

Customizing Your App's Appearance for iOS 7

Session 214

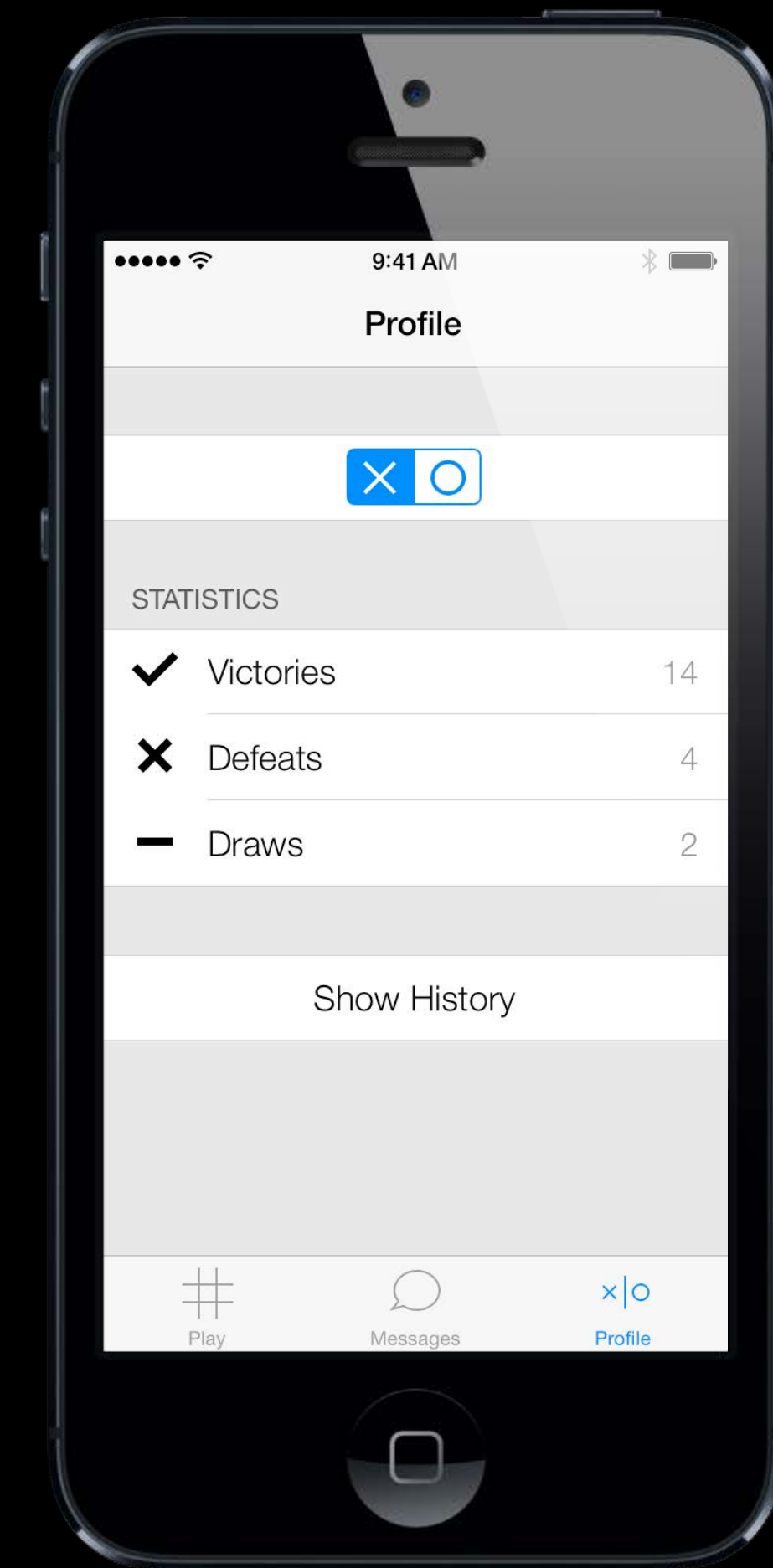
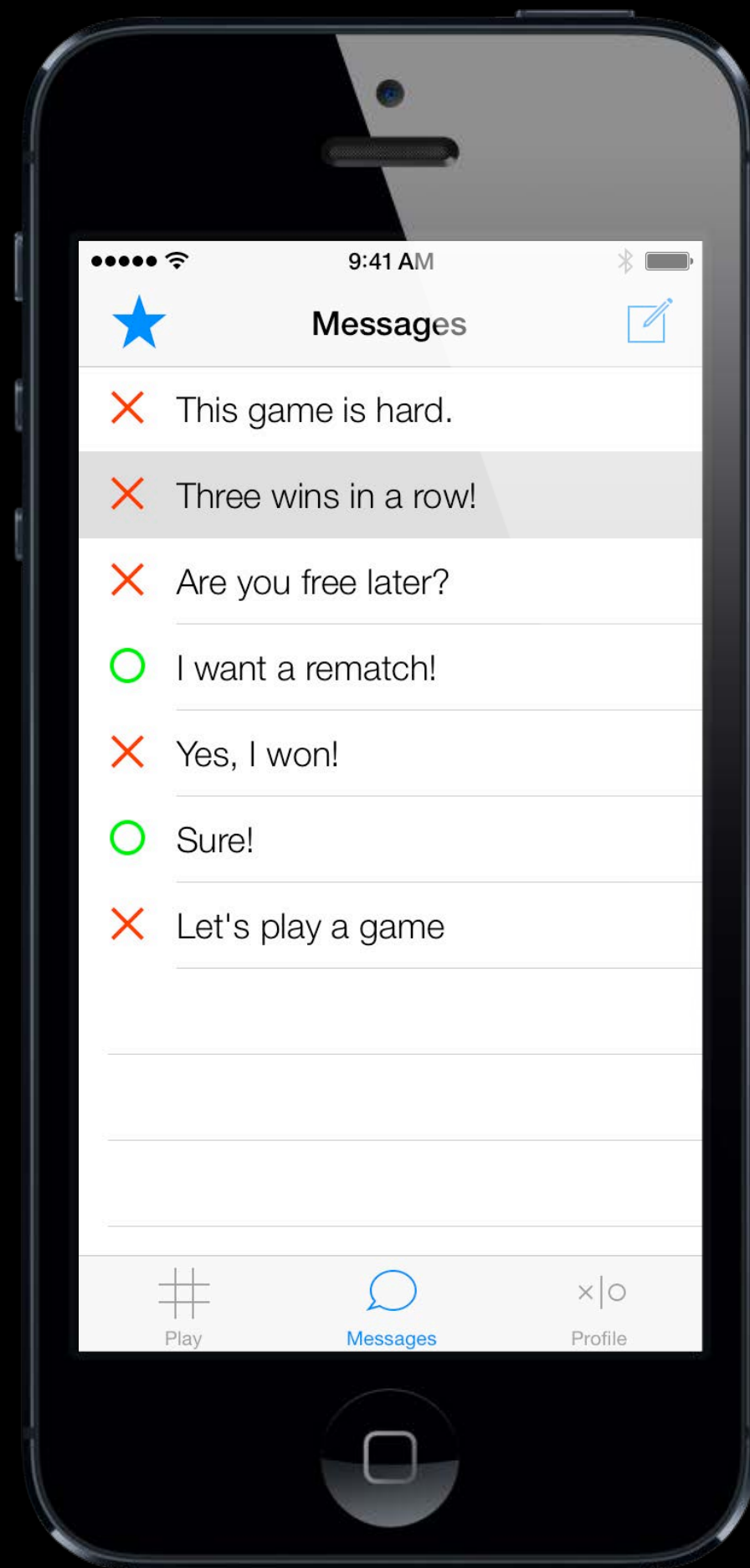
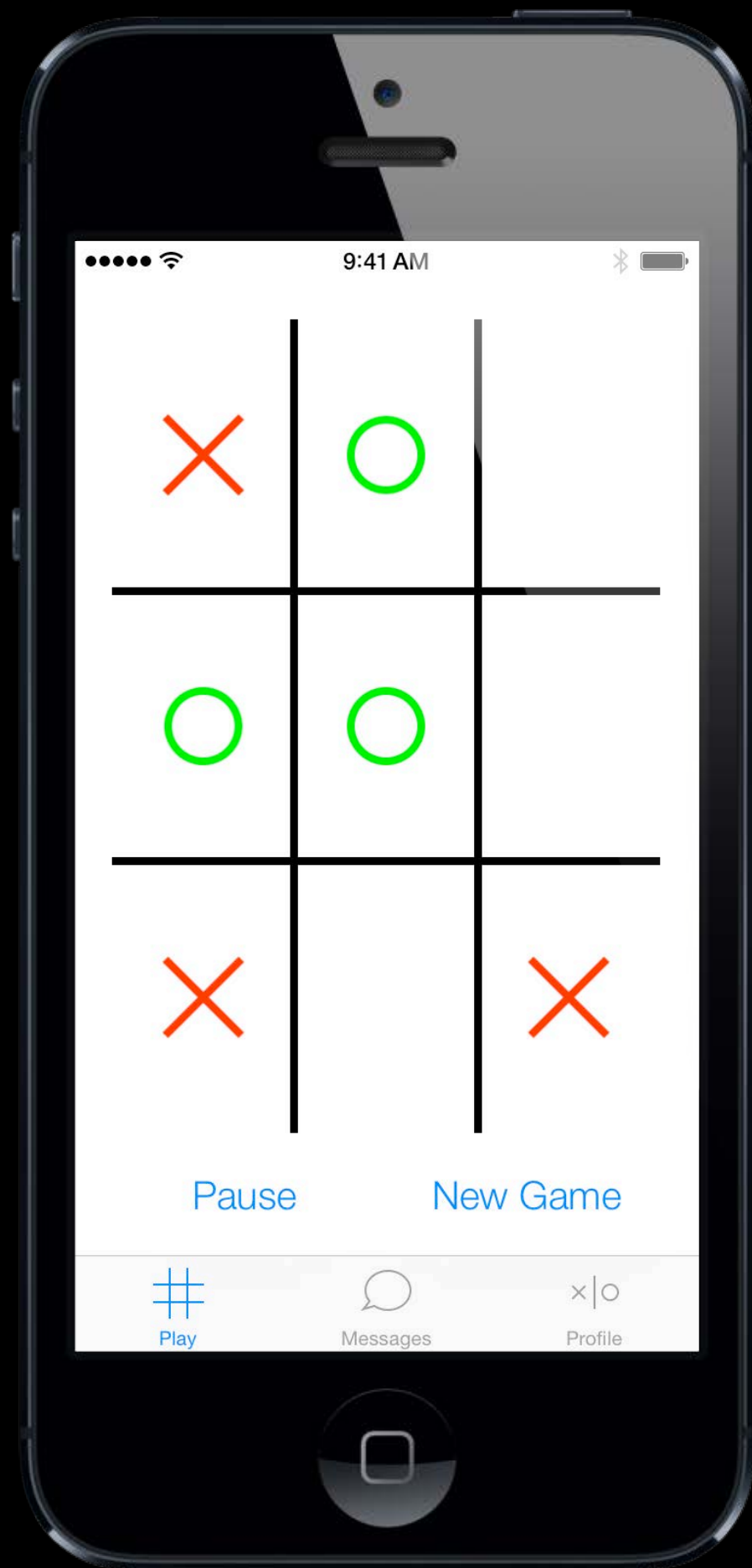
Jacob Xiao

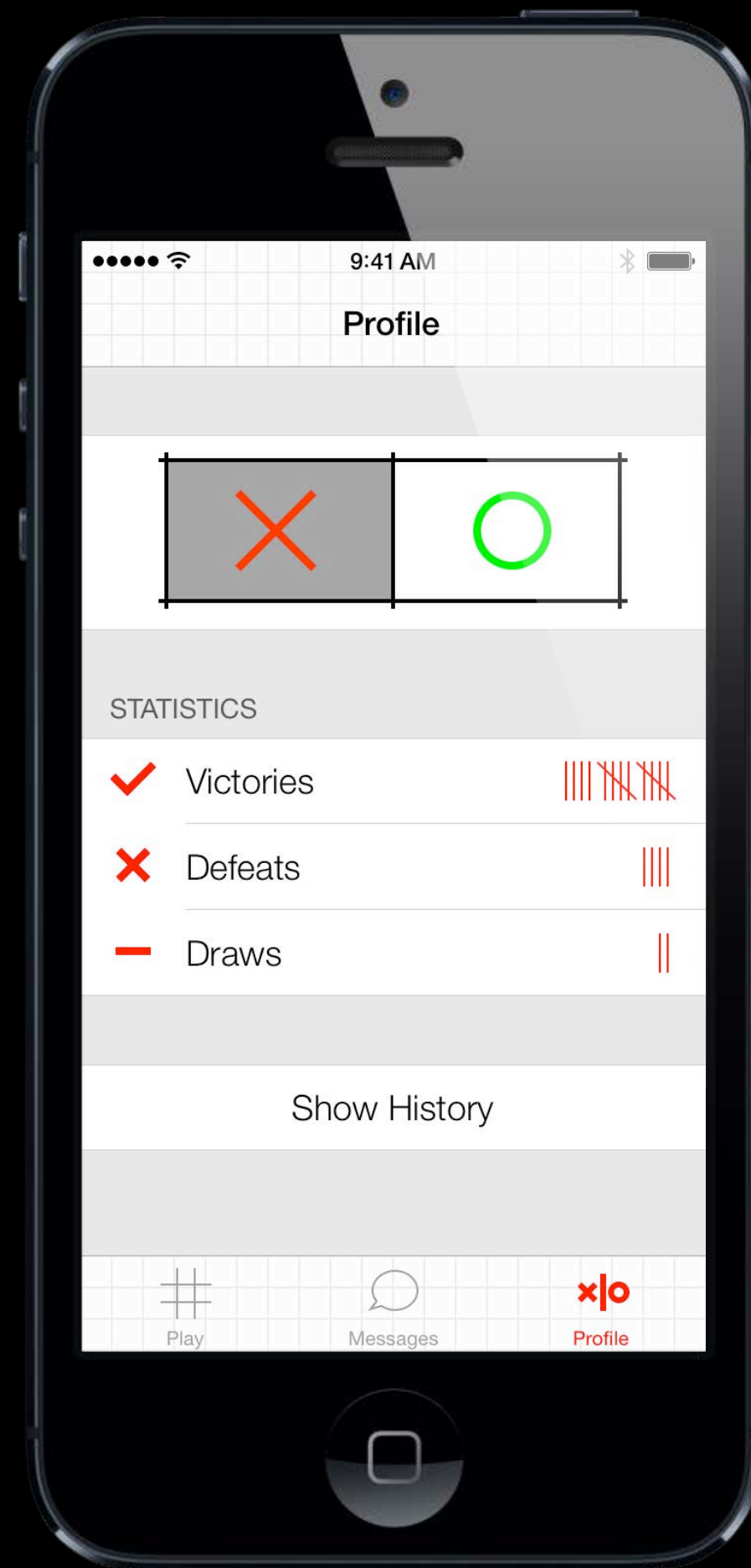
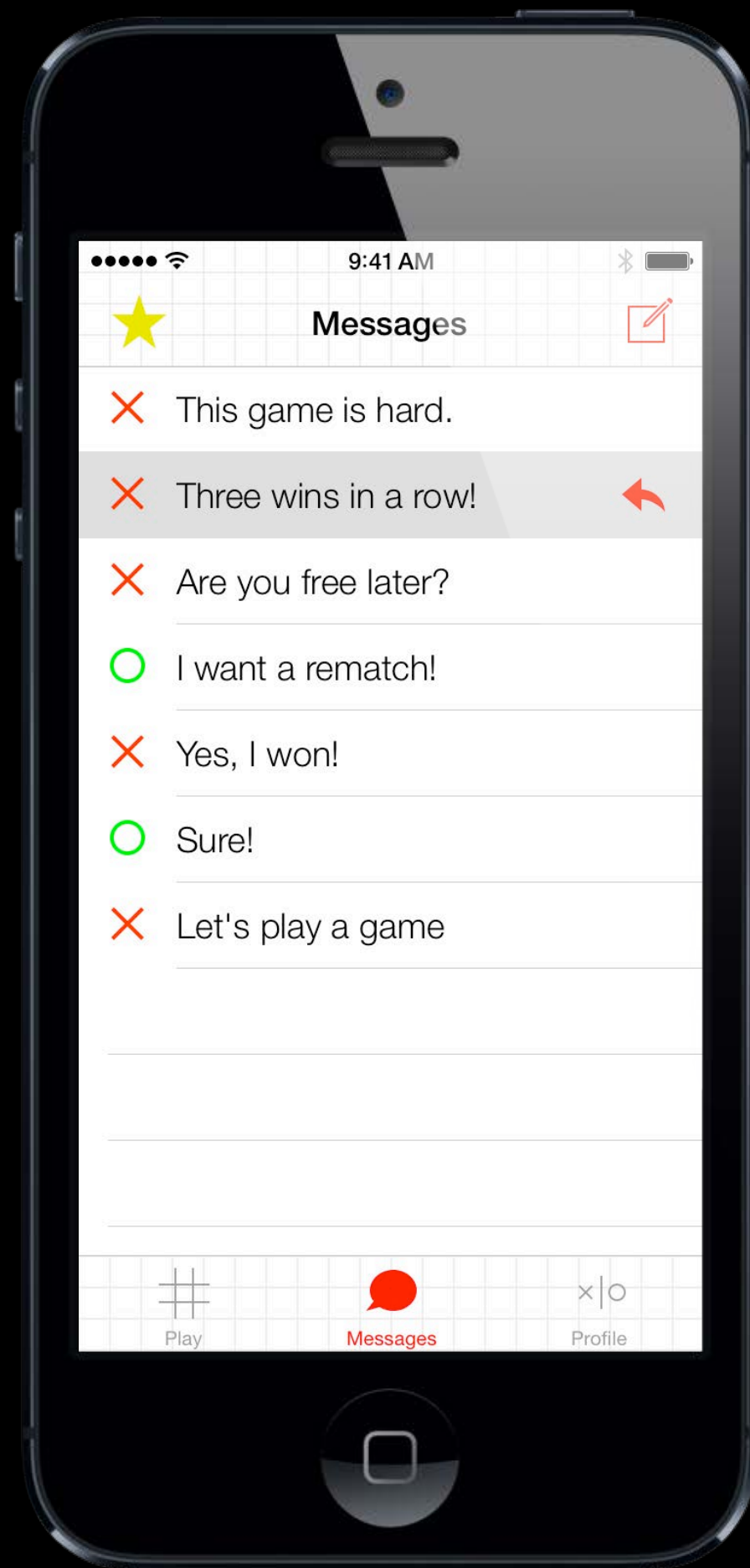
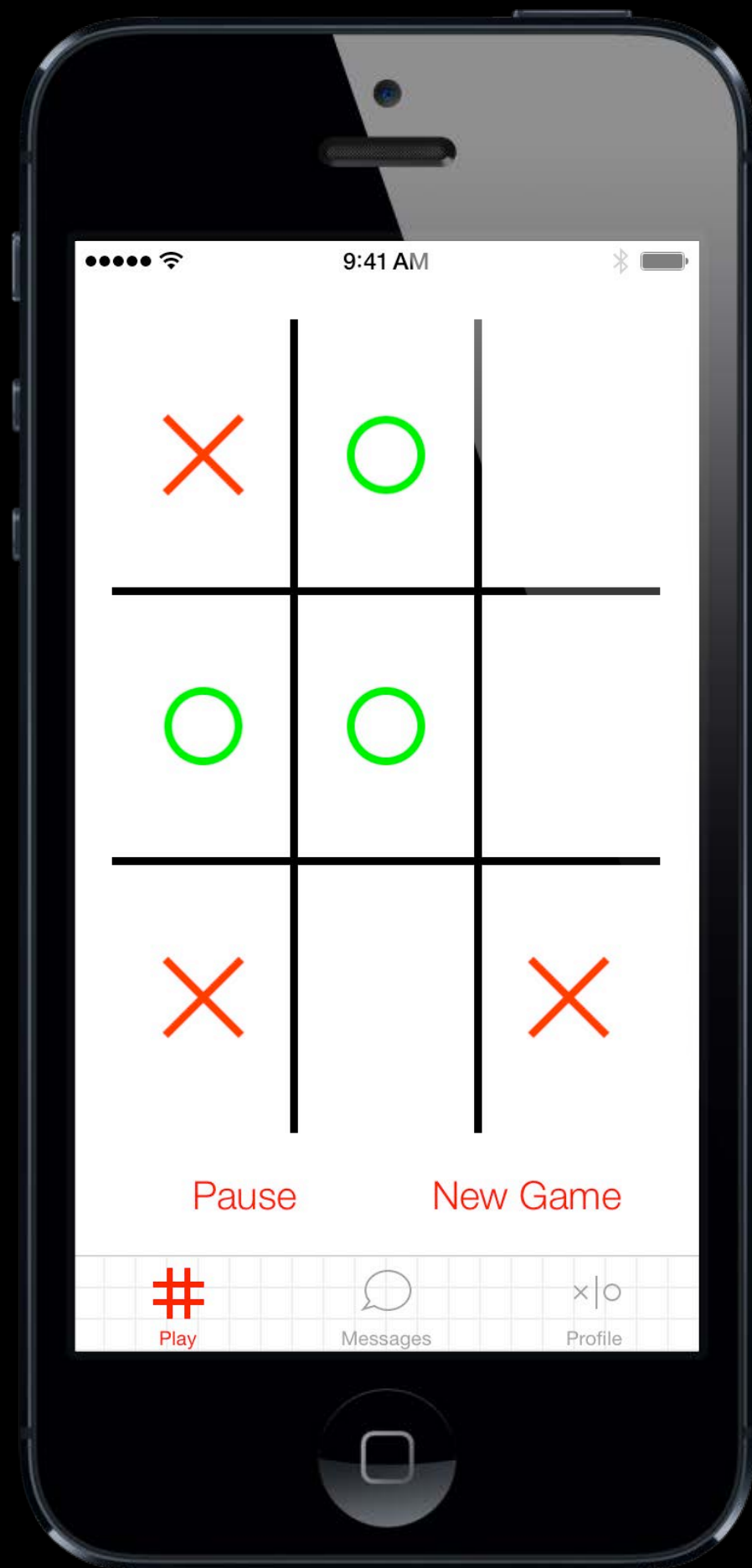
iOS Apps and Frameworks

