

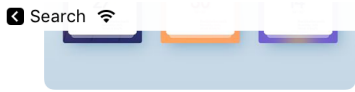
What is a UICollectionView?

- Way to present ordered data with a flexible layout
- Grid layout is the most commonly used



- It's commonly used out there.
- Apple's Calendar is a UICollectionView

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
			* Dev-Meeting 4 PM			
7	8	9	10	11	12	13
			* Dev-Meeting 4 PM			
14	15	16	17	18	19	20
			* Dev-Meeting 4 PM			
21	22	23	24	25	26	27
Father's Day National Aboriginal Da...	Discovery Day (NF, LR)		St. Jean Baptiste Day... * Dev-Meeting 4 PM			
28	29	30				



Weather App UI

₹ 719

Dribbble



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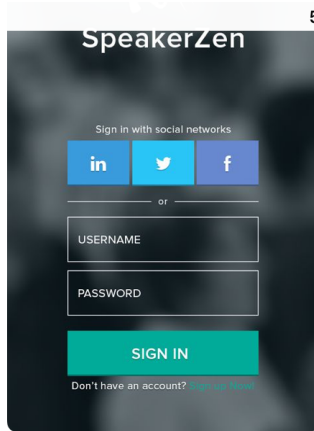
best apps for
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EduDemic



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iPad app



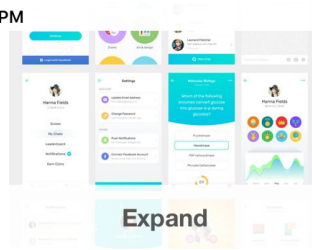
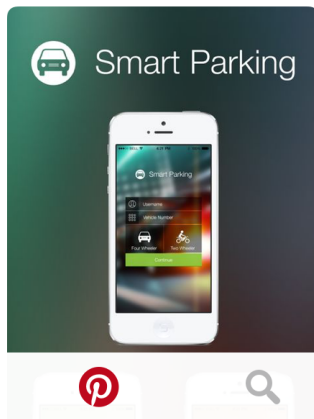
Login #form #ui
#userinterface

₹ 548

dribbble.com



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App icon

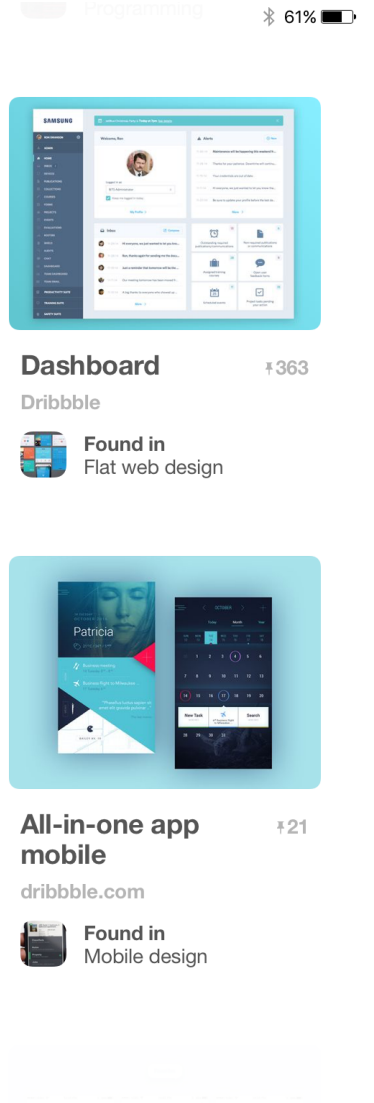


Quiz App is a
mobile UI kit
created using Ske...

₹ 102



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Mobile ui patterns



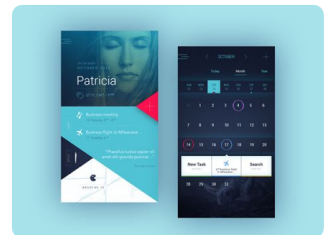
Dashboard

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All-in-one app mobile

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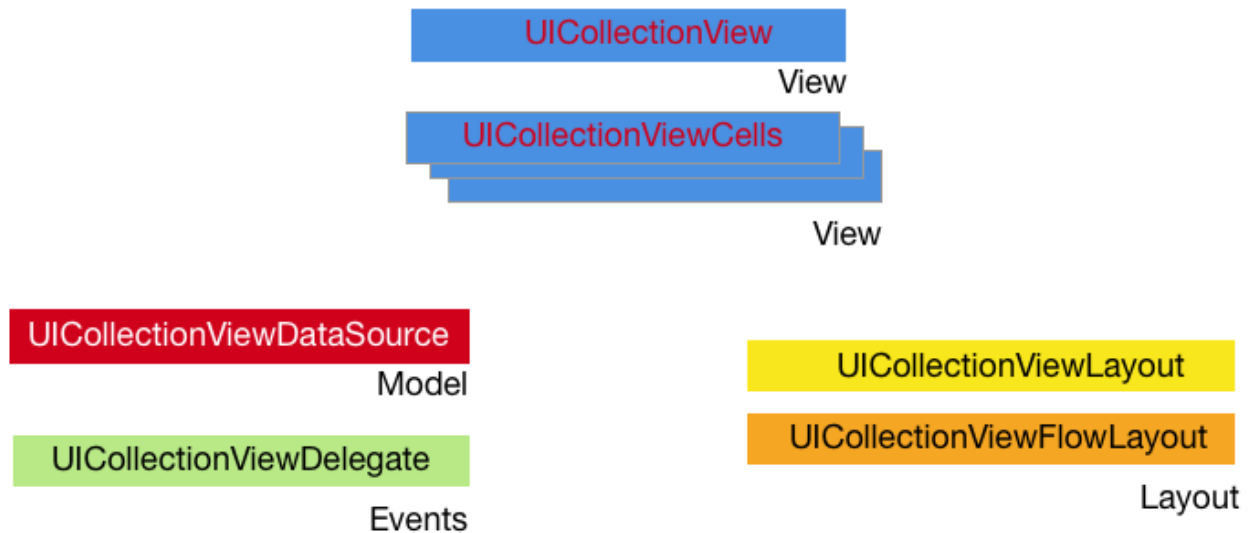
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Mobile design

50,000 Foot View

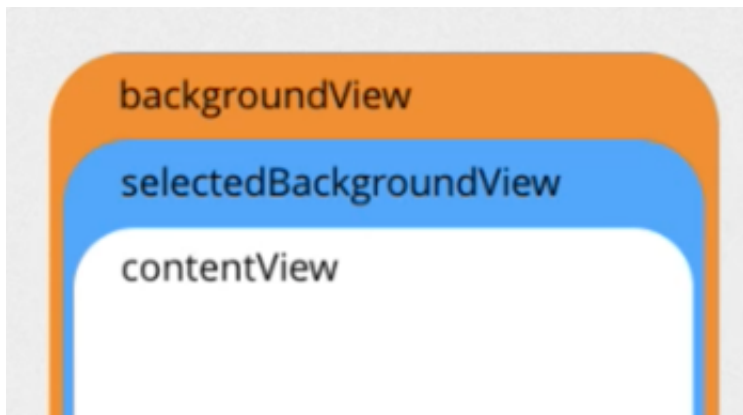
OverView



What it looks like:



- * UICollectionView is a container that holds everything
- * Cells are the content (add content to collectionView)

