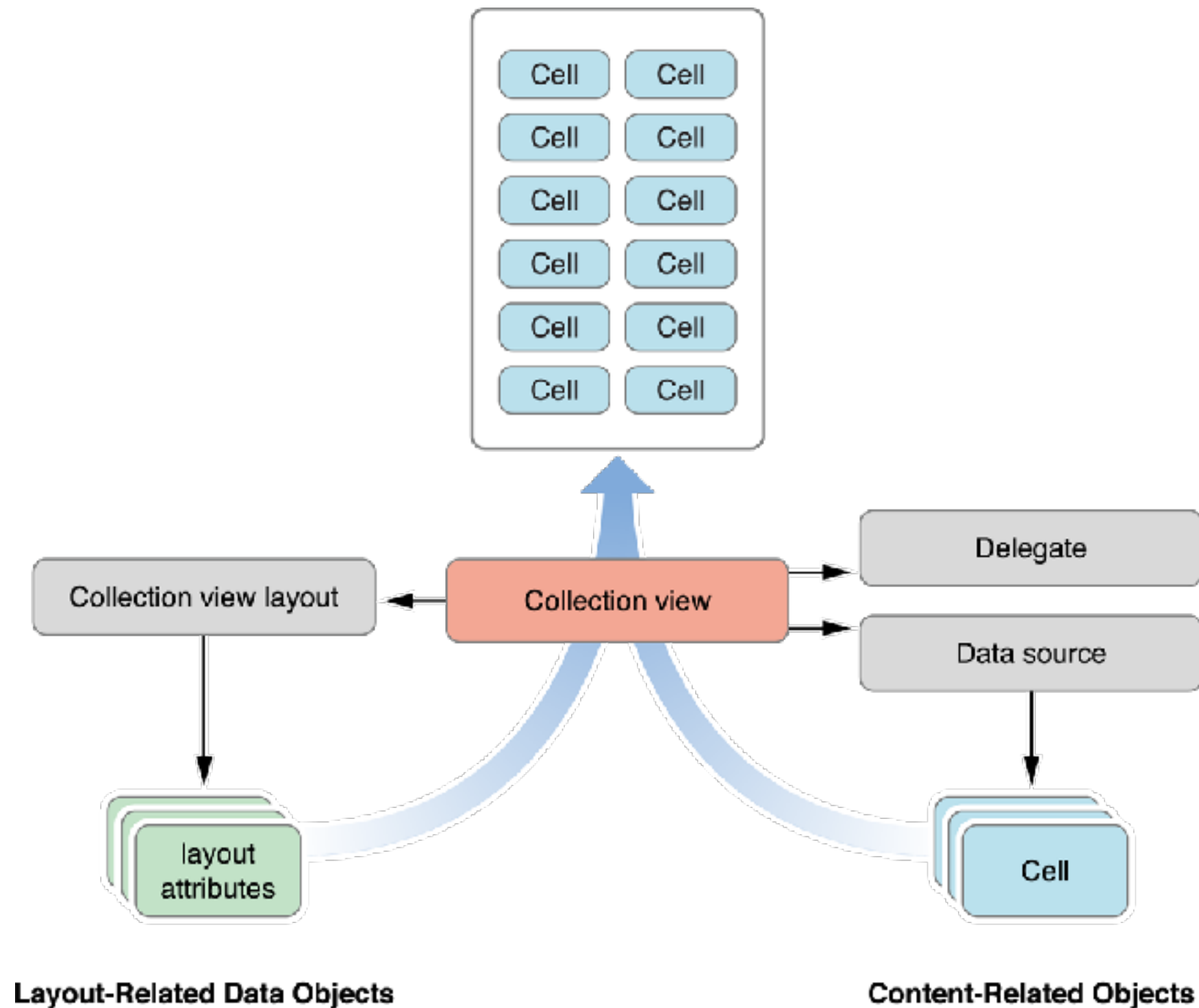
- 데이터 항목의 정렬 된 컬렉션을 관리하고 사용자 정의 레이아웃을 사용하여 데이터 항목을 제공하는 객체입니다