These are confidential sessions—please refrain from streaming, blogging, or taking pictures

What You Will Learn

- What's changed
- Advanced customization
- Making custom controls





Separating Images

Text Attributes

Alignment Insets

Bar Metrics

Retina Images

Theming

UIAppearance

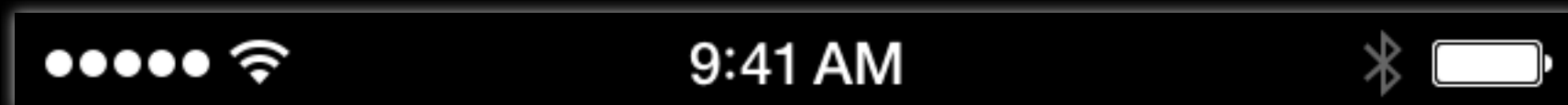
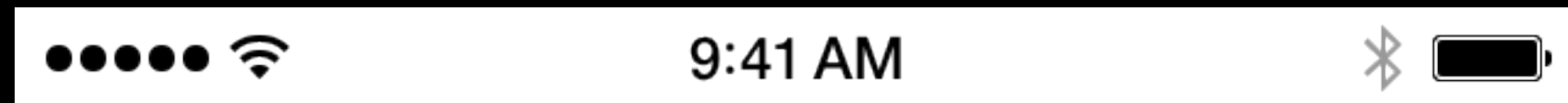
Background Images

Resizable Images

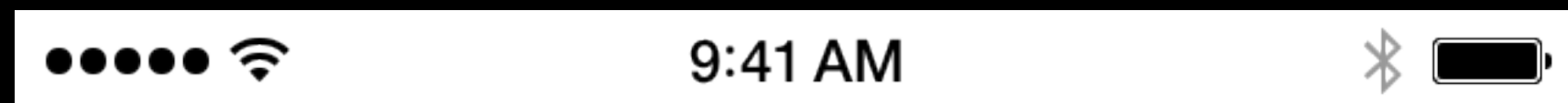
Control State

What's Changed

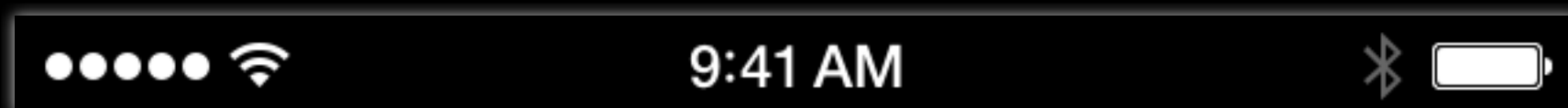
Status Bar



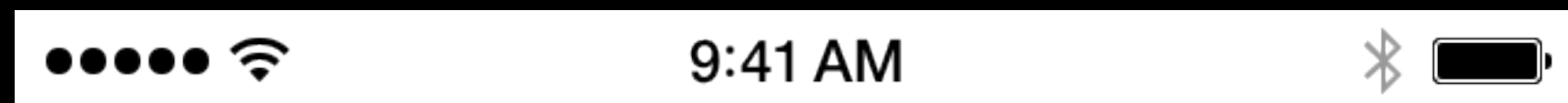
Status Bar



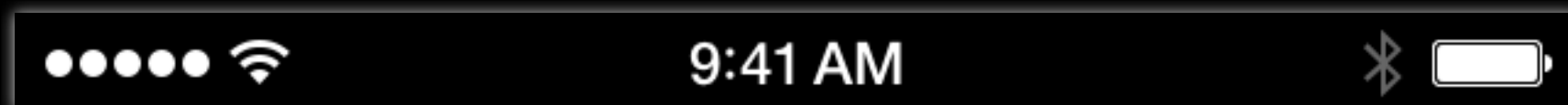
`UIStatusBarStyleDefault`



Status Bar

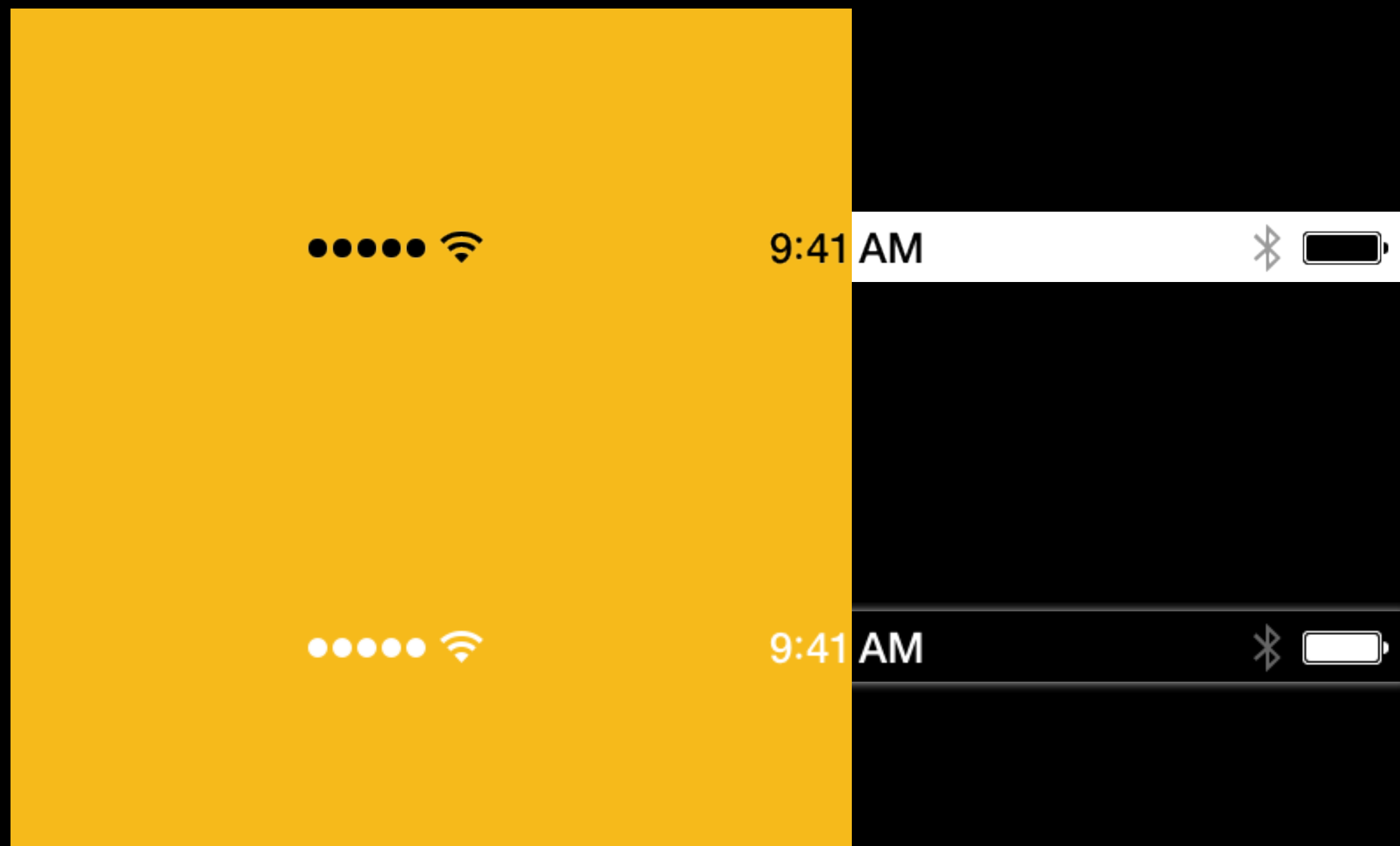


`UIStatusBarStyleDefault`



`UIStatusBarStyleLightContent`

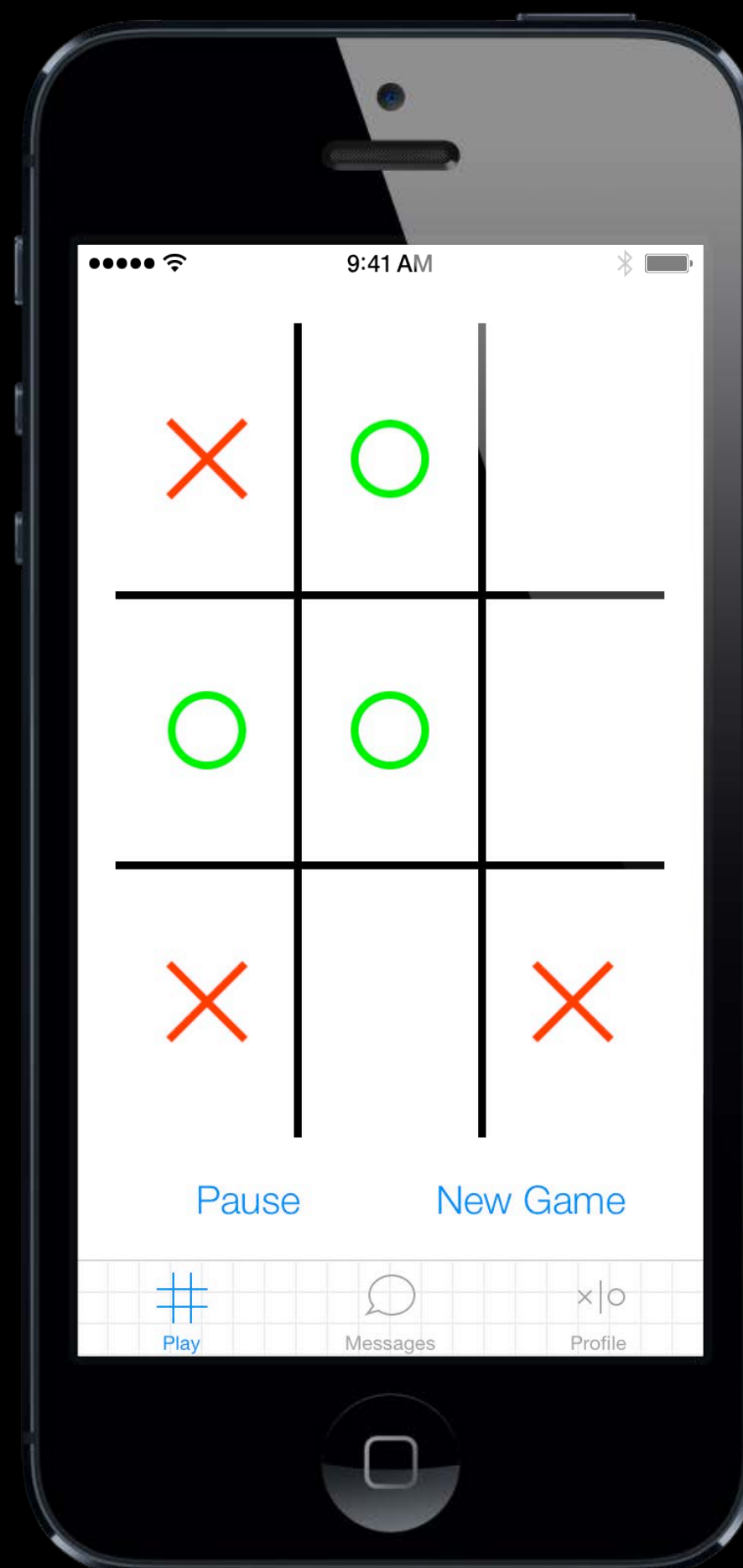
Status Bar



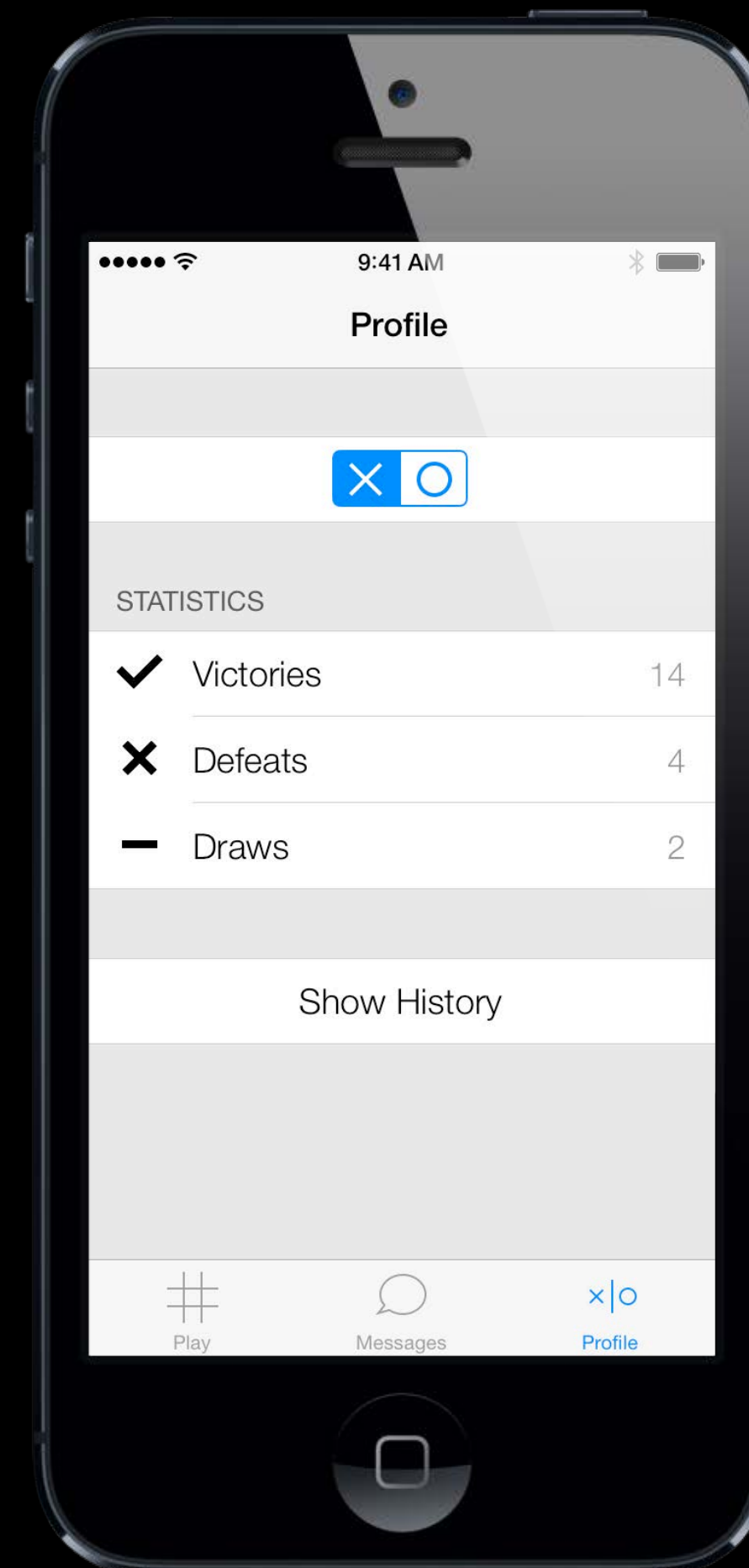
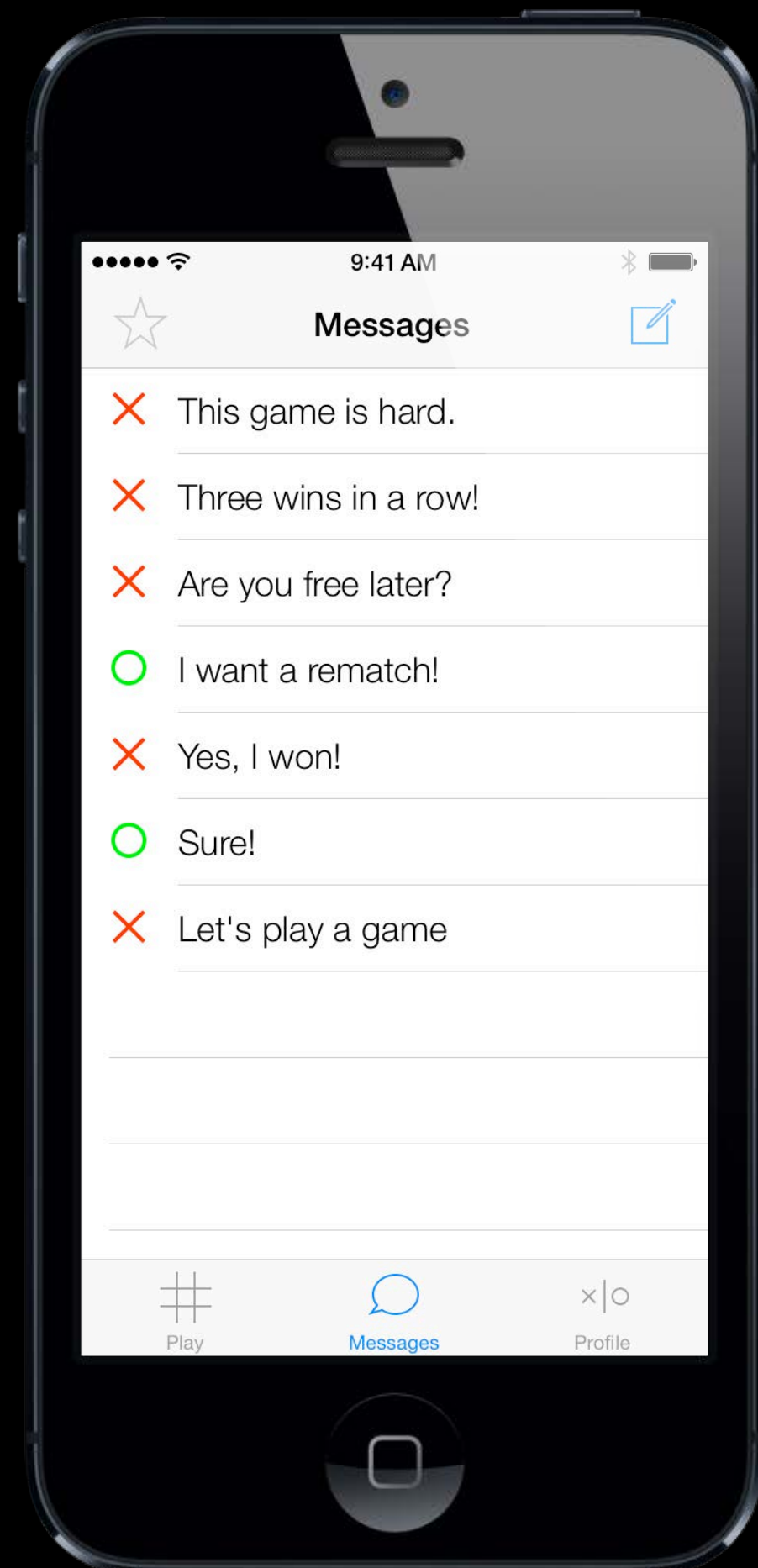
`UIStatusBarStyleDefault`

`UIStatusBarStyleLightContent`

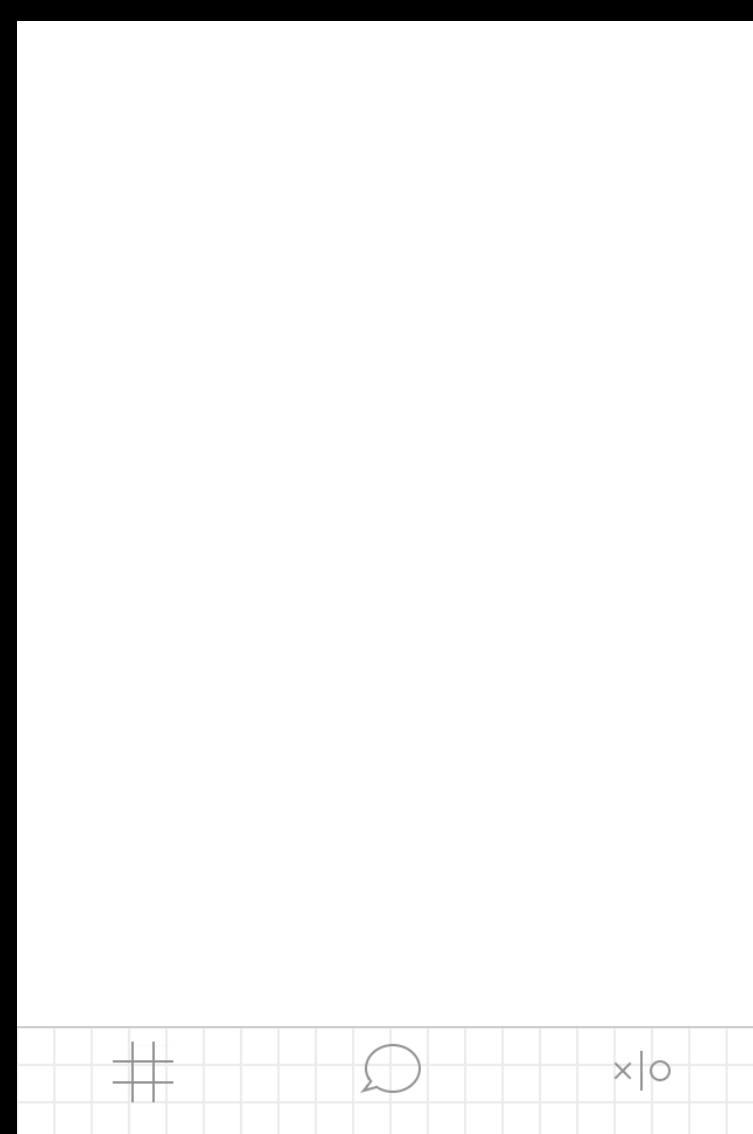
Status Bar



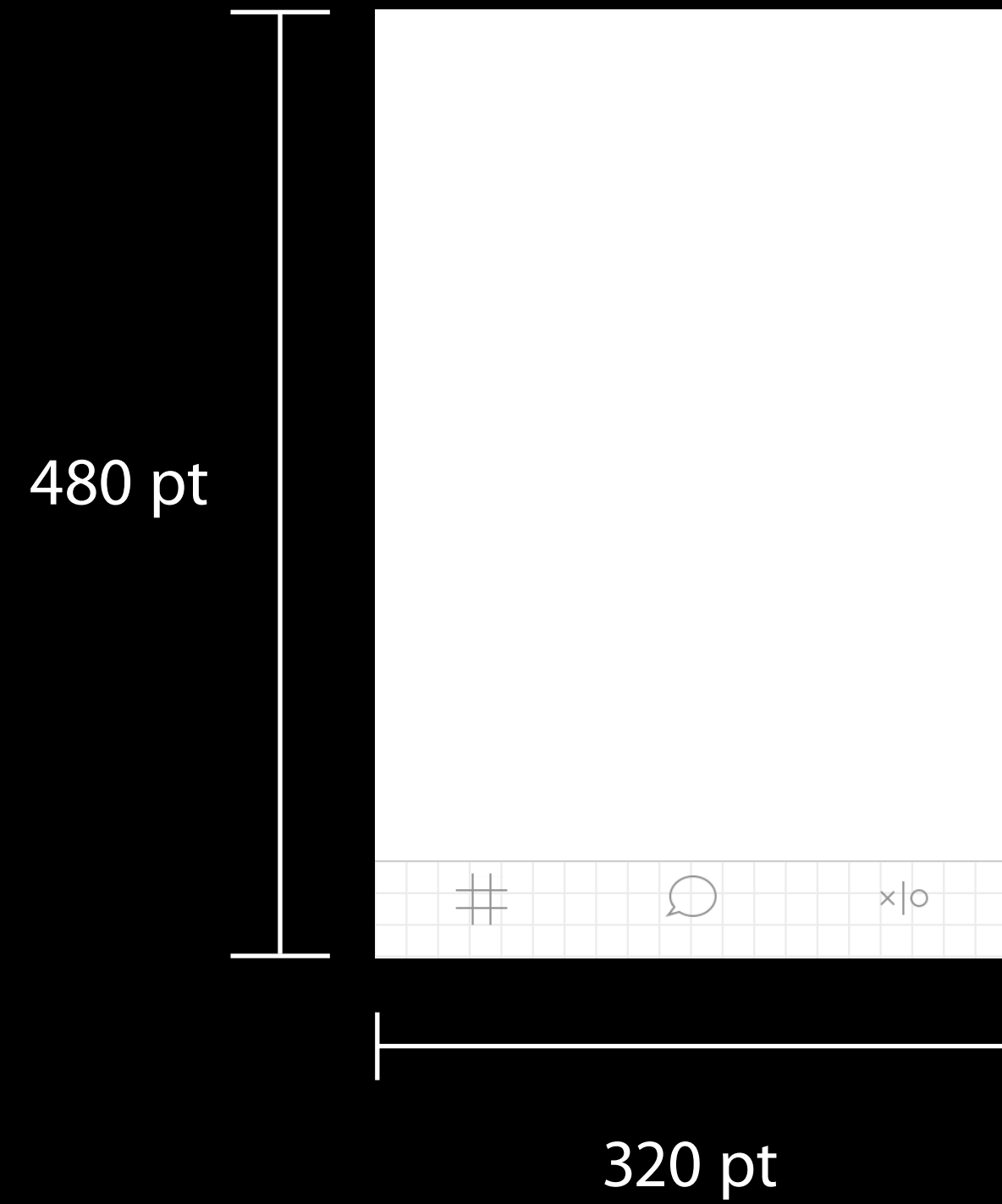
Status Bar



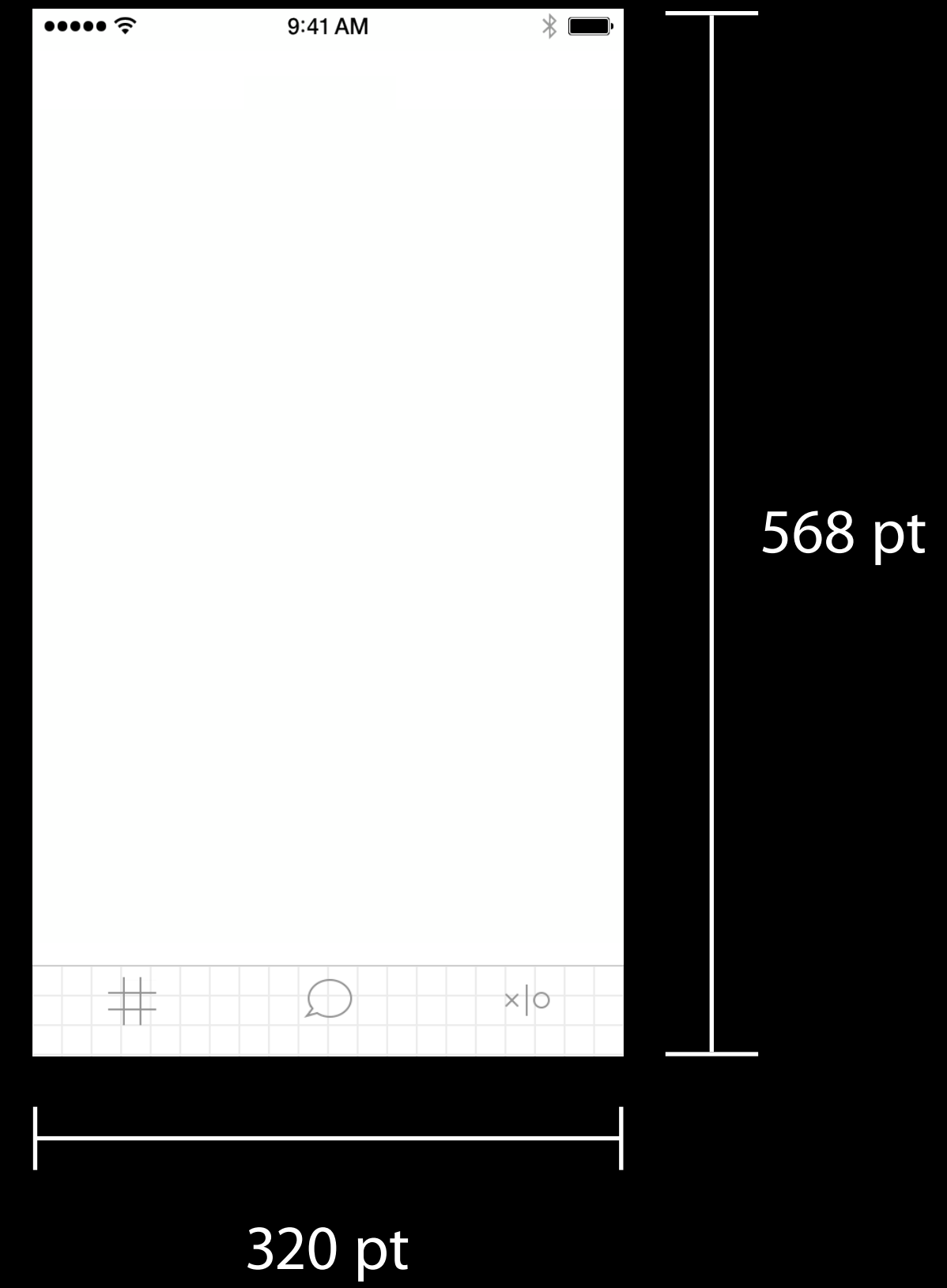
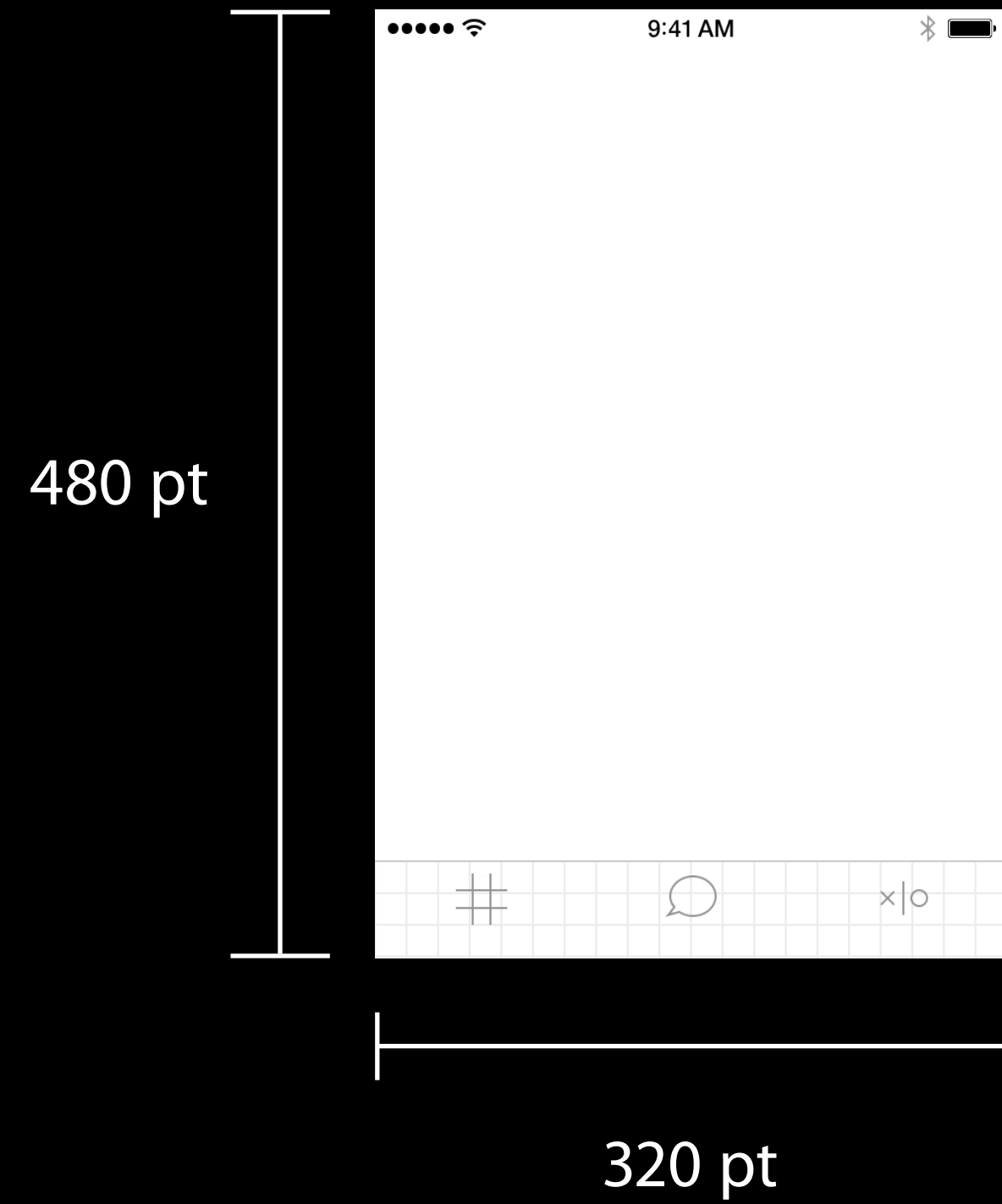
Status Bar



Status Bar



Status Bar



Status Bar

Status Bar

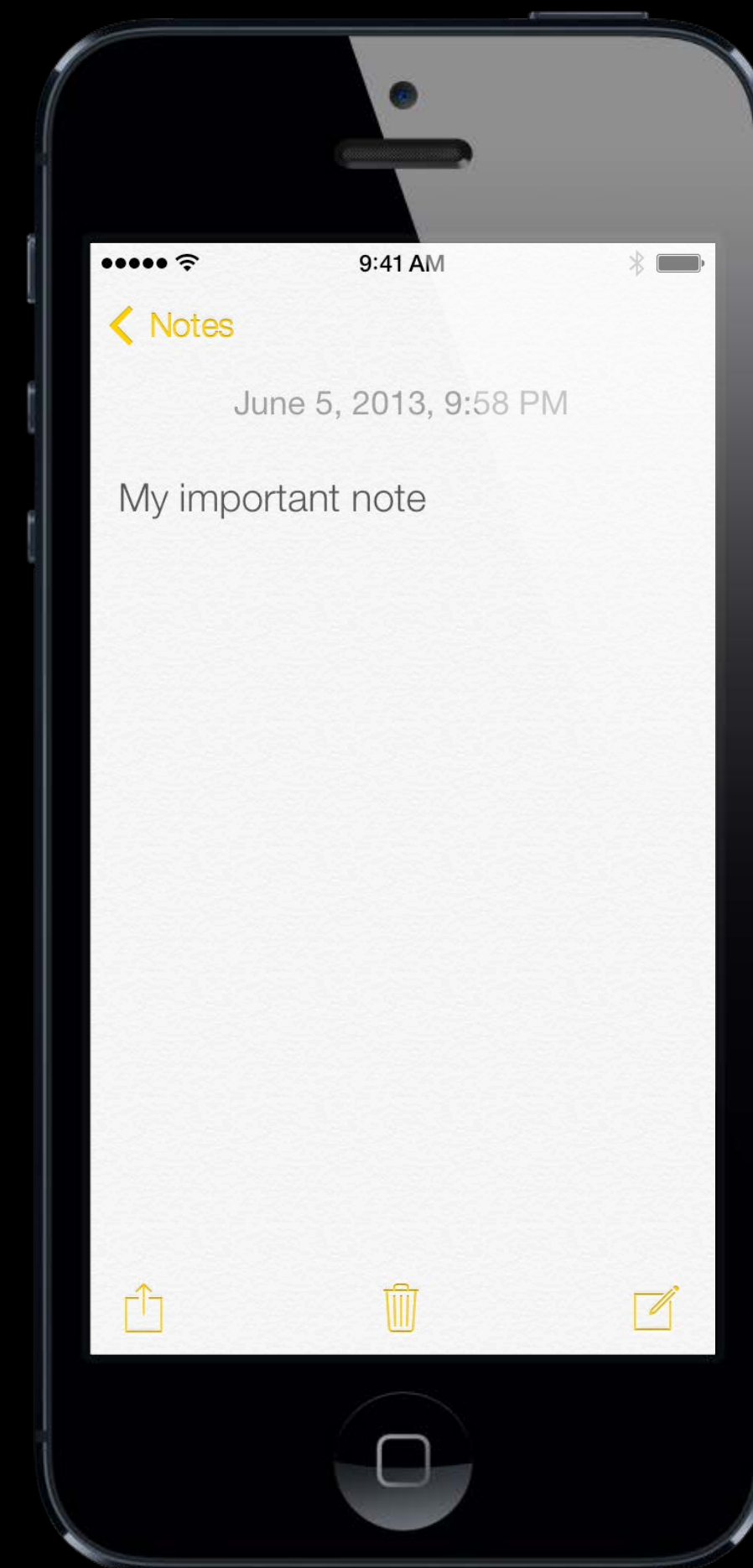
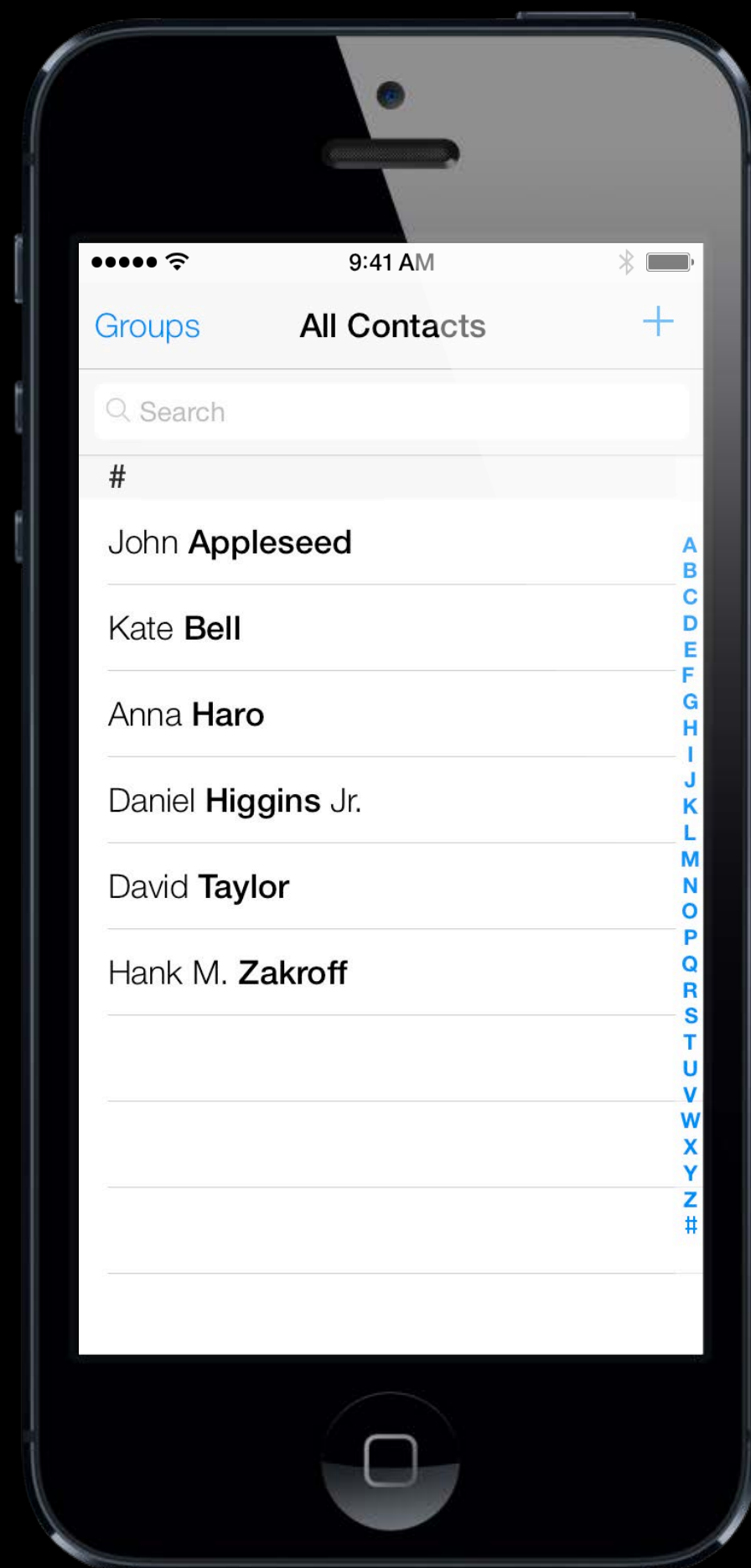
▼ UILaunchImages	Array	(2 items)
▼ Item 0	Dictionary	(4 items)
UILaunchImageSize	String	{320, 480}
UILaunchImageOrientation	String	Portrait
UILaunchImageMinimumOSVersion	String	7.0
UILaunchImageName	String	Default
▼ Item 1	Dictionary	(4 items)
UILaunchImageSize	String	{320, 568}
UILaunchImageOrientation	String	Portrait
UILaunchImageMinimumOSVersion	String	7.0
UILaunchImageName	String	Default-568h

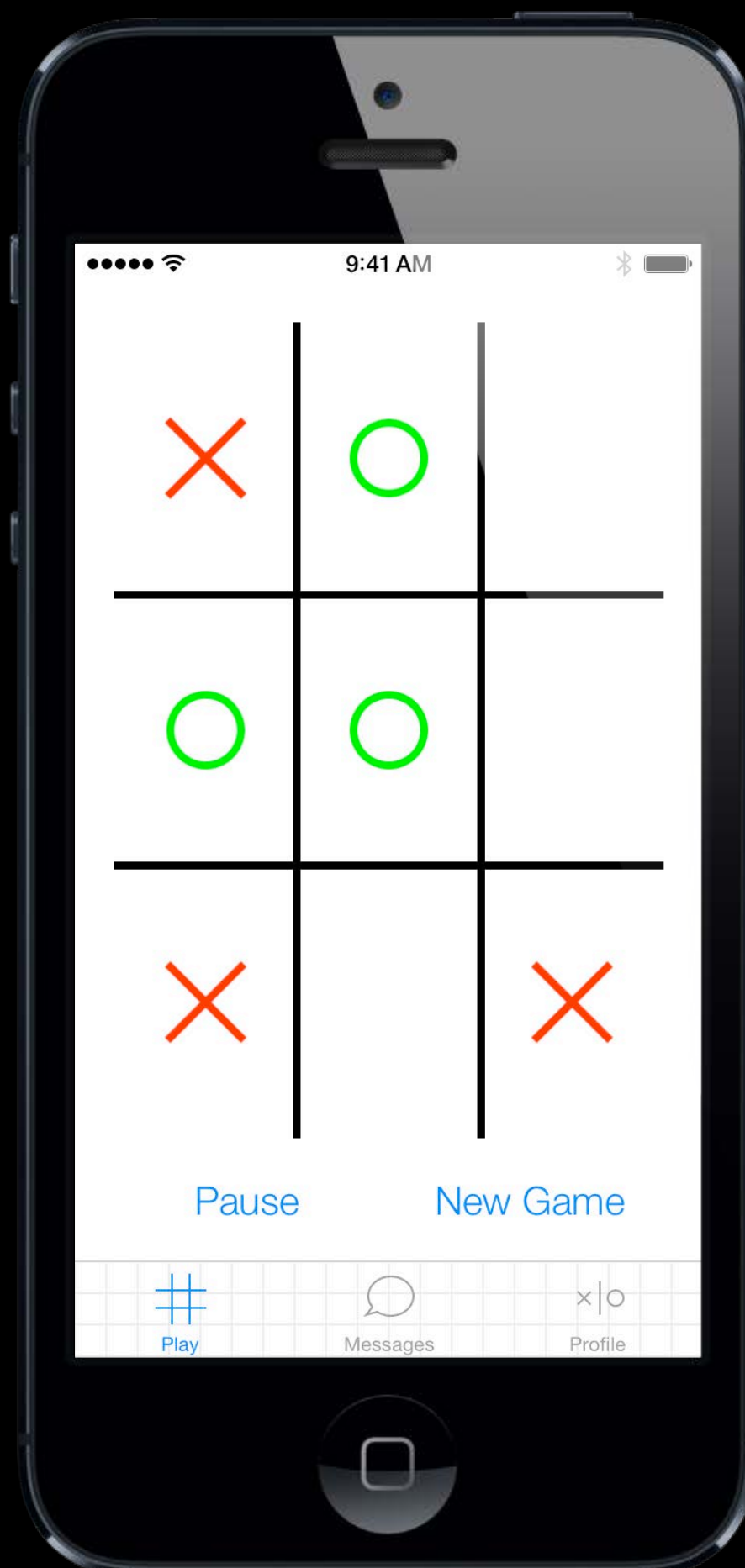
Status Bar

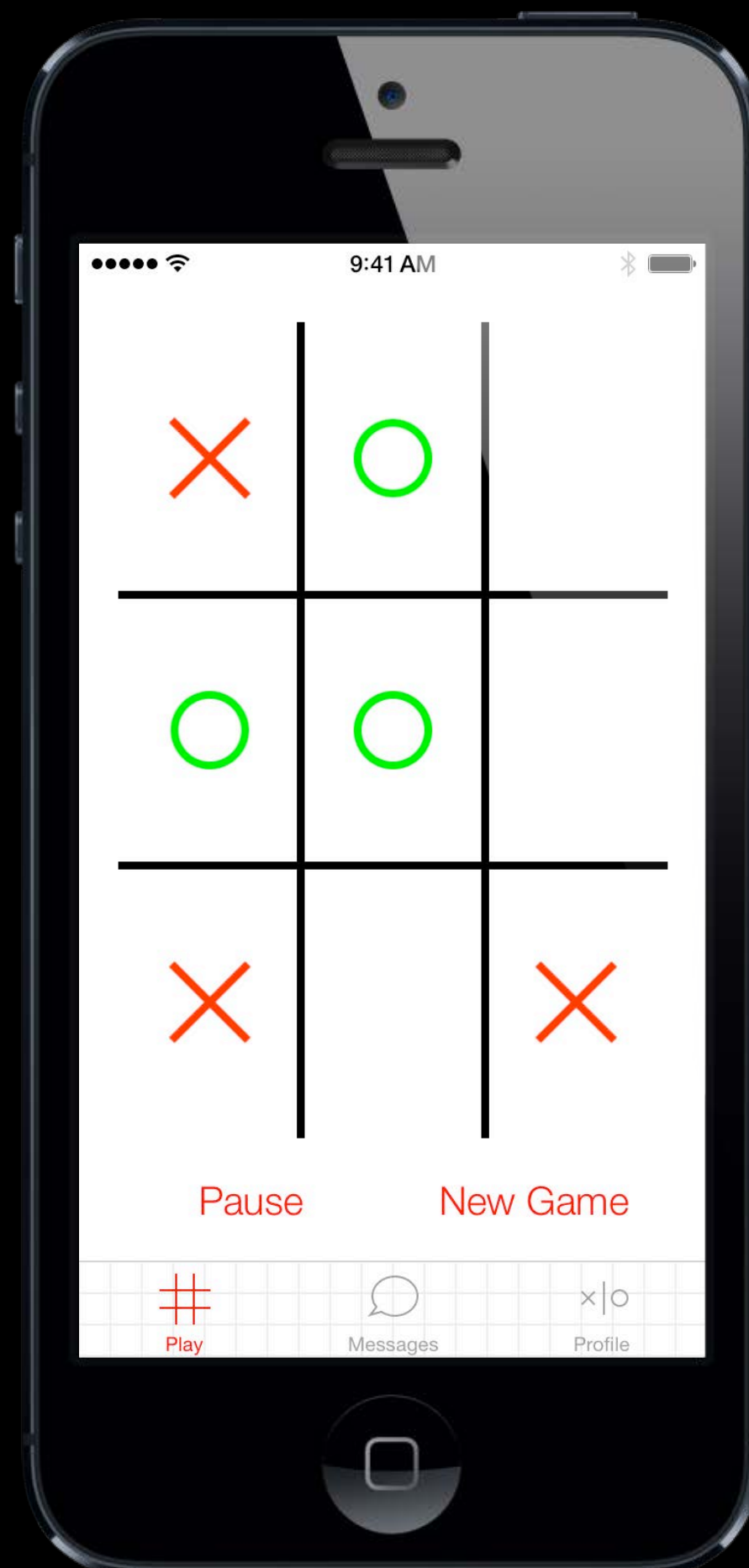
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▼ Item 0	Dictionary	(4 items)
UILaunchImageSize	String	{320, 480}
UILaunchImageOrientation	String	Portrait
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▼ Item 1	Dictionary	(4 items)
UILaunchImageSize	String	{320, 568}
UILaunchImageOrientation	String	Portrait
UILaunchImageMinimumOSVersion	String	7.0
UILaunchImageName	String	Default-568h

