Collection Views
A Collection View manages an ordered collection of data items and presents them using customizable layouts.

They provide the same general function as Table Views, except that a collection view is able to support more than just single-column layouts.

- multi-column grids
- tiled layouts
- circular layouts
- etc.
Collection Views

Like table views, a collection view:
- Is a subclass of **UIScrollView**
- Has a controller class – **UICollectionViewViewController**
- Has a delegate – **UICollectionViewDelegate**
- Has a data source – **UICollectionViewDataSource**
- Has reusable cells – **UICollectionViewCell**
- Has headers and footers called **Supplementary Views**

Unlike table views, a collection view offers a way to lay out its cells
- This is done by an optional **UICollectionViewLayout** object
Collection Views

- UICollectionViewLayout
  - is responsible for the size, position and other attributes of the content
  - can position its elements wherever it likes

- Two pre-defined types:
  - UICollectionViewFlowLayout: organizes cells into a grid
  - UICollectionViewTransitionLayout: lets you implement behaviors when changing from one layout to another in your collection view
Collection Views

Key methods:

- `numberOfSectionsInCollectionView`
- `numberOfItemsInSection`
- `cellForItemAtIndexPath` - Where you create a cell and set its data
- `sizeForItemAtIndexPath`
Collection Views

You can set the scroll direction as vertical (the default) or horizontal, either in IB or programmatically: