**The UICollections View provides a grid layout that can be styled.**

**The Collections view offers multiple columns. There is a UICollectionViewFlowLayout that allows headers and footers**

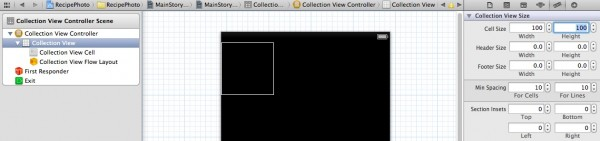
**This time we’ll take our initial table layout and turn it into a grid.  
  
Part 1. Prep and Design**

**Create a single view app. Call it MenuGallery.**

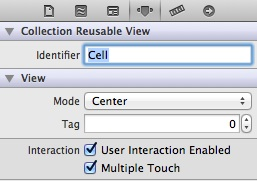
**Just like last week’s exercises, delete the default view controller.**

**Now drag a collection view controller from the object library**

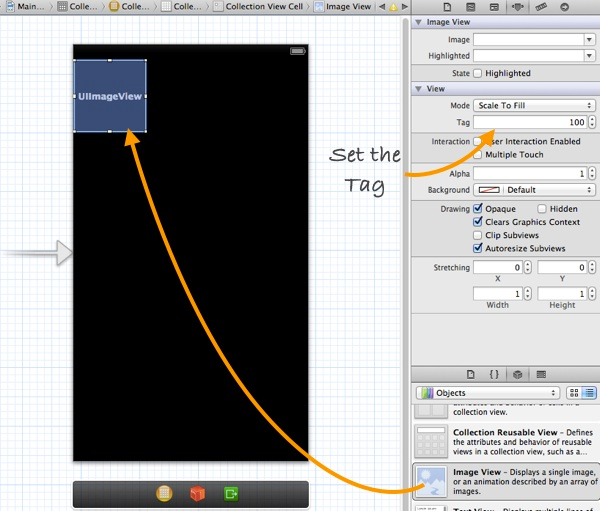
**Using the size inspector, change the cell to 100 by 100…notice you do not have to select the cell to do this.**

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**Similar to our tablecell experience, go to the attribute inspector and set it to “Cell”**

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**Now Drag an ImageView to the Table Cell and in the attributes inspector set the Tag to 100**

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**Part 2. Time to create the class that controls this.**

**Create a new class called MenuCollectionViewController. Make it a Cocoa Touch, Objective C Class. Make it a subclass of UICollectionViewController as that will hold all of the properties and methods we need.**

**Back in the storybord, select the collections controller and assign its custom class to MenuCollectionViewController.**

**Now to implement our necessary methods just like our table views…remember numberOfSectionsInTableView and numberOfRowsInSection? In the collections view, we have collectionView: numberOfItemsInSection: and collectionView:cellForItemAtIndexPath: methods.**

**Now add the pics folder to your project. Don’t forget to have the Copy checkbox checked.**

**In MenuViewController.m, create an array for our pictures:**

NSArray \*menuPhotos;

**Now assign the following values to that array in our ViewDidLoad Method:**

menuPhotos = [NSArray arrayWithObjects:@"angry\_birds\_cake.jpg", @"creme\_brelee.jpg", @"egg\_benedict.jpg", @"full\_breakfast.jpg", @"green\_tea.jpg", @"ham\_and\_cheese\_panini.jpg", @"ham\_and\_egg\_sandwich.jpg", @"hamburger.jpg", @"instant\_noodle\_with\_egg.jpg", @"japanese\_noodle\_with\_pork.jpg", @"mushroom\_risotto.jpg", @"noodle\_with\_bbq\_pork.jpg", @"starbucks\_coffee.jpg", @"thai\_shrimp\_cake.jpg", @"vegetable\_curry.jpg", @"white\_chocolate\_donut.jpg", nil];

**Now for our mandatory methods**

- (NSInteger)collectionView:(UICollectionView \*)collectionView numberOfItemsInSection:(NSInteger)section

**//same as before….count the array**

return menuPhotos.count;

}

- (UICollectionViewCell \*)collectionView:(UICollectionView \*)collectionView cellForItemAtIndexPath:(NSIndexPath \*)indexPath{

**//referencing the attributes of our cell**

static NSString \*identifier = @"Cell";

**//start our virtual loop through the cell**

UICollectionViewCell \*cell = [collectionView dequeueReusableCellWithReuseIdentifier:identifier forIndexPath:indexPath];

**//instantiate the imageview in each cell**

UIImageView \*menuPhotoView = (UIImageView \*)[cell viewWithTag:100];

**//assign the image**

menuPhotoView.image = [UIImage imageNamed:[menuPhotos objectAtIndex:indexPath.row]];

return cell;

}

**Now Run it!**

**Part 3. Customizing the grid’s cells**

**Each cell has three parts:**

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**We can use pic\_frame.png already in your project to be the background view…**

**The size of the frame is 100 by 100 px. In order to frame the recipe photo, we’ll first resize the image view of cell and re-arrange its position.**

**Back in the storyboard, select the ImageView and select it’s size inspector:**

**Change x to 5, y to 8. Change the width to 90 and the height to 72**

**Now go to the collections class…MenuCollectionViewController.m and add the following to the cellForItemAtIndexPath method**

cell.backgroundView = [[UIImageView alloc] initWithImage:[UIImage imageNamed:@"photo-frame.png"]];

**Run it and we’re done…note…the content view above could be things other than a picture…**