Status Bar

▼ UILaunchImages	Array	(2 items)
▼ Item 0	Dictionary	(4 items)
UILaunchImageSize	String	{320, 480}
UILaunchImageOrientation	String	Portrait
UILaunchImageMinimumOSVersion	String	7.0
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▼ Item 1	Dictionary	(4 items)
UILaunchImageSize	String	{320, 568}
UILaunchImageOrientation	String	Portrait
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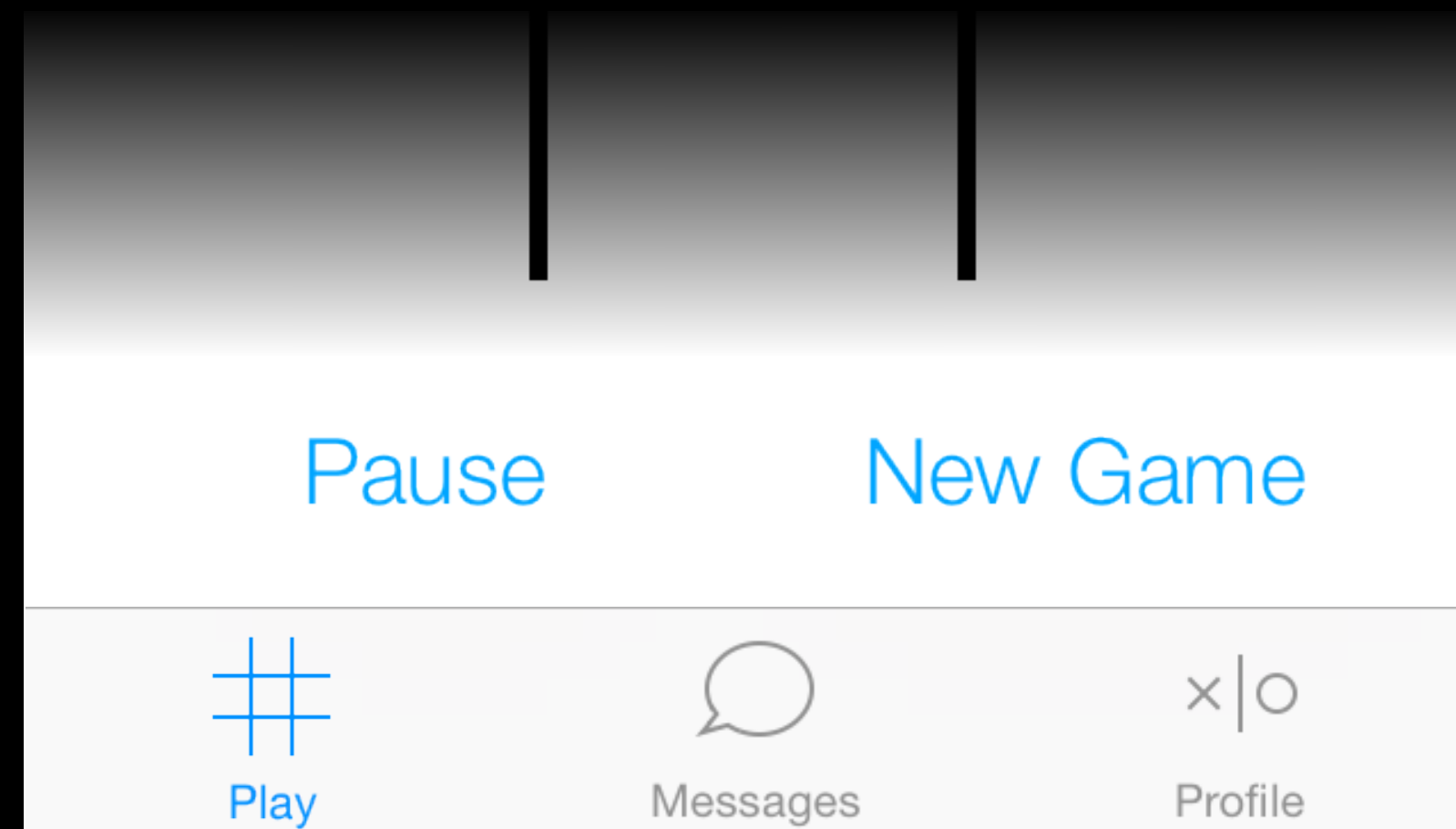




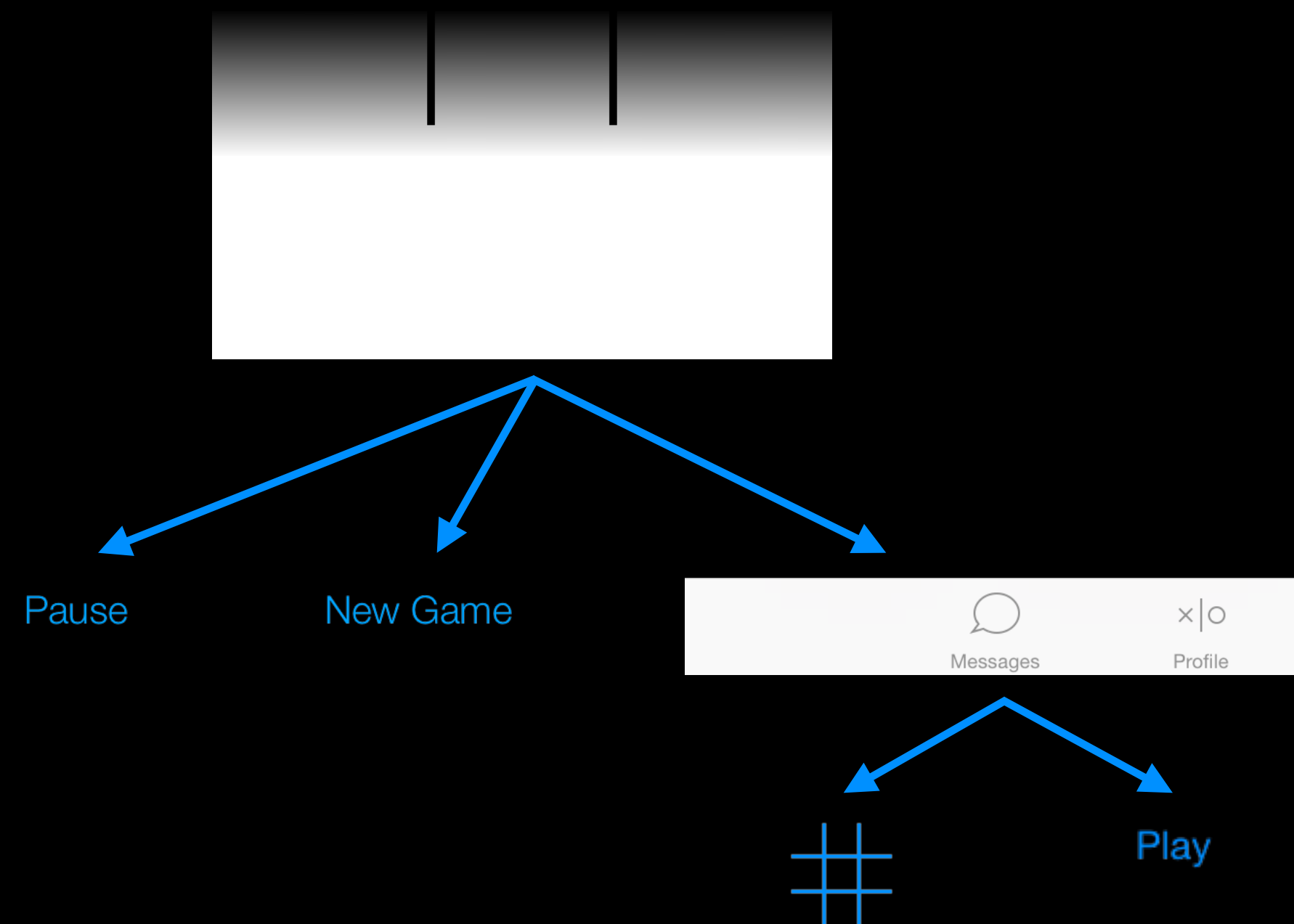


```
window.tintColor = [UIColor redColor];
```

Tint Color

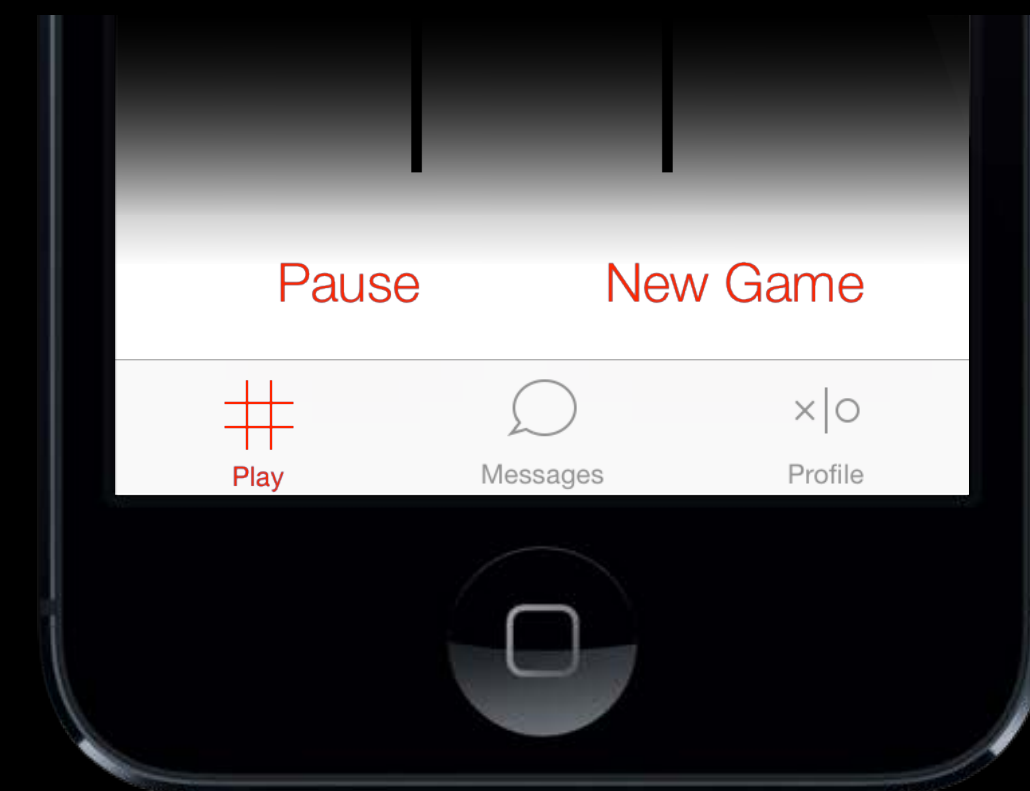
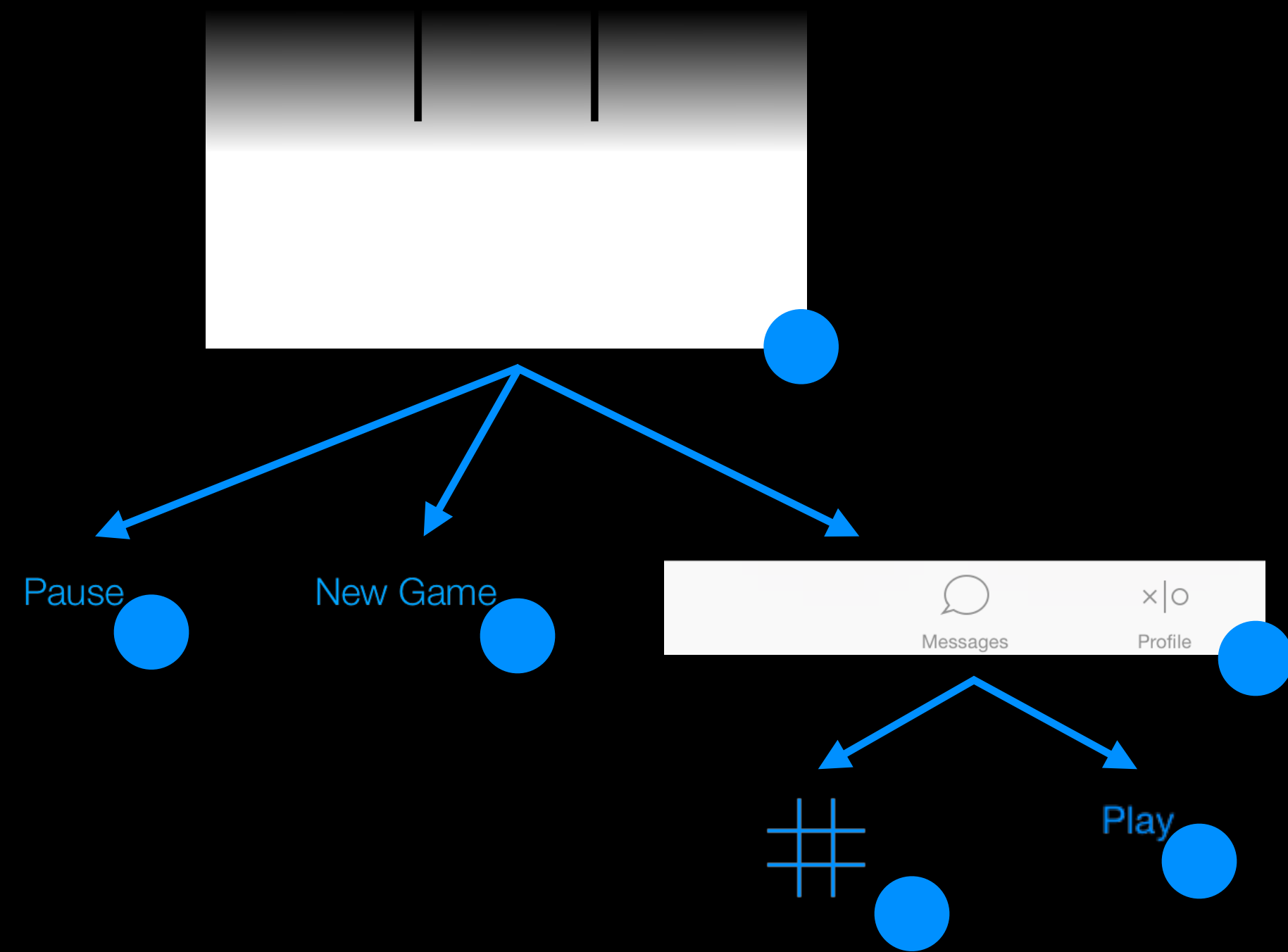


Tint Color



Tint Color

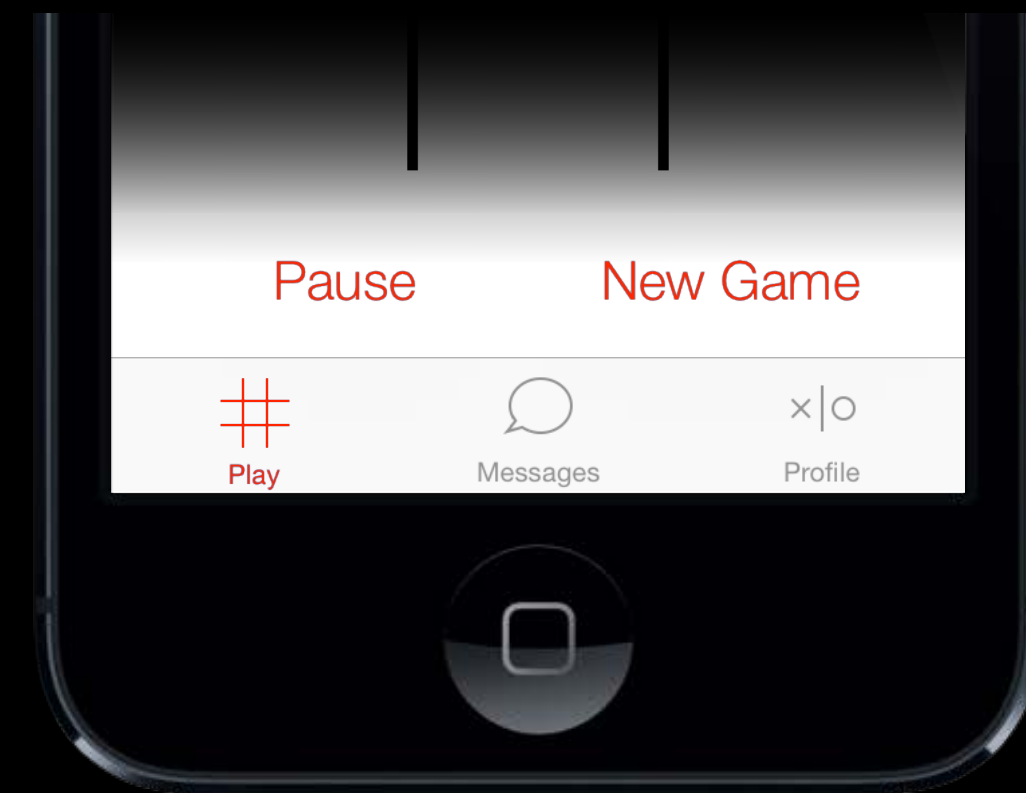
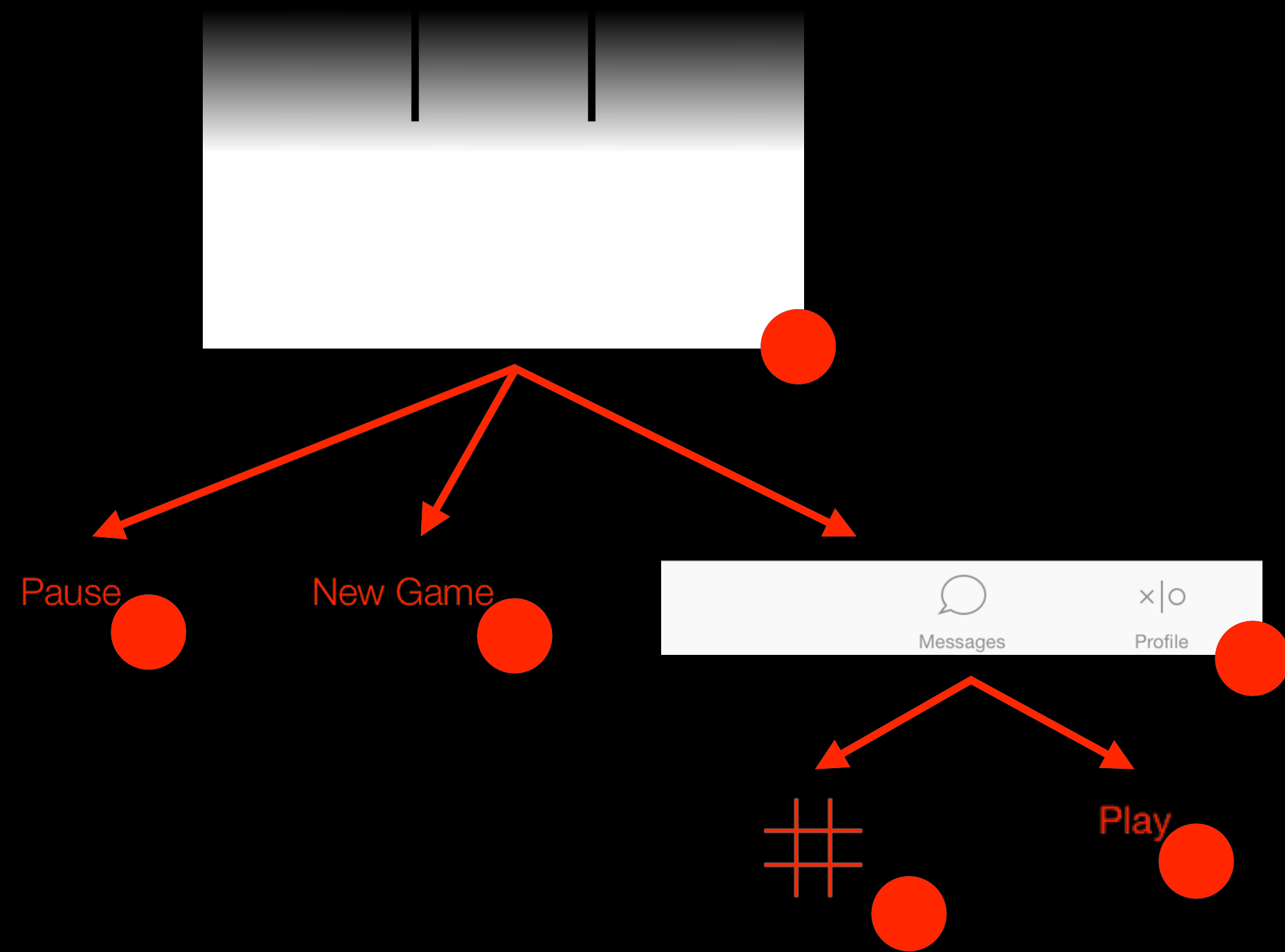
```
@property(nonatomic, retain) UIColor *tintColor;
```