UICollectionView

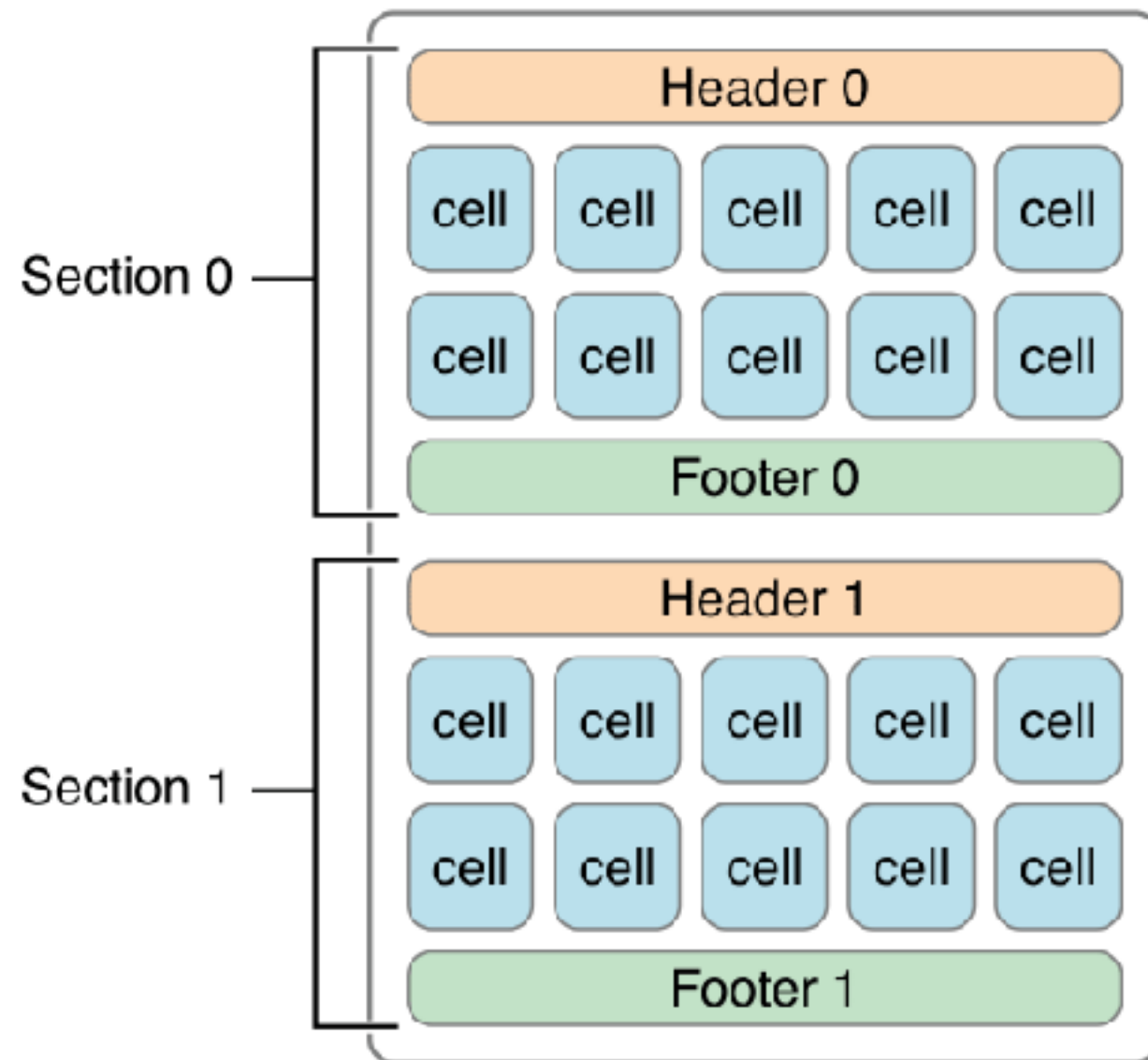
- The classes and protocols for implementing collection views
 - Manager
 - UICollectionView
 - UICollectionViewController
 - Protocol
 - UICollectionViewDataSource
 - UICollectionViewDelegate
 - Presentation
 - UICollectionViewReusableView
 - UICollectionViewCell
 - Layout
 - UICollectionViewLayout
 - UICollectionViewLayoutAttributes
 - UICollectionViewUpdateItem
 - Flow Layout
 - UICollectionViewFlowLayout
 - UICollectionViewDelegateFlowLayout

