UIScrollView

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Tạo một zooming scroll view

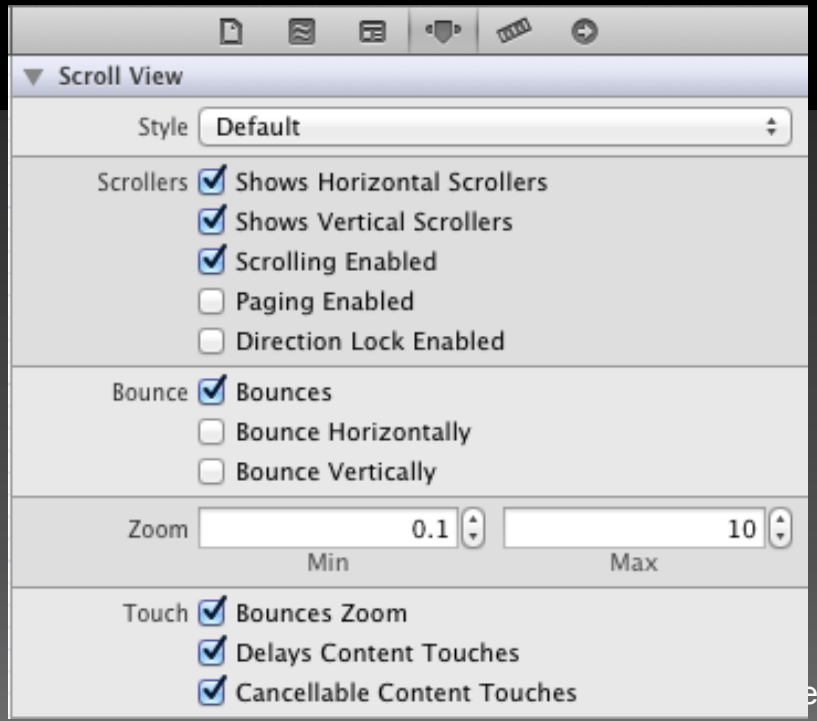
1. Đặt UIImageView nằm trong UIScrollView
2. UIScrollView.delegate trỏ tới UIViewController
3. UIViewController tuân theo UIScrollViewDelegate


```
@interface ViewController : UIViewController <UIScrollViewDelegate>
```

- Viết hàm này, trả về UIImageView chứa ảnh còn phóng to, thu nhỏ

```
- (UIView *)viewForZoomingInScrollView:(UIScrollView *)scrollView
{
    return self.photo;
}
```

- Điều chỉnh hệ số Zoom



Không sử dụng cách kéo, thả, cấu hình trên StoryBoard

```
- (void)viewDidLoad
{
 [super viewDidLoad];
 self.imageView = [[UIImageView alloc] initWithImage:[UIImage
imageNamed:@”Ventura.jpg"]];

 [self.scrollView
setContentSize:CGSizeMake(self.imageView.frame.size.width,
self.imageView.frame.size.height)];

 self.scrollView.minimumZoomScale = 0.2;
 self.scrollView.maximumZoomScale = 4.0;
 self.scrollView.delegate = self;
 self.scrollView.clipsToBounds = YES;
 [self.scrollView addSubview:self.photo];
}
```

Mở ví dụ SimpleZoom ra chạy thử

Để làm việc tốt với UIScrollView cần làm 2 thứ

1. Cấu hình UIScrollView

2. Lập trình UIViewController thực hiện các hàm trong UIScrollViewDelegate

Cấu hình cho UIScrollView

Managing the Display of Content

- setContentOffset:animated:
  contentOffset *property*
  contentSize *property*
  contentInset *property*

Managing Scrolling

  scrollEnabled *property*
  directionalLockEnabled *property*
  scrollsToTop *property*
- scrollRectToVisible:animated:
  pagingEnabled *property*
  bounces *property*
  alwaysBounceVertical *property*
  alwaysBounceHorizontal *property*
- touchesShouldBegin:withEvent:inContentView:
- touchesShouldCancelInContentView:
  canCancelContentTouches *property*
  delaysContentTouches *property*
  decelerationRate *property*
  dragging *property*
  tracking *property*
  decelerating *property*

Managing the Scroll Indicator

- indicatorStyle *property*
- scrollIndicatorInsets *property*
- showsHorizontalScrollIndicator *property*
- showsVerticalScrollIndicator *property*
- – flashScrollIndicators

Zooming and Panning

- panGestureRecognizer *property*
- pinchGestureRecognizer *property*
- – zoomToRect:animated:
- zoomScale *property*
- – setZoomScale:animated:
- maximumZoomScale *property*
- minimumZoomScale *property*
- zoomBouncing *property*
- zooming *property*
- bouncesZoom *property*

Managing the Delegate

- delegate *property*

<UIScrollViewDelegate>

- Để điều khiển, hứng sự kiện của UIScrollView, ta trỏ UIScrollView.delegate tới UIViewController.