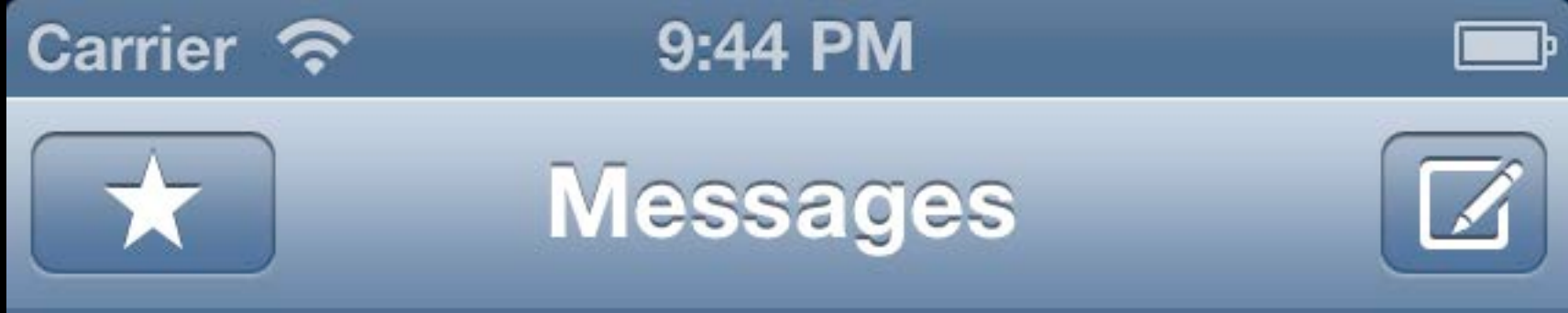
Tint Color

```
@property(nonatomic, retain) UIColor *tintColor;
```

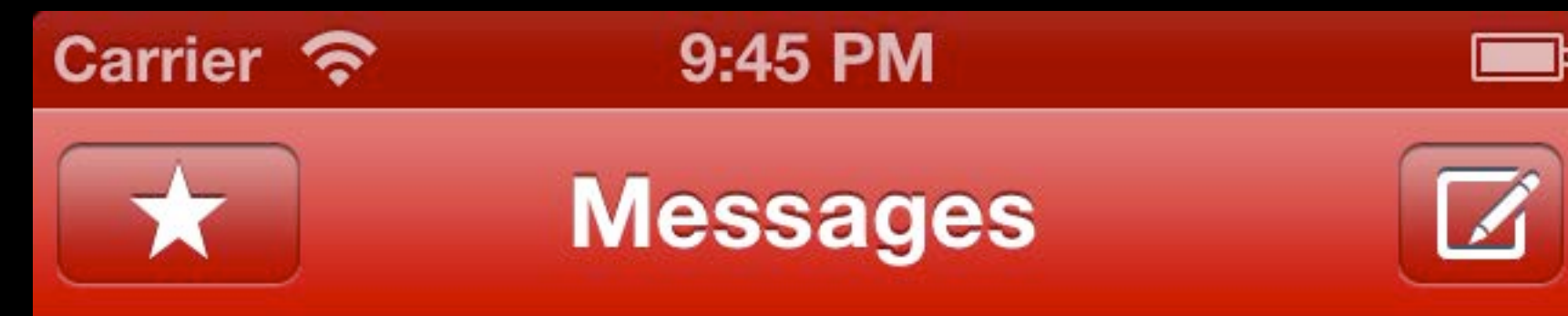
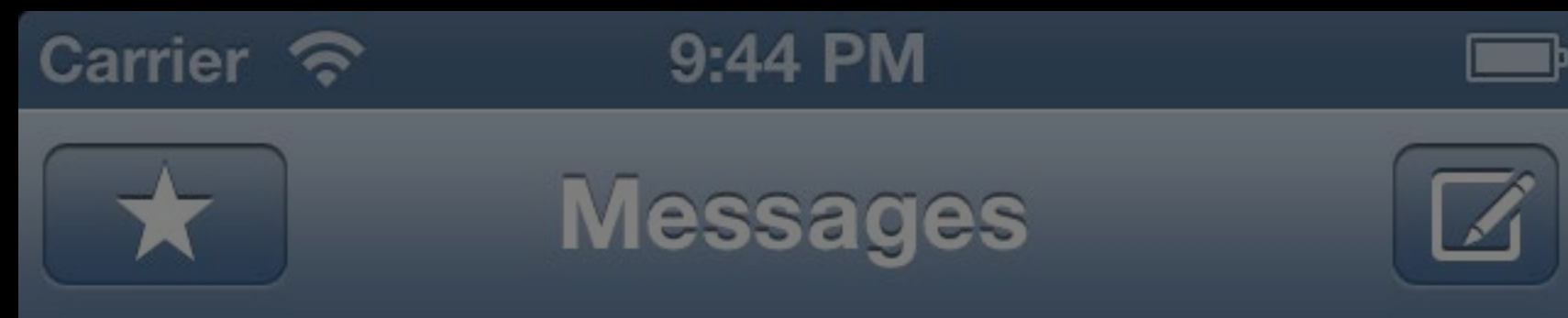
```
window.tintColor = [UIColor redColor];
```



Bar Tint Color

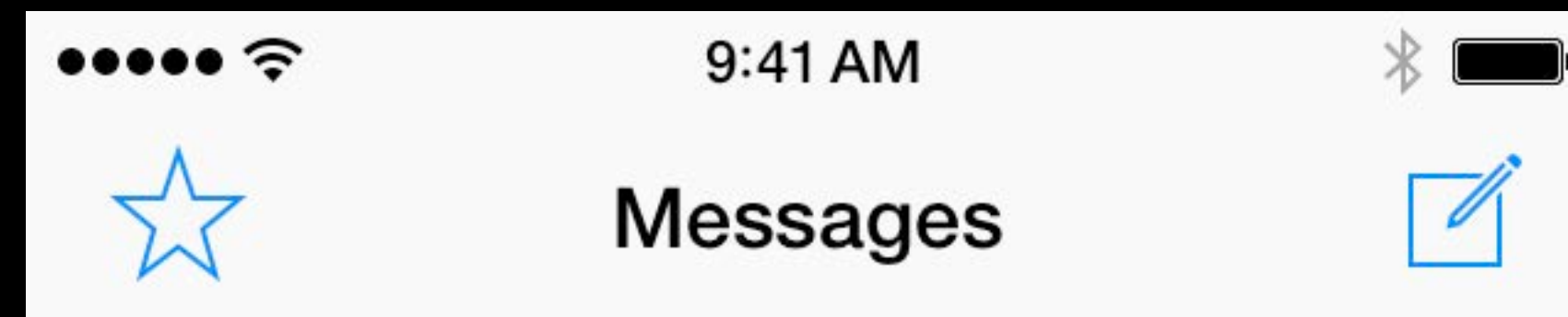


Bar Tint Color

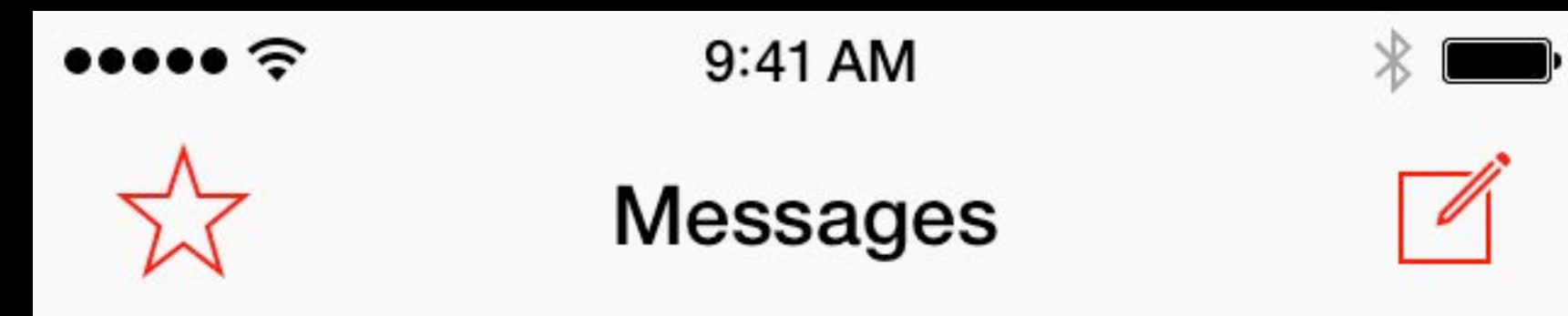
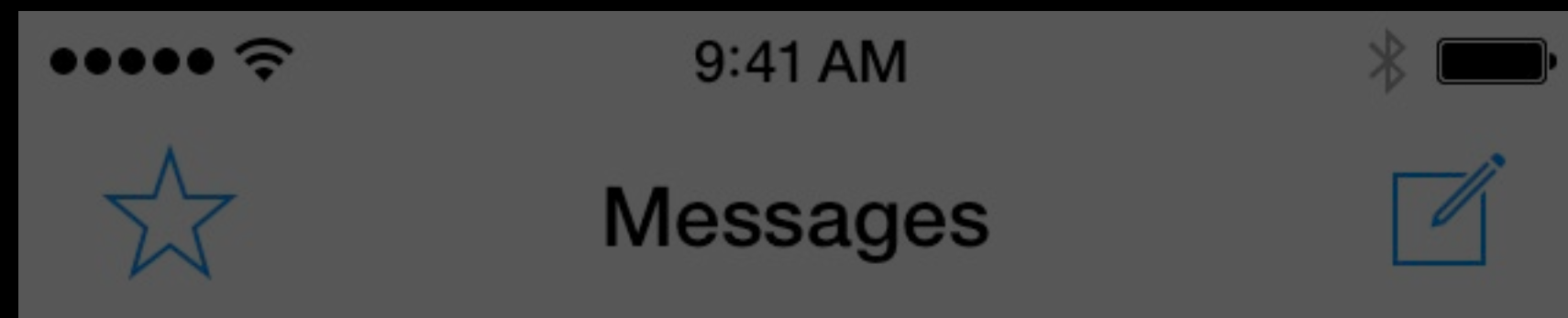


```
bar.tintColor = [UIColor redColor];
```

Bar Tint Color

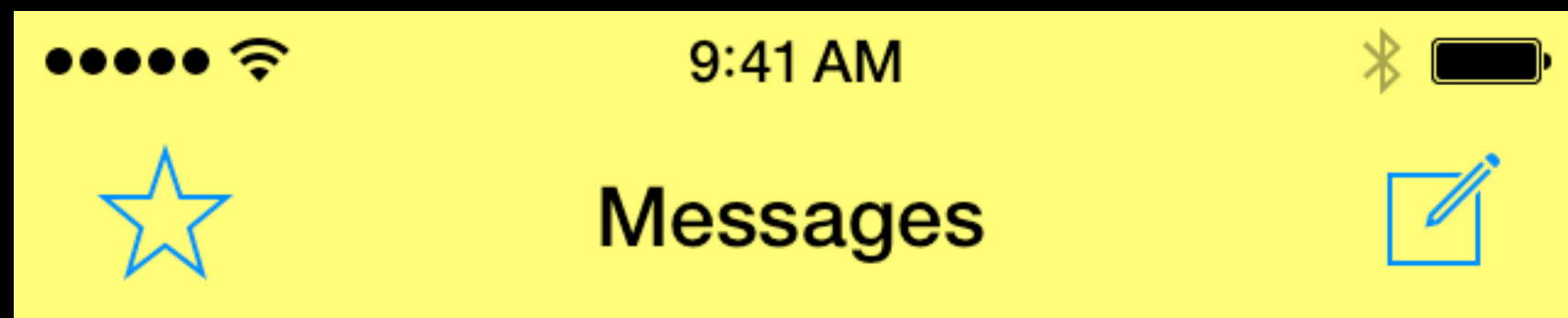
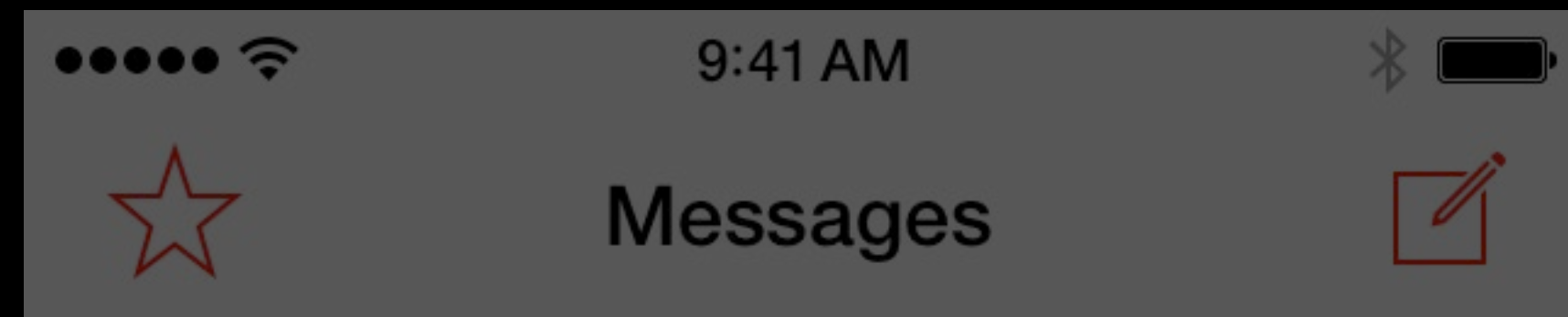
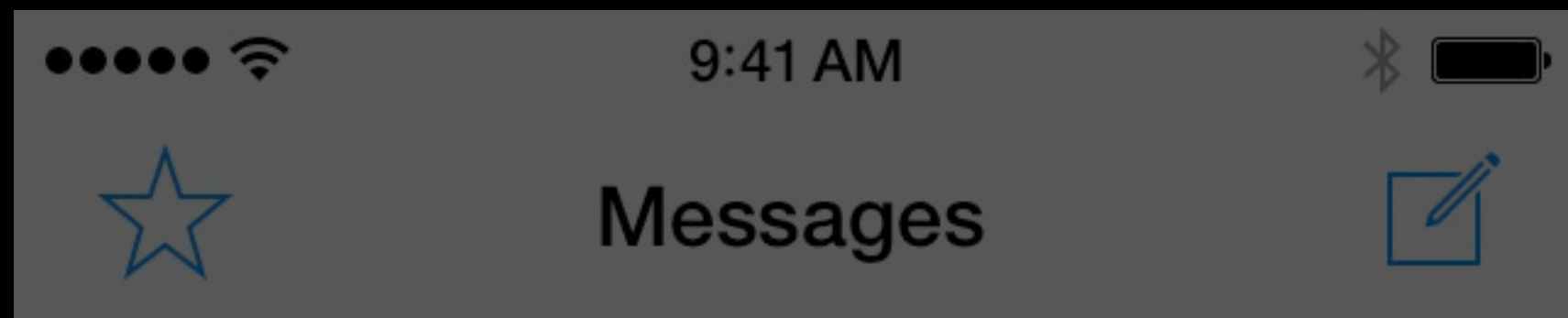