UICollectionView

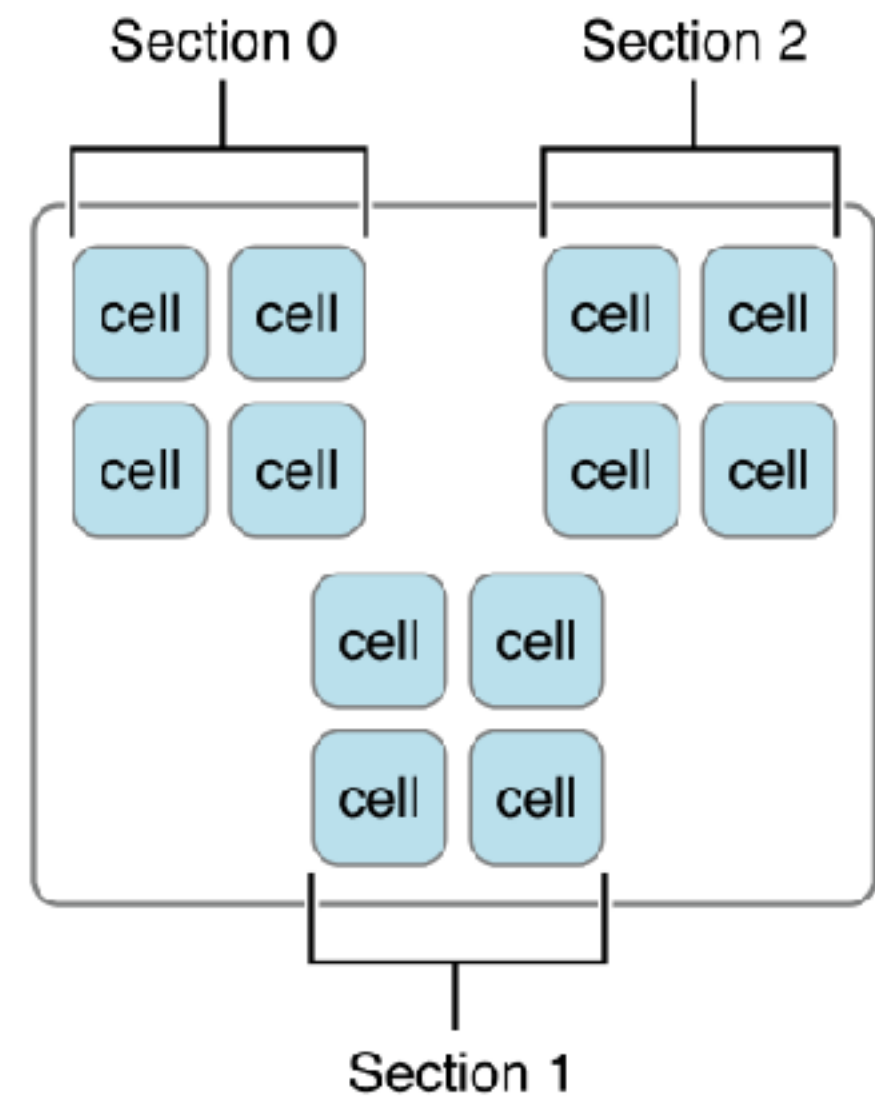


Layout

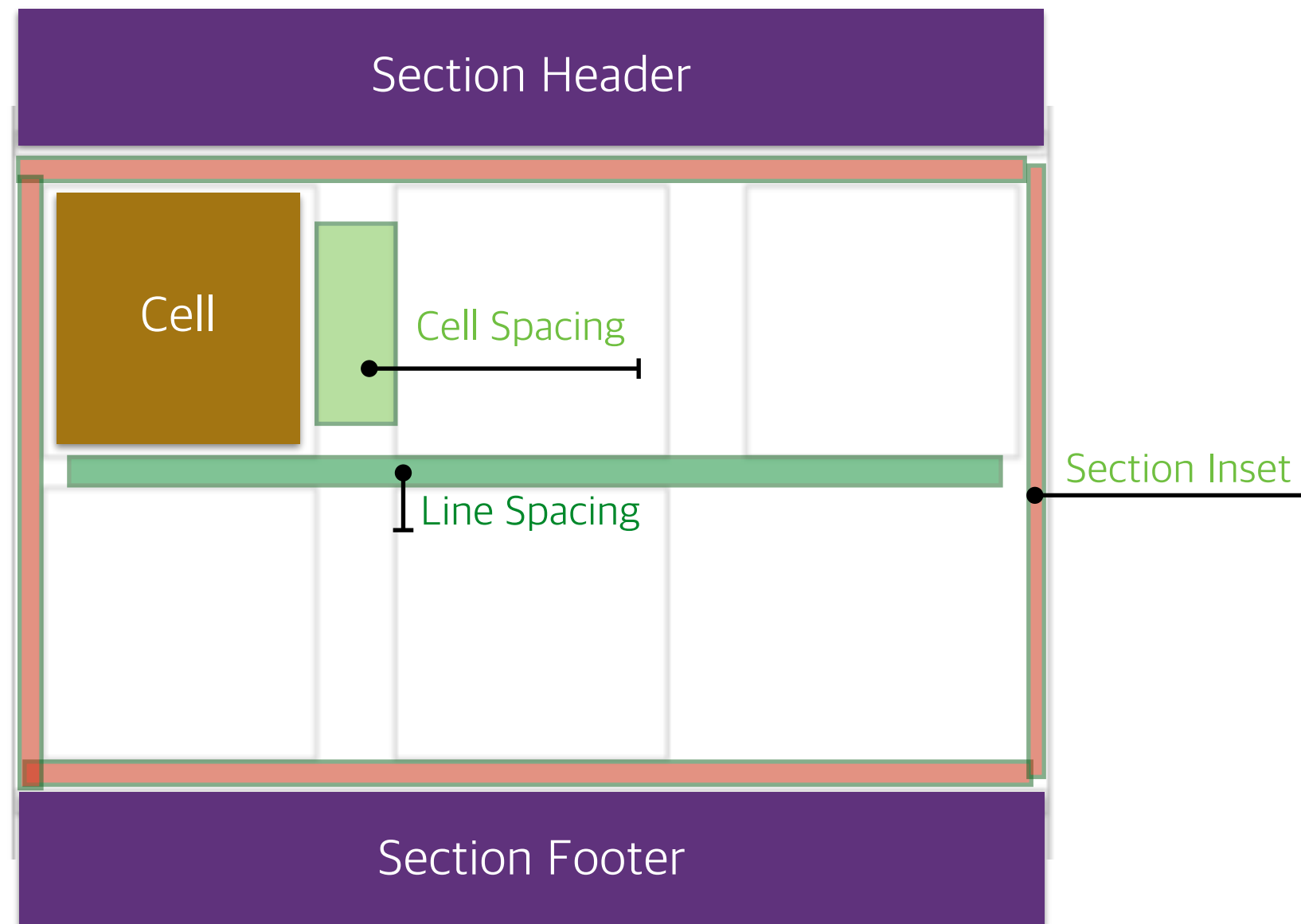
Flow Layout



Custom Layout

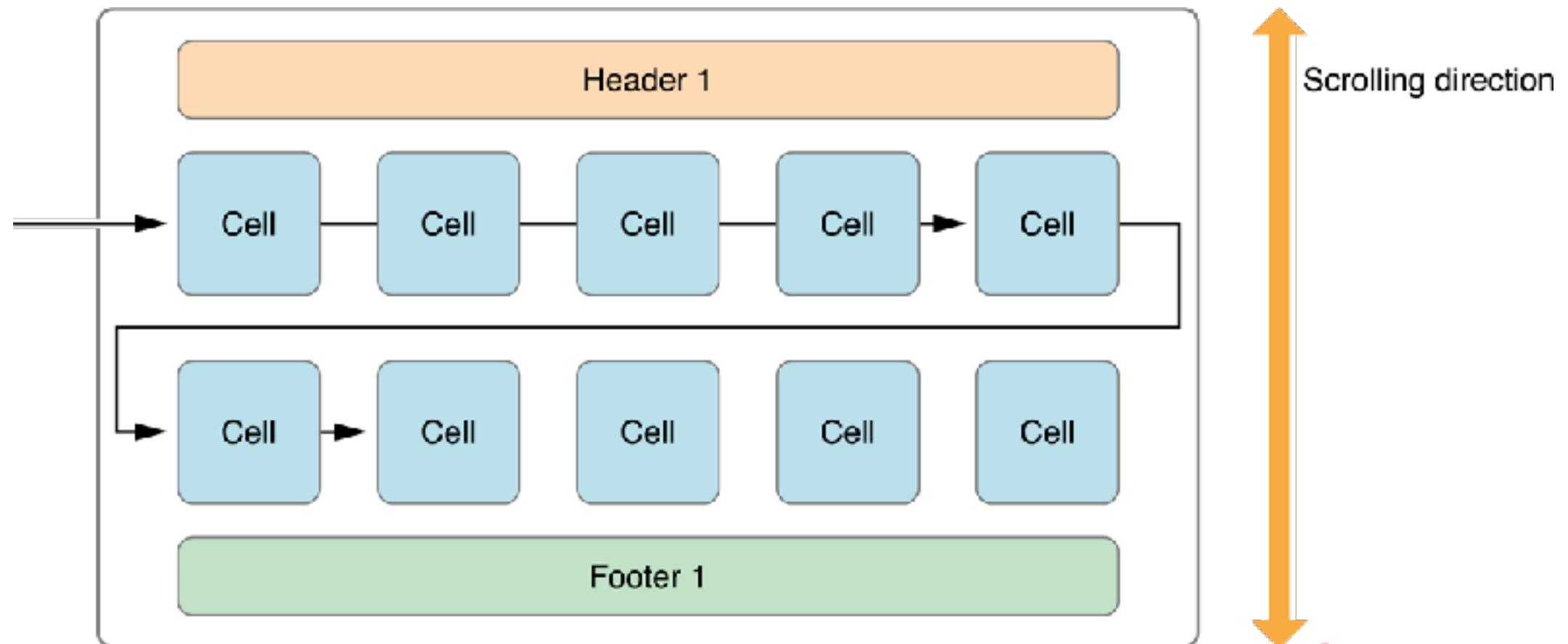


Section Layout



FlowLayout

