

Working with UICollectionView

Tim Ekl, The Omni Group

2013.07.11



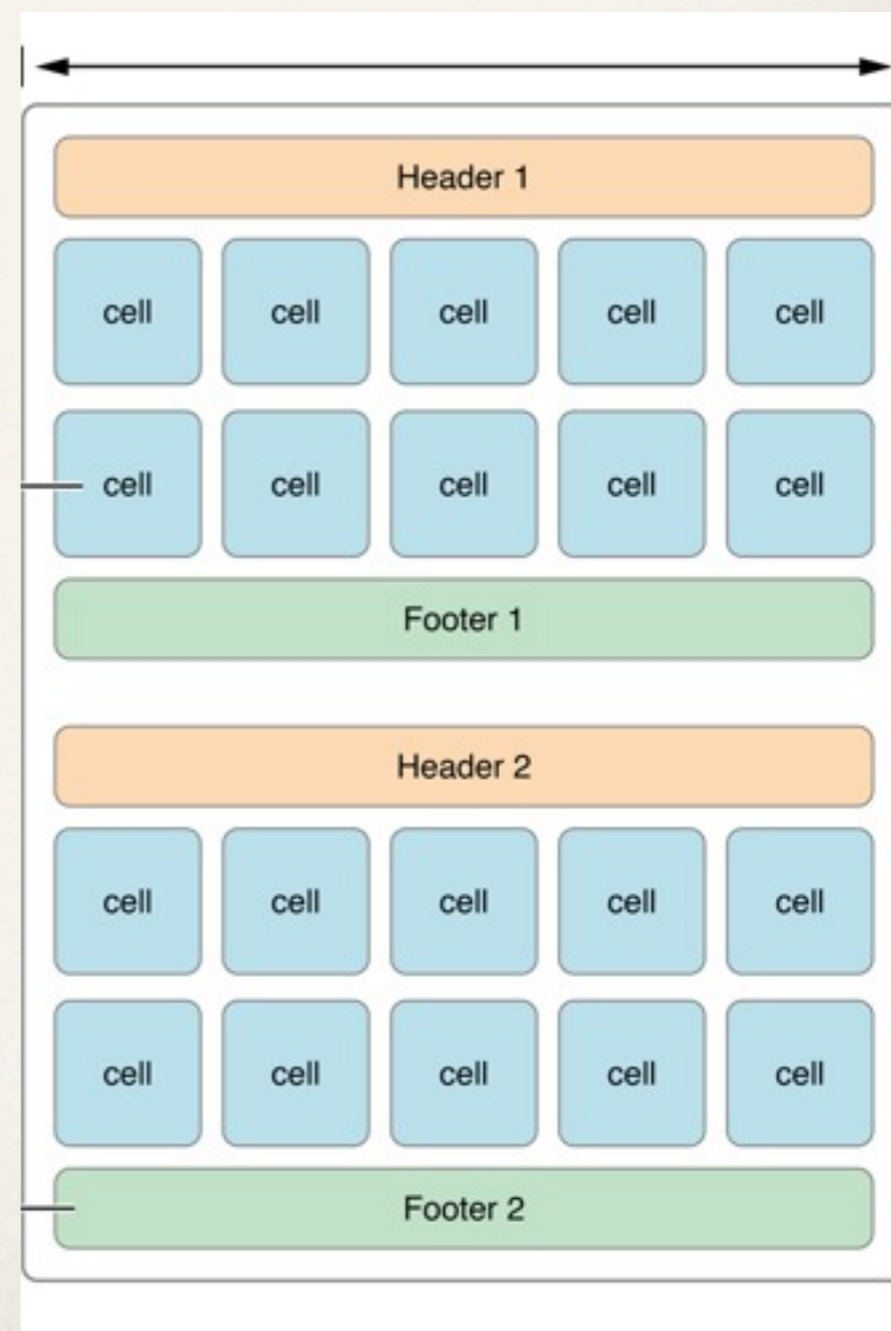
Follow Along

<https://github.com/lithium3141/TECollectionViewDemo>

UICollectionView

UICollectionView

- ❖ "...present an ordered set of data items using a flexible and changeable layout"
- ❖ Provides ability to display grid
- ❖ Layout object organizes cells onscreen
- ❖ Uses data source & multiple delegates (!)
- ❖ No built-in editing
- ❖ Requires class/nib registration for dequeuing; cannot create cells on the fly



<UICollectionViewDelegate>

- * ...similar to UITableViewDelegate

UICollectionView Demo

Tables vs. Collections

UITableView	UICollectionView
One column; many rows	Arbitrary layout (grid)
Delegate & data source	Data source & two delegates
Built-in editing mode	No editing
New cells & reuse queue	Cells from reuse queue only
Navigates a hierarchy	Often navigates a plane

UICollectionViewLayout

UICollectionViewLayout

- ❖ Abstract superclass intended for app-specific subclassing
- ❖ Determines position of cells within the collection view
- ❖ Very common subclass UICollectionViewFlowLayout
 - ❖ Arranges items left to right & top to bottom
 - ❖ Provides its own delegate protocol for simple customization
 - ❖ Assumes collection view delegate is also flow layout delegate

<UICollectionView DelegateFlowLayout>

- (CGSize)collectionView:(UICollectionView *)collectionView
 layout:(UICollectionViewLayout *)layout
sizeForItemAtIndexPath:(NSIndexPath *)indexPath;
- (CGFloat)collectionView:(UICollectionView *)collectionView
 layout:(UICollectionViewLayout *)layout
minimumLineSpacingForSectionAtIndex:(NSInteger)section;
- (CGFloat)collectionView:(UICollectionView *)collectionView
 layout:(UICollectionViewLayout *)layout
minimumInteritemSpacingForSectionAtIndex:(NSInteger)section;

Flow Layout Demo

Custom Layouts

- ❖ Subclass UICollectionViewLayout
- ❖ Determine *all* layout information for cells (and header / footer views)
 - ❖ Total content size
 - ❖ Item size by index path
 - ❖ Item size(s) in rect
 - ❖ Changing item size with bounds change

UICollectionViewLayoutAttributes

- ❖ Substitutes for setting view properties on cells directly
 - ❖ Layout: frame, size, center
 - ❖ Appearance: alpha, hidden, transform3D
 - ❖ Behavior relative to siblings: zIndex

Custom Layout Demo

Questions