Bar Tint Color



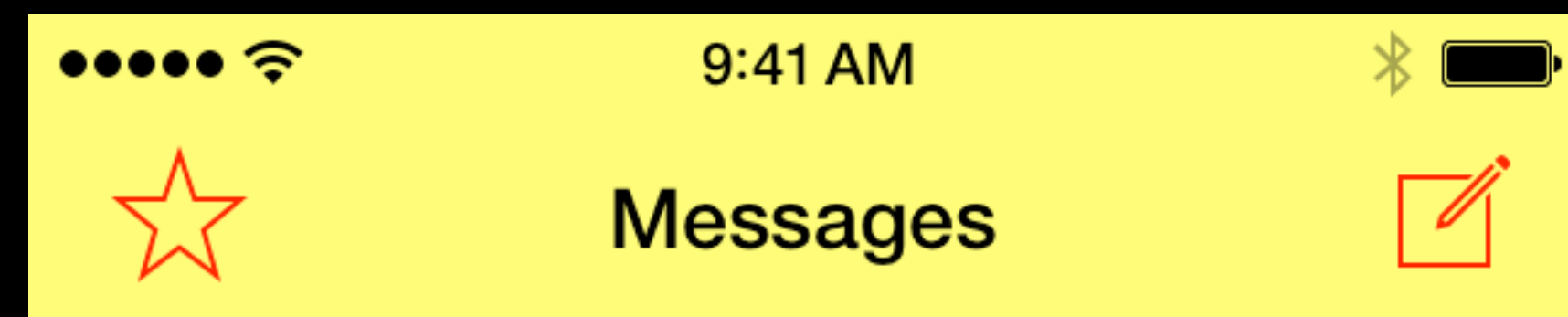
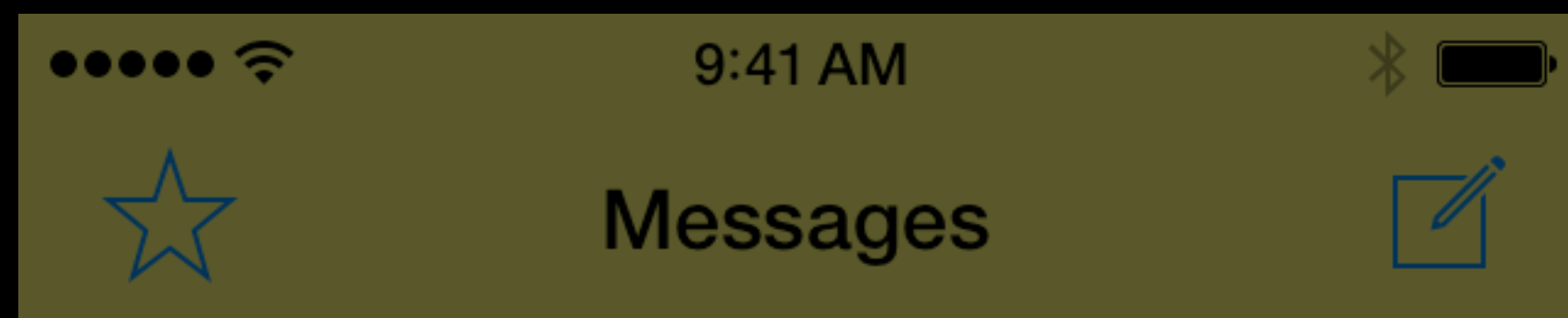
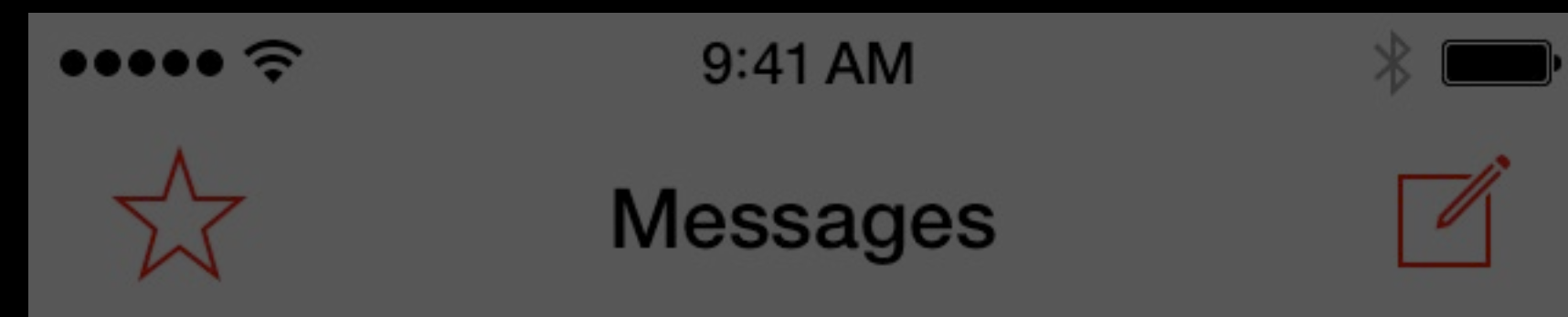
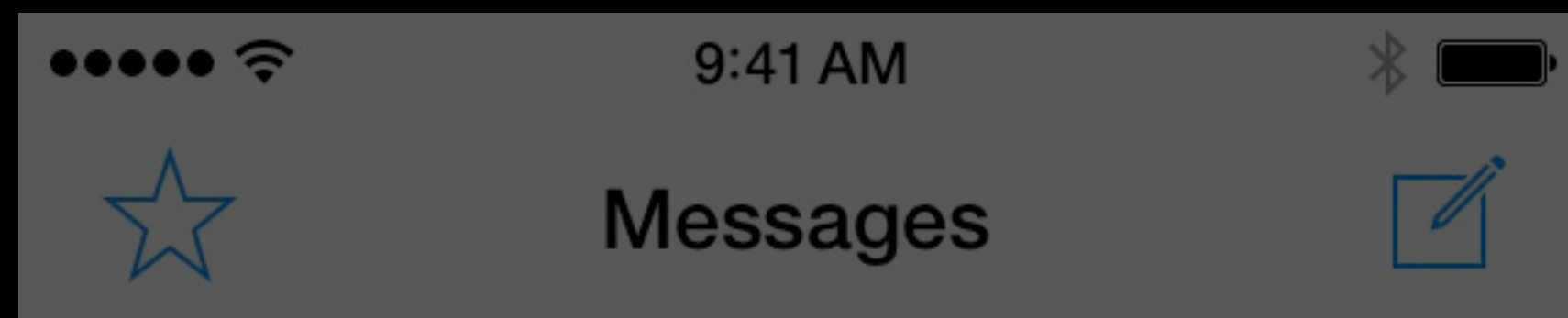
```
bar.tintColor = [UIColor redColor];
```

Bar Tint Color



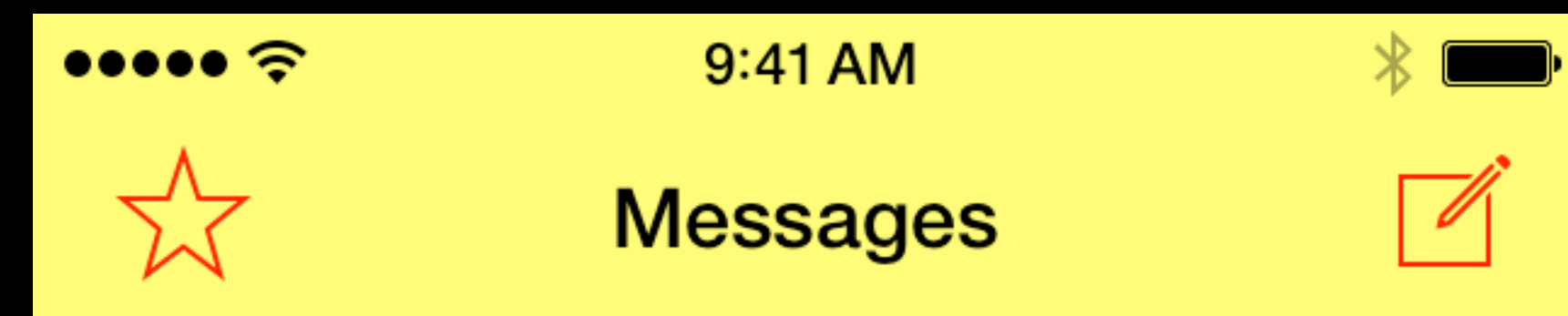
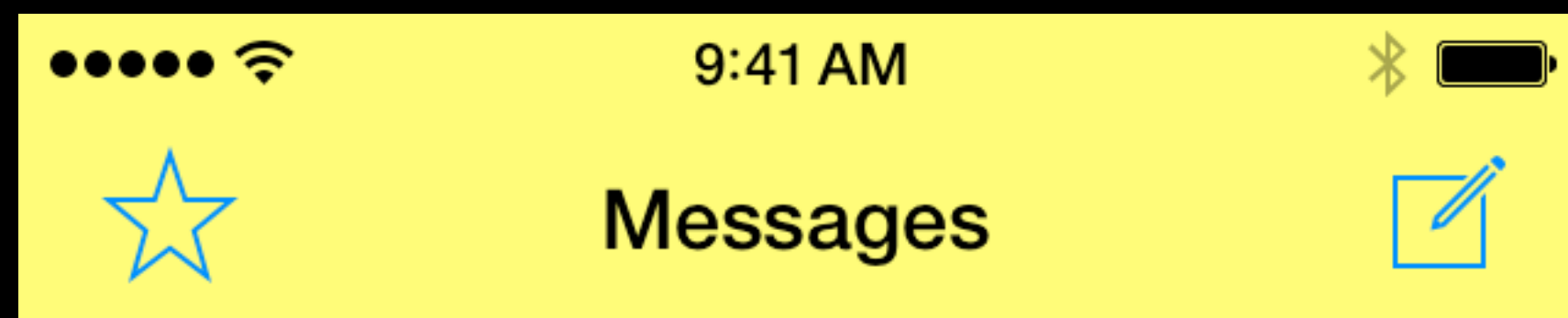
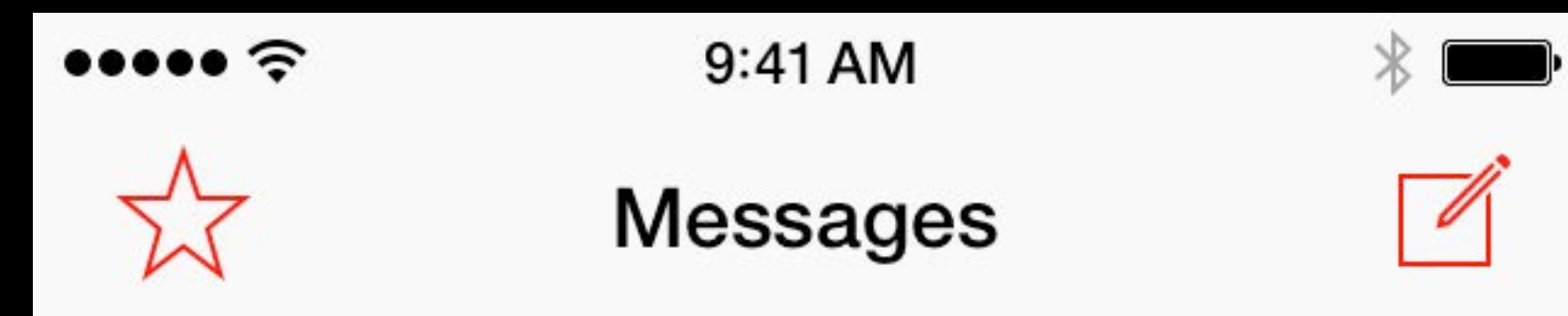
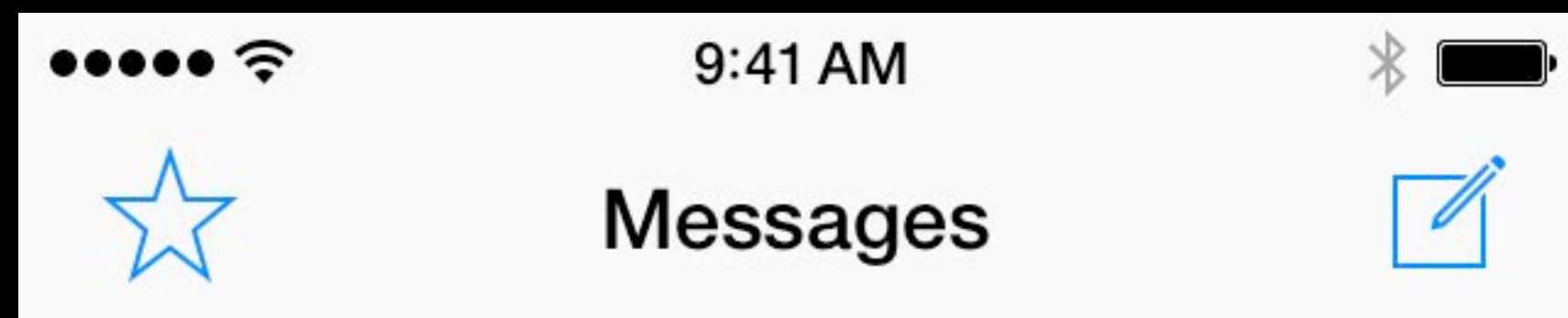
```
bar.barTintColor = [UIColor yellowColor];
```


Bar Tint Color



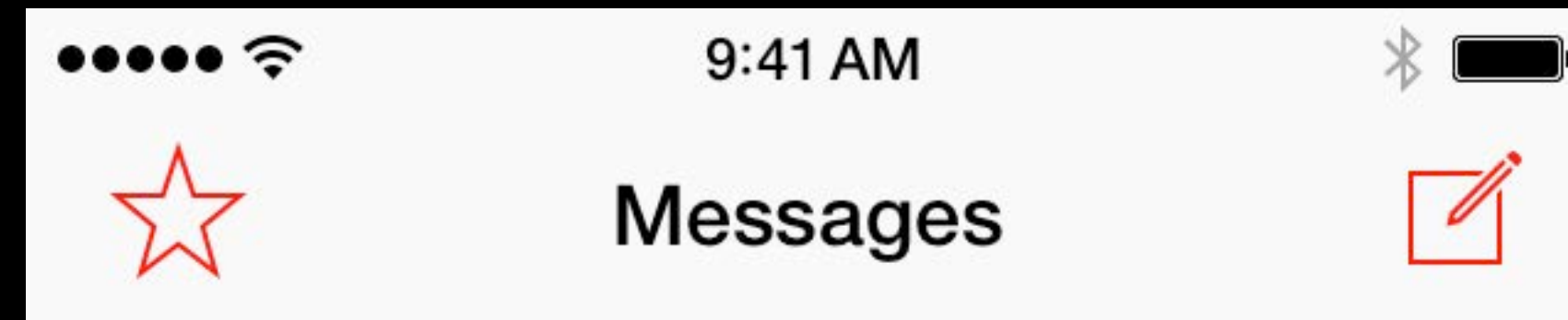
```
bar.tintColor = [UIColor redColor];  
bar.barTintColor = [UIColor yellowColor];
```

Bar Tint Color

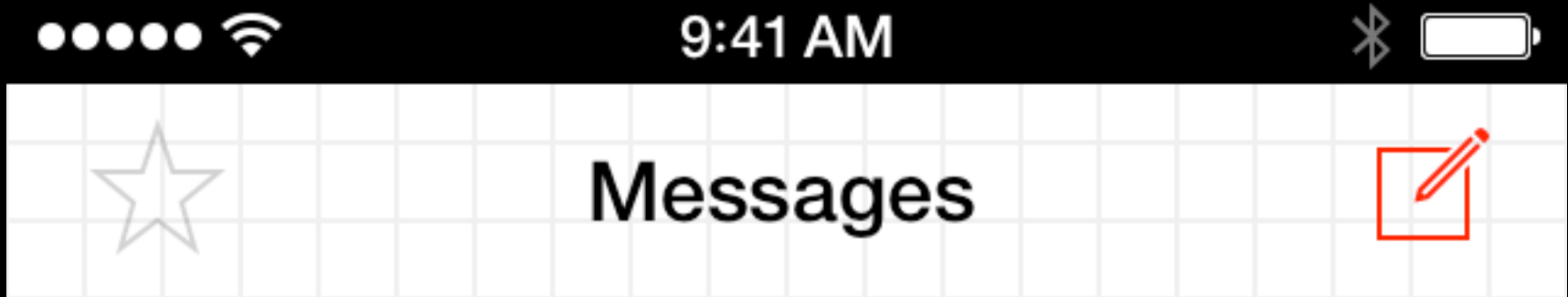
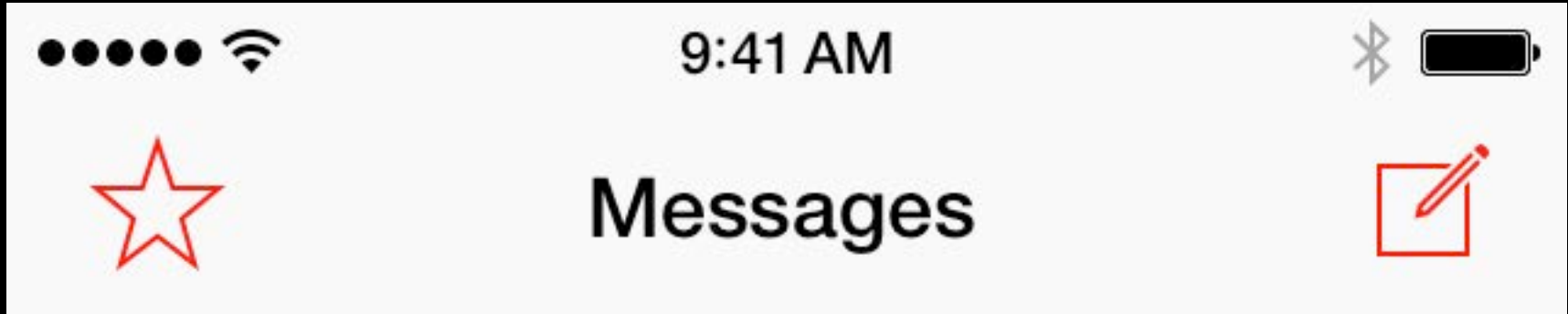


```
@property(nonatomic, retain) UIColor *barTintColor;
```