- Còn UIViewController thì tuân thủ UIScrollViewDelegate

Responding to Scrolling and Dragging

- `scrollViewDidScroll:`
- `scrollViewWillBeginDragging:`
- `scrollViewWillEndDragging:withVelocity:targetContentOffset:`
- `scrollViewDidEndDragging:willDecelerate:`
- `scrollViewShouldScrollToTop:`
- `scrollViewDidScrollToTop:`
- `scrollViewWillBeginDecelerating:`
- `scrollViewDidEndDecelerating:`

Managing Zooming

- `viewForZoomingInScrollView:`
- `scrollViewWillBeginZooming:withView:`
- `scrollViewDidEndZooming:withView:atScale:`
- `scrollViewDidZoom:`

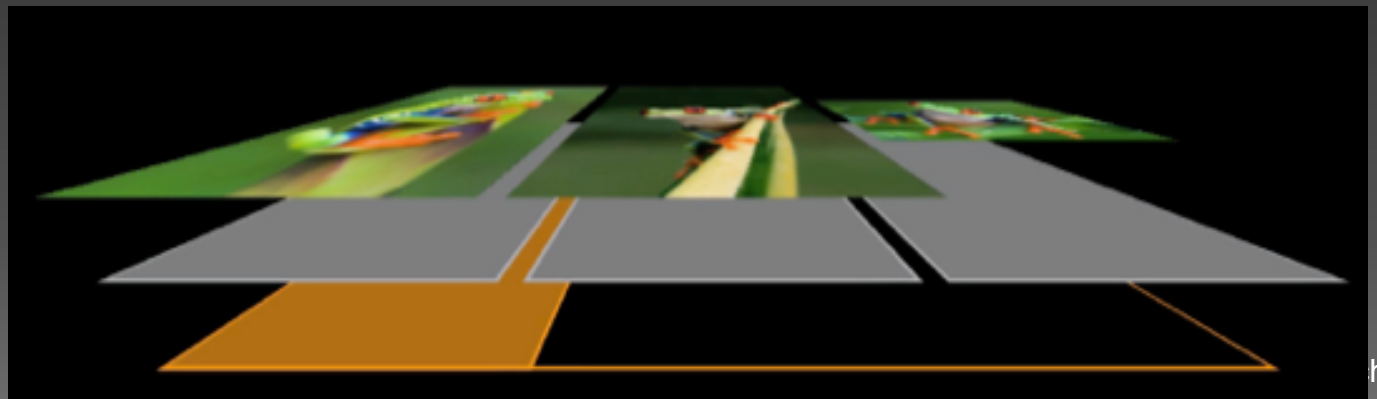
Responding to Scrolling Animations

- `scrollViewDidEndScrollingAnimation:`

Demo

Ví dụ “Zoom in Paging Scroll View”

- Tạo Paging trong UIScrollView
- Lồng ScrollView trong ScrollView để tạo hiệu ứng mong muốn.




MacBook Air

Thuộc tính pagingEnabled và ContentSize

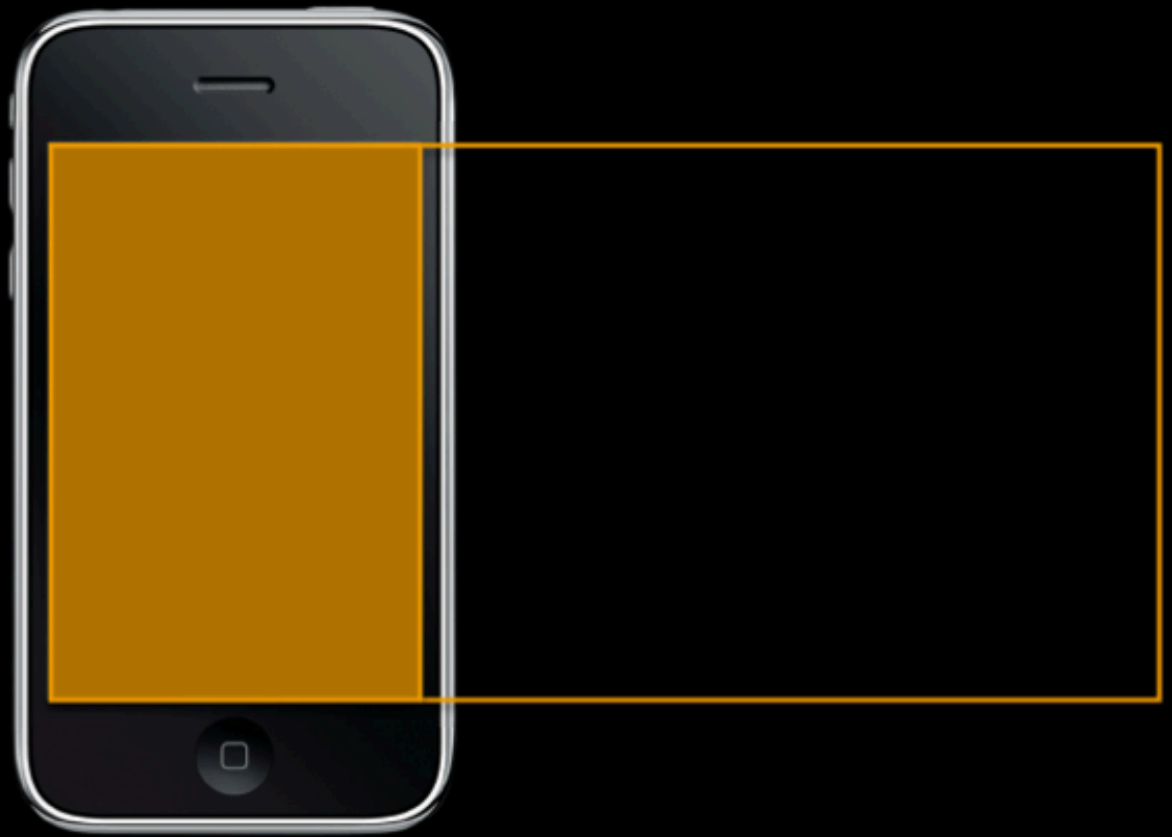
```
self.myScrollView = [[UIScrollView alloc] initWithFrame:scrollViewRect];

self.myScrollView.pagingEnabled = YES;

self.myScrollView.contentSize = CGSizeMake(scrollViewRect.size.width *
3.0f, scrollViewRect.size.height);
```