- UICollectionViewFlowLayout Class에 정의
- Scroll Direction
 1. Vertical
 2. Horizontal



Flow Layout Attributes 정의

- UICollectionViewDelegateFlowLayout protocol 이용
- UICollectionViewDelegate가 정의된 인스턴스에서 작성.

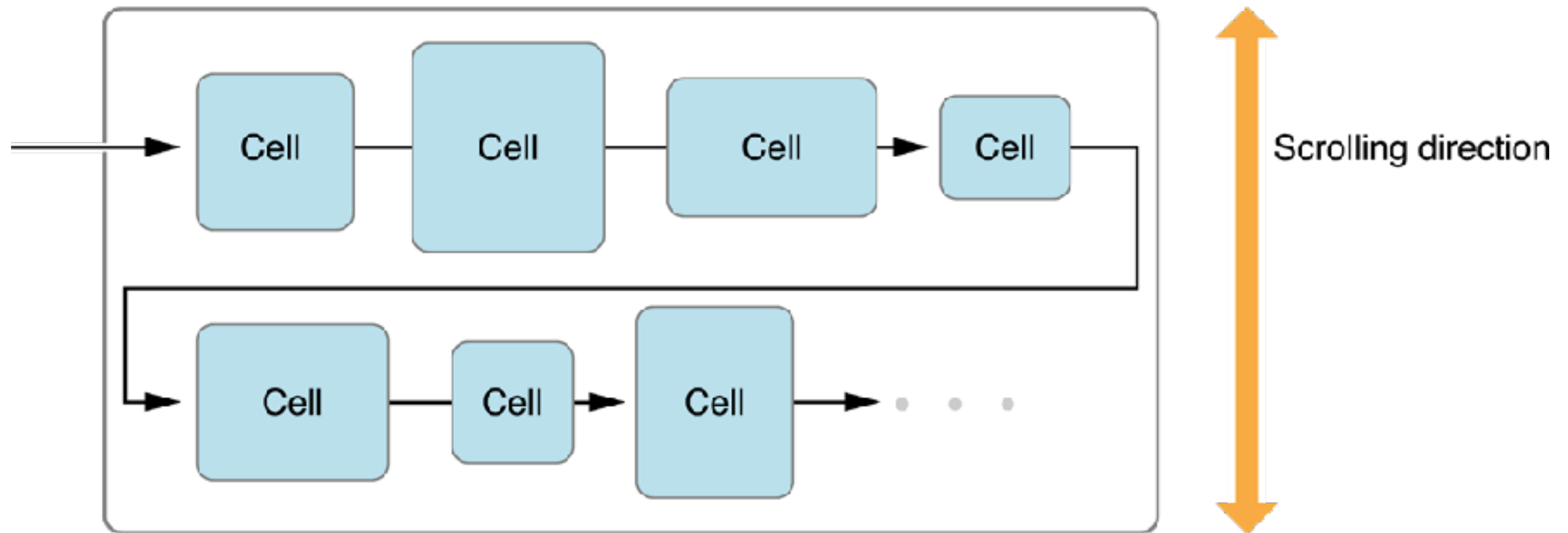
```
func collectionView(_ collectionView: UICollectionView, layout  
collectionViewLayout: UICollectionViewLayout, sizeForItemAt indexPath:  
IndexPath) -> CGSize
```