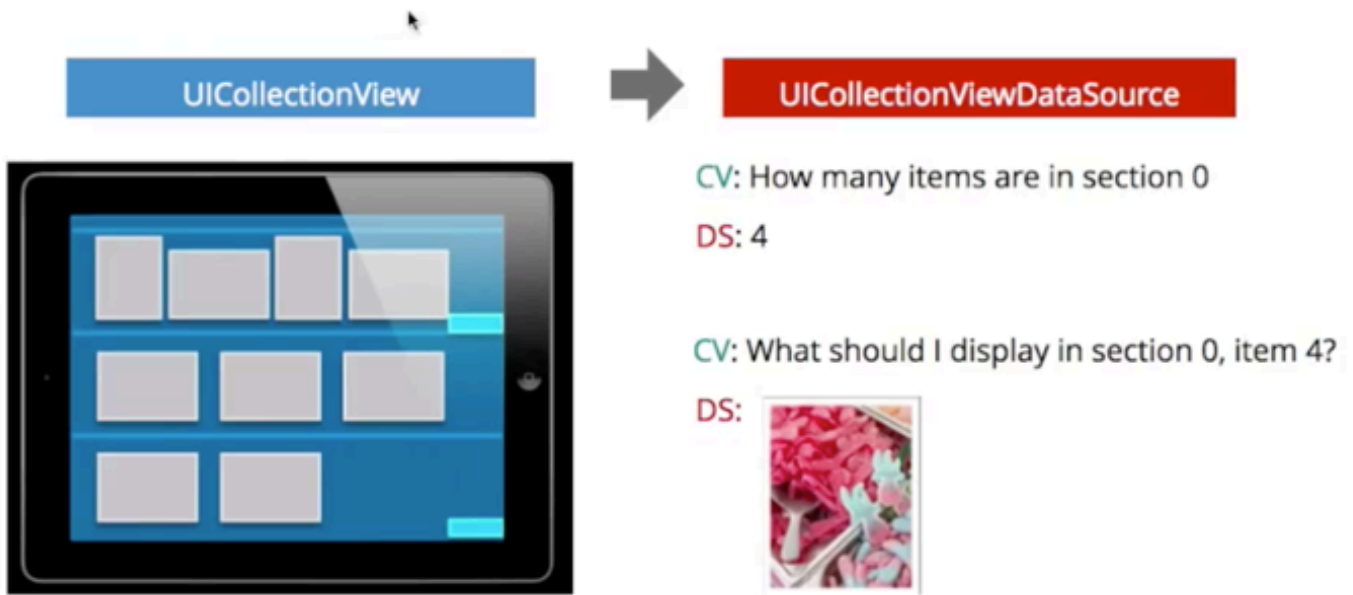


- * Supplementary view are things like headers and footers
- * DecorationView is the background image in this case

UICollectionViewDataSource

UICollectionViewDataSource

Providing content



UICollectionViewDataSource Has 3 Important Methods

```
1
2 // you should implement this and return the number
  of sections in your collection
3
4 - (NSInteger)numberOfSectionsInCollectionView:
  (UICollectionView *)collectionView;
5
6 // you have to determine the number of items there
  are for each section and return it here
7 - (NSInteger)numberOfItemsInSection:
  (NSInteger)section;
8
9
10 // this is where the model and view intersect
11 - (UICollectionViewCell *)cellForItemAtIndexPath:
```

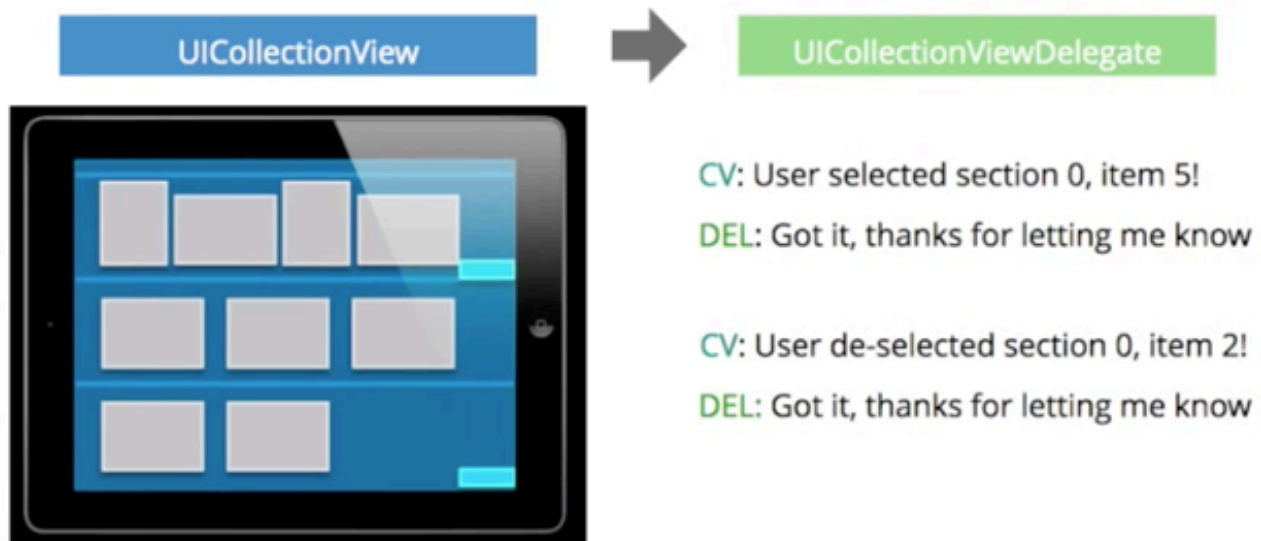
```
(NSIndexPath *)indexPath;
```

12
13
14

UICollectionViewDelegate

UICollectionViewDelegate

Interacting with Content



```
1  
2 - (void)collectionView:(UICollectionView  
  *)collectionView didSelectItemAtIndexPath:  
  (NSIndexPath *)indexPath;  
3
```

UICollectionViewFlowLayout

- Subclass of UICollectionViewLayout.
- Used for most grid style layouts.