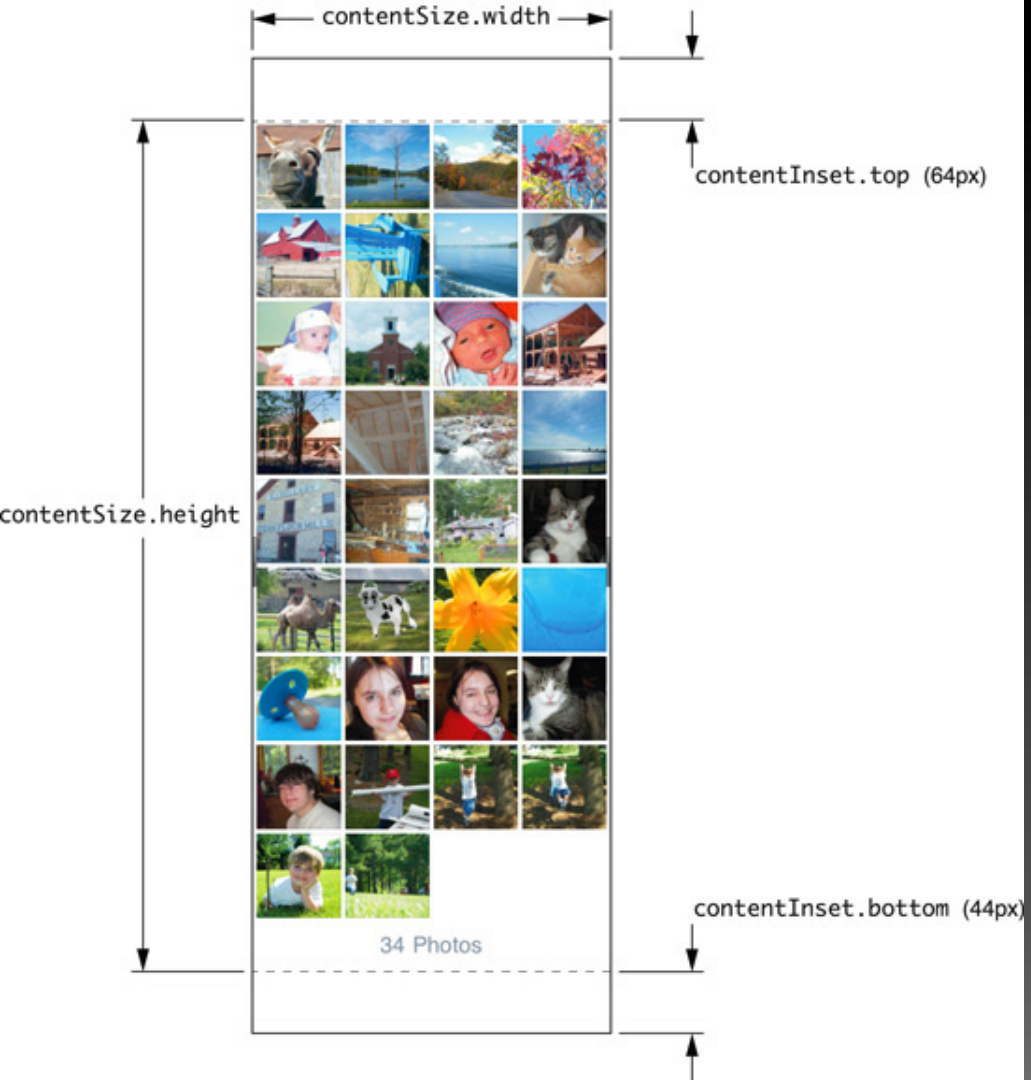
View Configuration

setContentSize



Coordination of content in UIScrollView

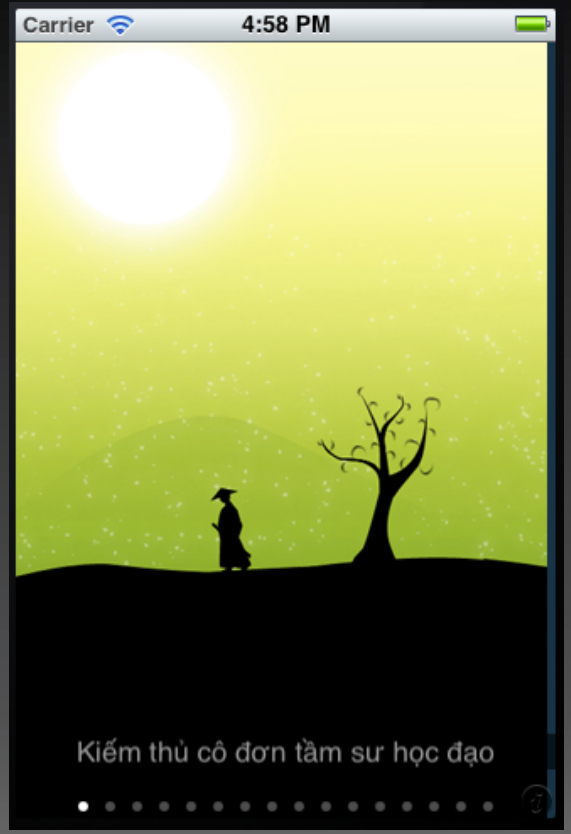
- contentInset
- contentOffset
- contentSize



UIScrollView property explain

- Content size: kích thước nội dung hiển thị bên trong scroll view.
- ContentInset: phần chừa ra không hiển thị nội dung scroll view

Background Chooser



- Model:
  - Photo, DataSource
- ViewController

```
- (void)scrollViewDidScroll:(UIScrollView *)scrollView {
    // Load the pages which are now on screen
    [self loadVisiblePages];
}
```

```
- (void)loadVisiblePages {
- // First, determine which page is currently visible
CGFloat pageWidth = self.scrollView.frame.size.width;
NSInteger page = (NSInteger)floor(self.scrollView.contentOffset.x/
pageWidth + 0.5f);

    if (self.pageControl.currentPage != page || isFirstTimeLoading)
{
        isFirstTimeLoading = NO;
        // Update the page control
        self.pageControl.currentPage = page;

        //[self loadPage:page-1];
        [self loadPage:page];
        [self loadPage:page+1];

        self.labelPopup.text = [self.datasource
descriptionAtIndex:page];
    }
}
```

ScrollViewSuite : TapToZoom

- Fitting the image to the screen on launch
- Detecting single, double, and two-finger taps using UIGestureRecognizer
- Zooming in response to taps