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

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

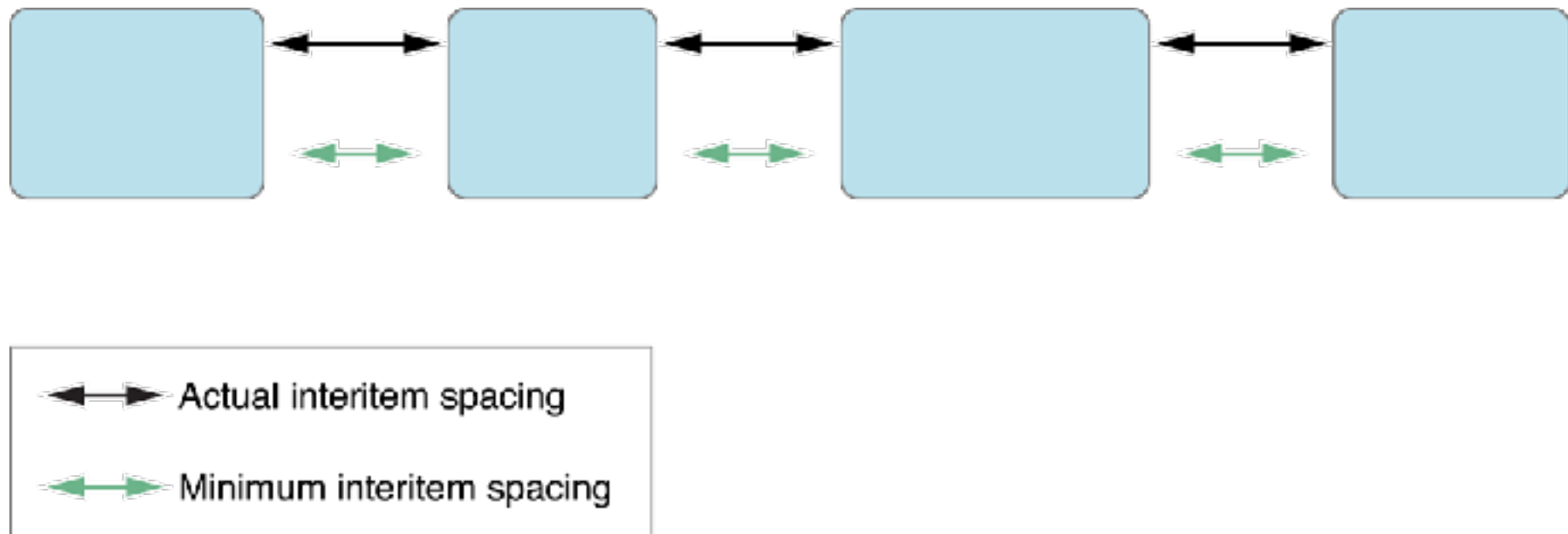
```
func collectionView(_ collectionView: UICollectionView, layout  
collectionViewLayout: UICollectionViewLayout, insetForSectionAt  
section: Int) -> UIEdgeInsets
```