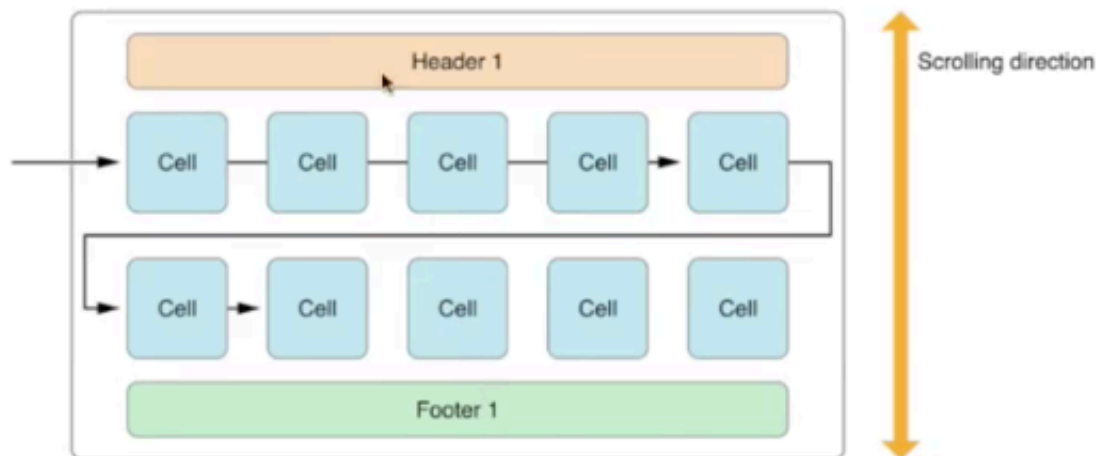
- The default flow layout is automatically hooked up in the *UICollectionViewController* and can be accessed using the *collectionViewLayout*.
- If you have an outlet to a *UICollectionView* then you can also access the *collectionViewLayout* which is automatically hooked up at least in IB.
- You can setup static values in the storyboard.
- To setup values that are relative to the view's dimensions then set these up in *viewDidLoad*.

UICollectionViewFlowLayout

How to layout content

```
var scrollDirection: UICollectionViewScrollDirection  
flowlayout.scrollDirection = UICollectionViewScrollDirection.Horizontal
```

The grid's scroll direction




```

1
2 @property CGFloat minimumInteritemSpacing;
3 @property CGFloat minimumLineSpacing;
4 @property(n nonatomic) UICollectionViewScrollDirection
  scrollDirection;
5
6 E.g.
7 UICollectionViewFlowLayout* layout =
  (UICollectionViewFlowLayout*)self.collectionView.col
  lectionViewLayout.
8 layout.minimumLineSpacing = 10;
9
10

```

UICollectionViewFlowLayout

How to layout content

```

var minimumInteritemSpacing: CGFloat
minimumInteritemSpacing = 5.0

```

Minimum horizontal spacing between cells

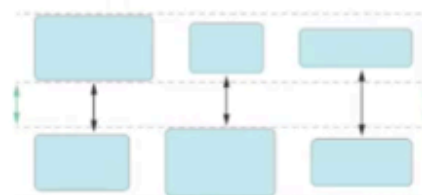


```

var minimumLineSpacing: CGFloat
minimumLineSpacing = 10.0

```

Minimum vertical spacing between cells



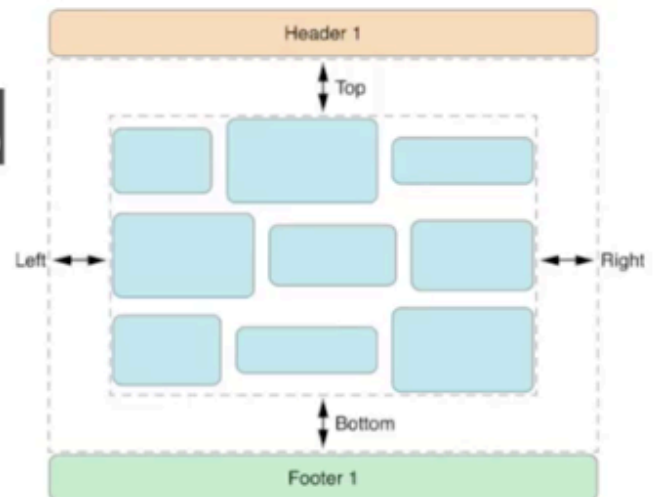
UICollectionViewFlowLayout

How to layout content

```
var sectionInset: UIEdgeInsets
sectionInset = UIEdgeInsetsMake(10,30,20,10)
```

Padding on sections

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



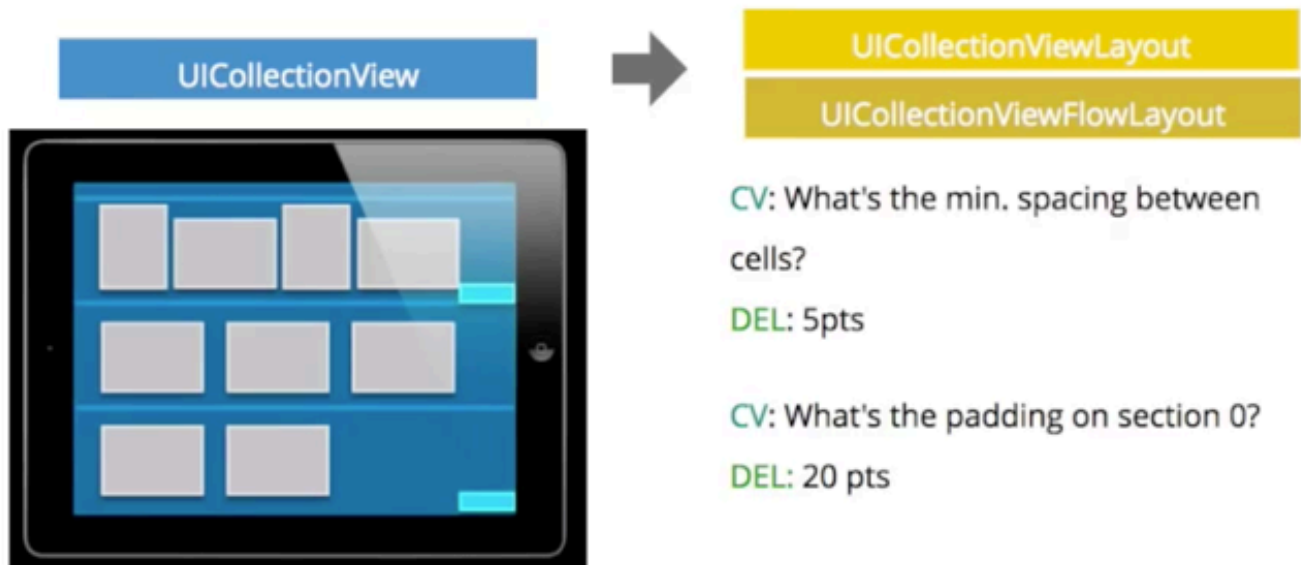
UICollectionViewDelegateFlowLayout

- You can also setup a delegate to create dynamically sized cells *UICollectionViewDelegateFlowLayout*.

```
1 - (CGSize)collectionView:(UICollectionView
    *)collectionView layout:(UICollectionViewLayout
    *)collectionViewLayout sizeForItemAtIndexPath:
    (NSIndexPath *)indexPath;
```

UICollectionViewLayout

How to layout content



CV: What's the min. spacing between cells?

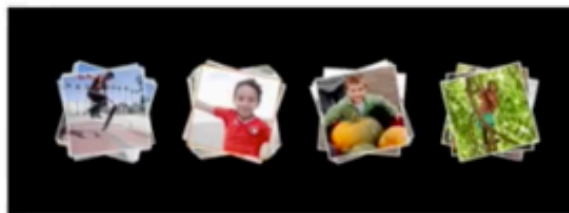
DEL: 5pts

CV: What's the padding on section 0?

DEL: 20 pts

UICollectionViewLayout

Complex layout examples



<https://github.com/philosopherdog/iOS-W3D3-CollectionViews>