


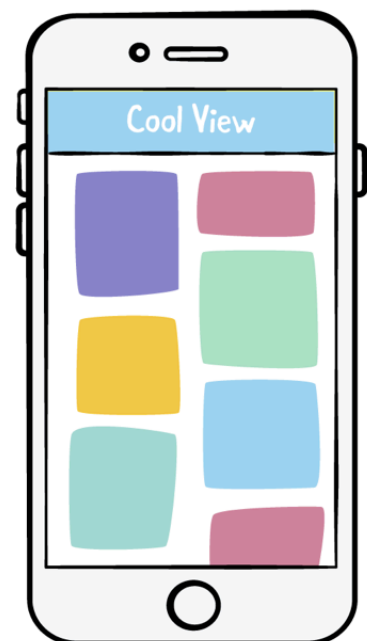


CUSTOM   
COLLECTION  
 VIEW  
LAYOUT 



 HANDS-ON CHALLENGES

## Custom Collection View Layout

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## Moving the section header content

As our app currently stands, the status bar information is displayed over our section header. If you wanted to move the section header content out of the way of the status bar, how do you think it would be achieved?

### Hints:

1. Look at the `contentInset` property of the collection view.
2. You'll also need to update the code in the layout subclass to accommodate the inset.

Before you turn the page for our solution, be sure to give it a try for yourself first!

## Solution

Open **MasterViewController.swift** and add the following line of code to the end of `viewDidLoad()`:

```
collectionView!.contentInset = UIEdgeInsets(top: 20, left: 0, bottom: 0,
right: 0)
```

This sets the collection view's `contentInset` property to have a 20 pixel inset from the top of the view.

Next, open **StretchyHeaderLayout.swift** and update `layoutAttributesForElements(in:)` like so, (Just the numbered lines have been added/changed):

```
override func layoutAttributesForElements(in rect: CGRect) ->
[UICollectionViewLayoutAttributes]? {
    let layoutAttributes = super.layoutAttributesForElements(in: rect)!
    as [UICollectionViewLayoutAttributes]
    let insets = collectionView!.contentInset // 1.
    let offset = collectionView!.contentOffset
    let minY = -insets.top // 2.
    if (offset.y < minY) { // 3.
        let deltaY = fabs(offset.y - minY) // 4.
        for attributes in layoutAttributes {
            if let elementKind = attributes.representedElementKind {
                if elementKind == UICollectionViewElementKindSectionHeader {
                    var frame = attributes.frame
                    frame.size.height = max(minY, headerReferenceSize.height
                    + deltaY) // 5.
                    frame.origin.y = frame.minY - deltaY
                    attributes.frame = frame
                }
            }
        }
    }
    return layoutAttributes
}
```

1. Get the `collectionView!.contentInset` property and store it in a constant.
2. Create the `minY` constant that is the negative of the `insets.top` value.
3. Change this line to take our new inset into account.
4. Again, we need to take the new inset into account by subtracting it from the `offset.y`.
5. Change this line to use the `minY` value instead of 0.

Now build and run!



Now the section header appears below the status bar information!