Item Size



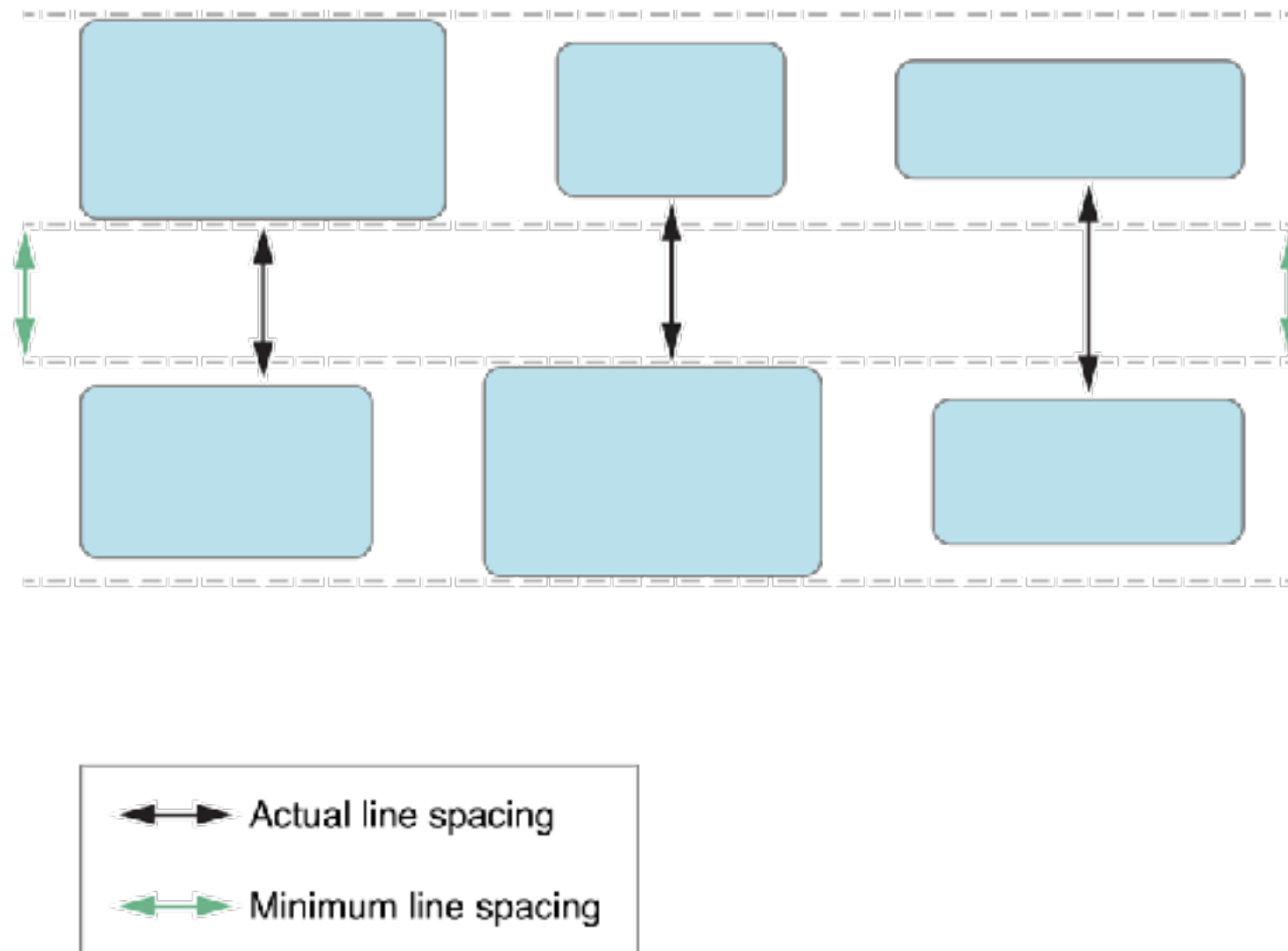
```
func collectionView(_ collectionView: UICollectionView,  
    layout collectionViewLayout: UICollectionViewLayout,  
    sizeForItemAt indexPath: IndexPath) -> CGSize
```