ScrollViewSuite : AutoScroll

- Single tap: toggle display thumb view
- Double tap – single touch
- Double tap – two touches:
- Use of the canCancelContentTouches property to track moving touches in a subview of a scroll view
- How to implement autoscrolling in response to a subview being dragged

ScrollViewSuite - Titling

- How to subclass UIScrollView to add content tiling
- Reusing tiles to optimize performance and memory use
- Changing the resolution of the content in response to zooming

UITextView

- Multilines
- No multi colors
- No bold / italic formatting

3rd parties RichText

- http://www.cocoacontrols.com/platforms/ios/controls/egotextview
- https://github.com/SquaredTiki/EditableCoreTextOverlay
- http://codaset.com/jer/jtextview
- http://www.cocoacontrols.com/platforms/ios/controls/dtcoretext
- http://www.cocoacontrols.com/platforms/ios/controls/rtlabel

UIProgressView

- See demo “OpenPDF ProgressView”

```
- (void)connection:(NSURLConnection *)connection didReceiveData:
(NSData *)data
{

        filesizereceived += [data length];
        filepercentage = (float)filesizereceived/(float)totalfilesize;
        progressView.progress = filepercentage;

        int p = 100 *filepercentage;
        NSString *percent = [NSString stringWithFormat: @"%d %%",p];

        progressLabel.text = percent;
        [receivedData appendData:data];

}
```