Item Spacing



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

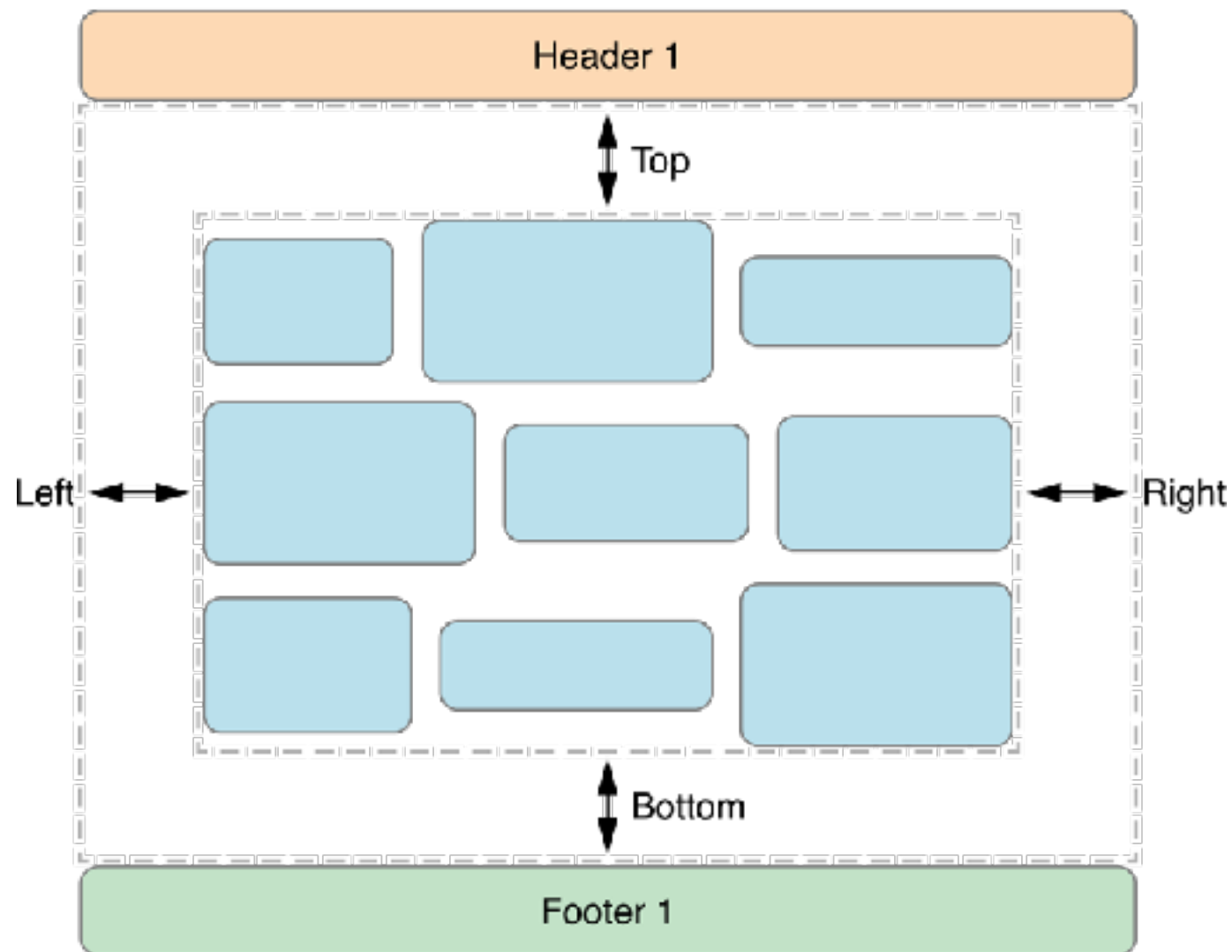
Line Spacing



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

Section Inset

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



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

Protocol

- UICollectionViewDataSource
- UICollectionViewDelegate
- UICollectionViewDataSourcePrefetching

UICollectionViewDataSource

```
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
```

UICollectionViewDelegate

```
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