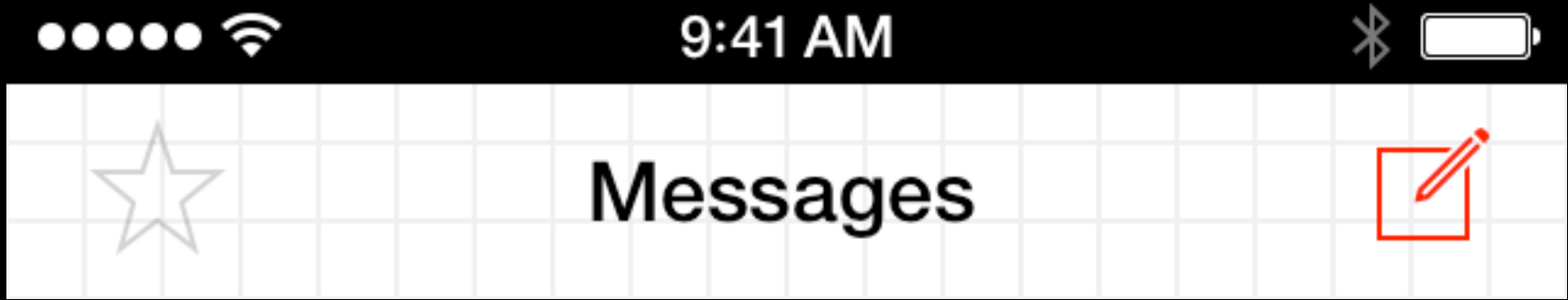
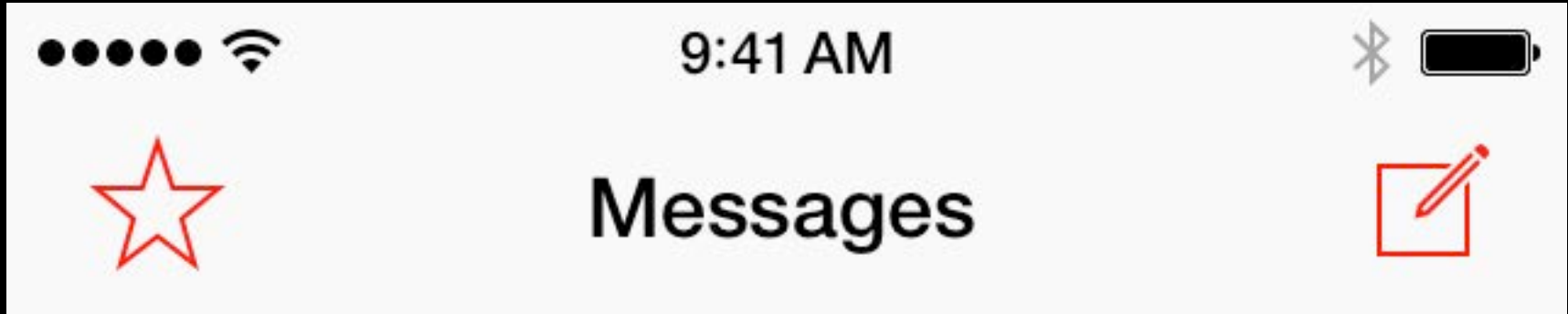
Bar Backgrounds



Bar Backgrounds

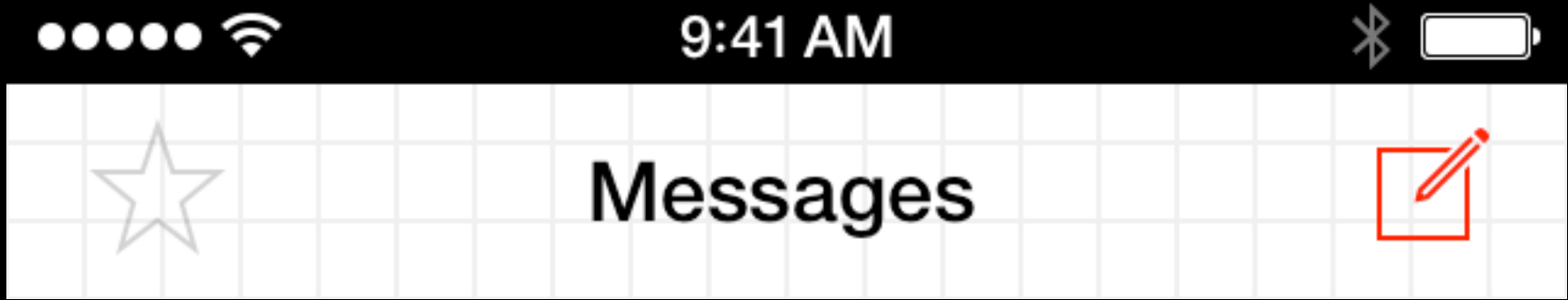
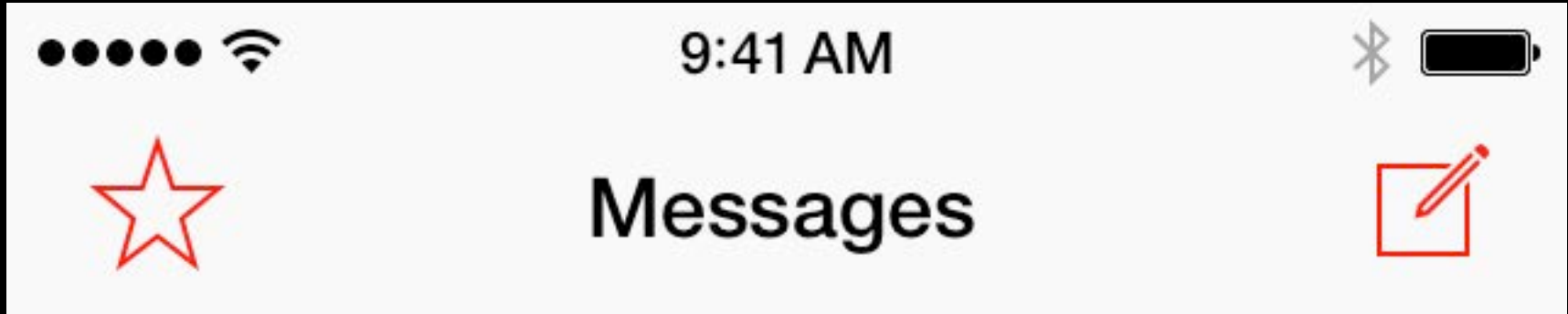


Bar Backgrounds

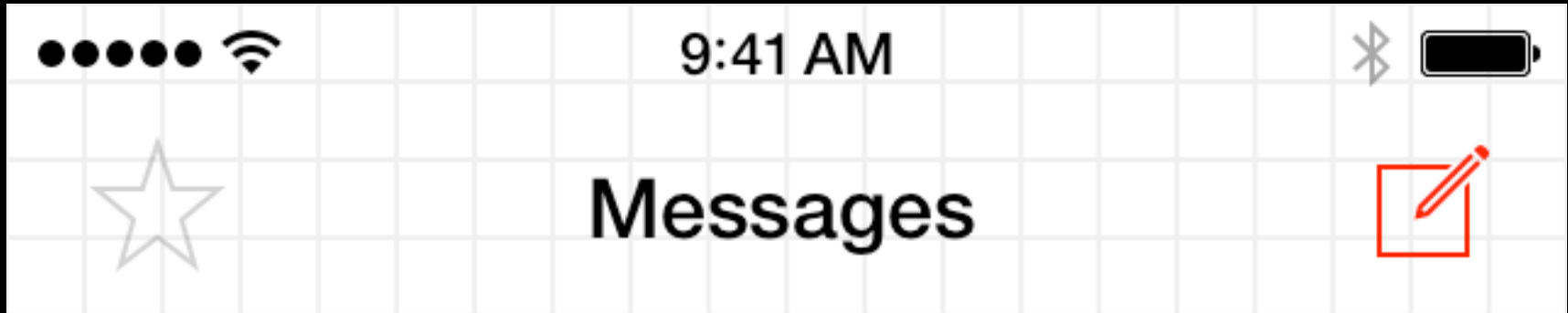


44 pt

Bar Backgrounds



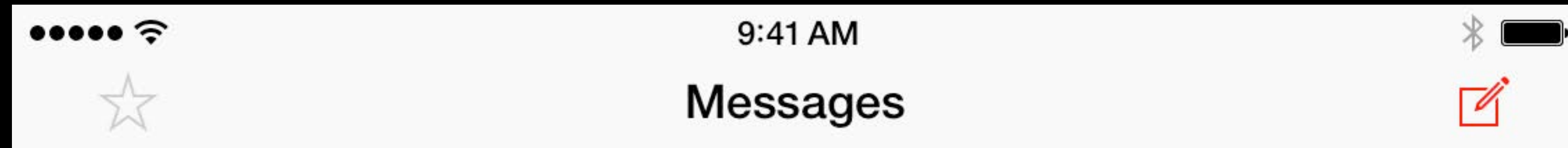
44 pt



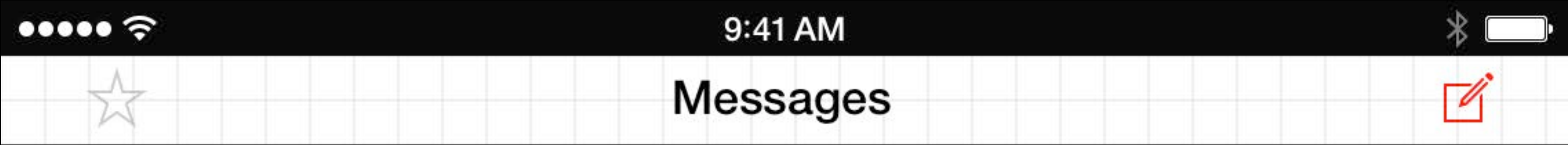
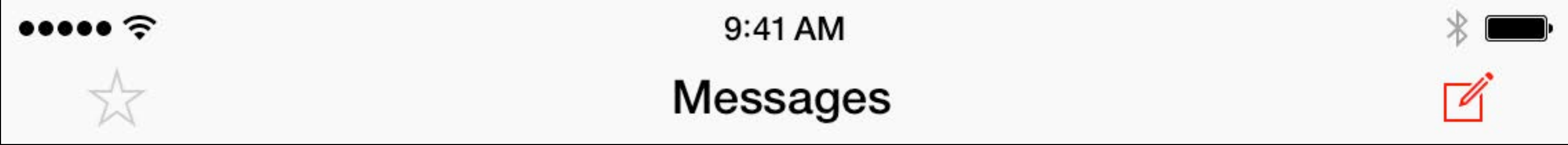
64 pt

Bar Backgrounds

Bar Backgrounds

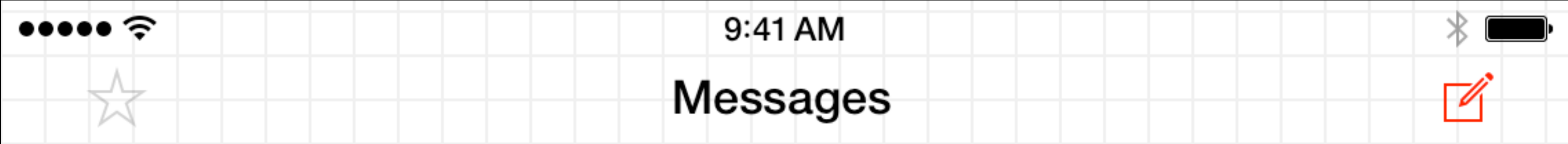
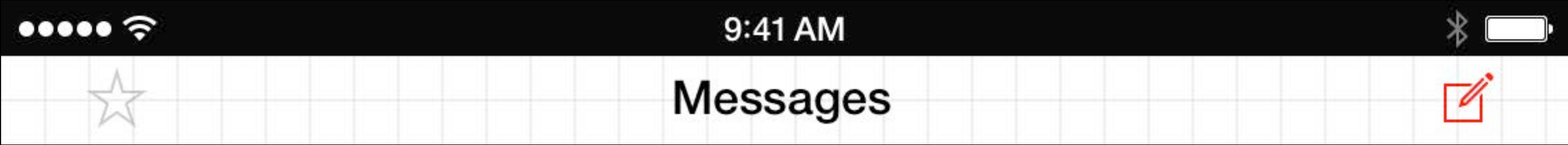
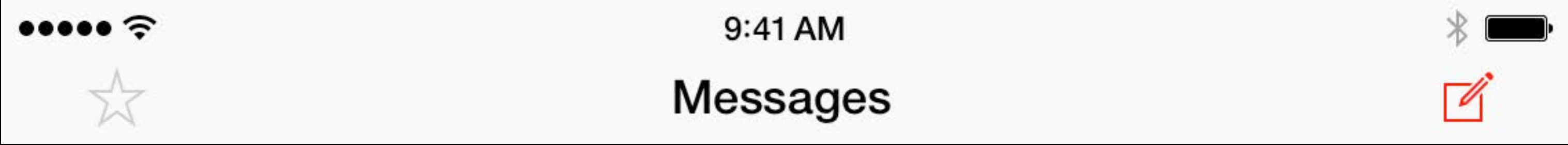


Bar Backgrounds

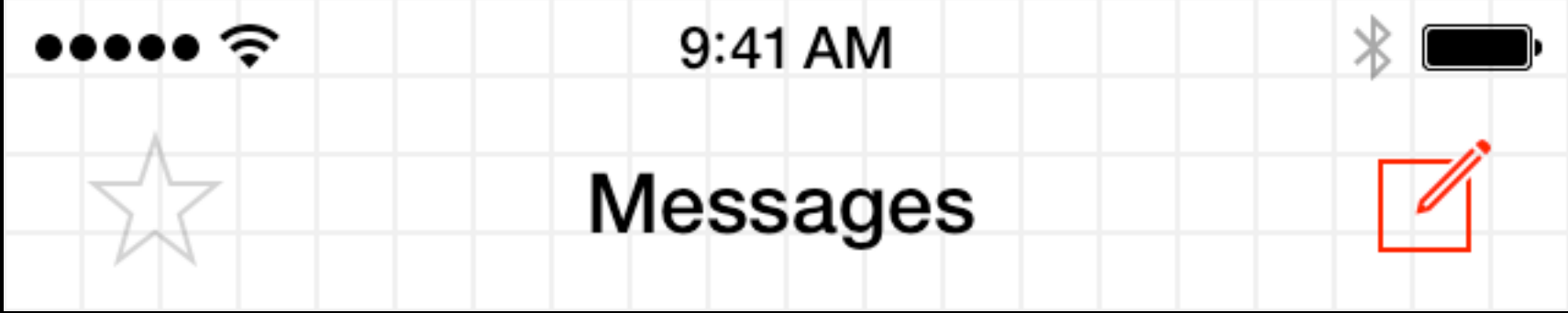


I 32 pt

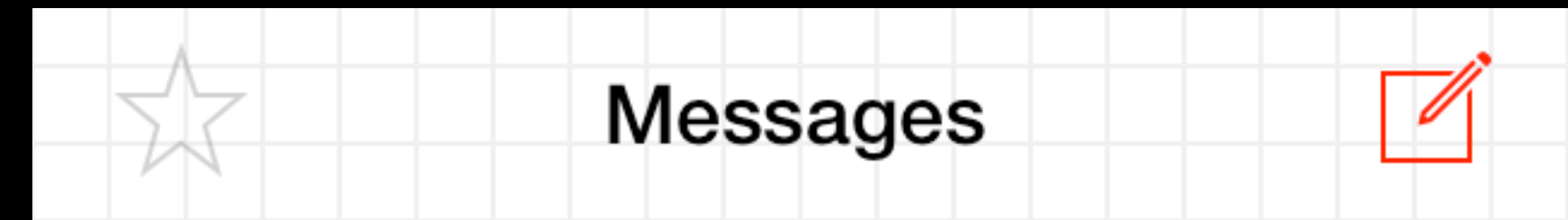
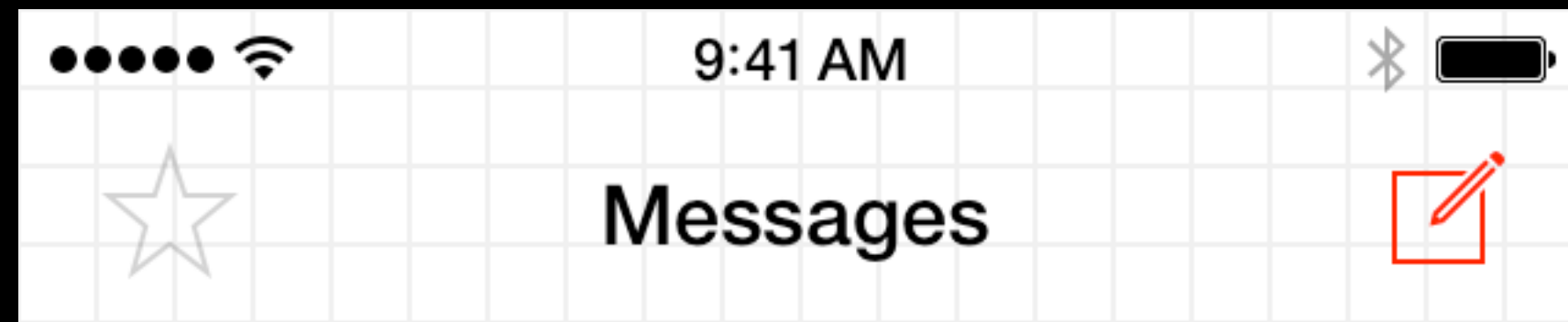
Bar Backgrounds



Bar Backgrounds

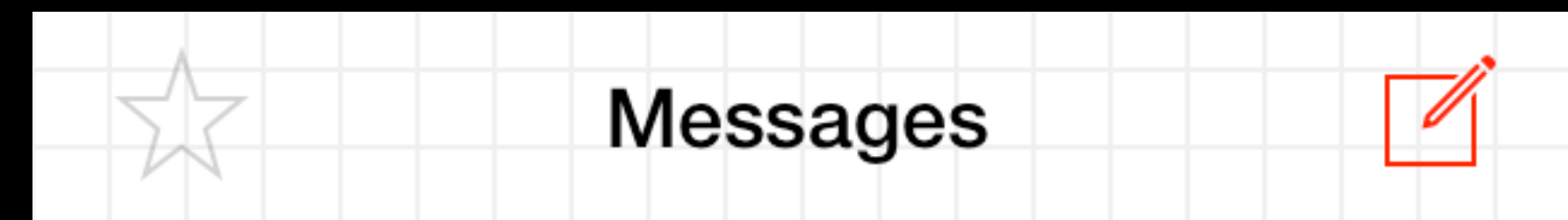
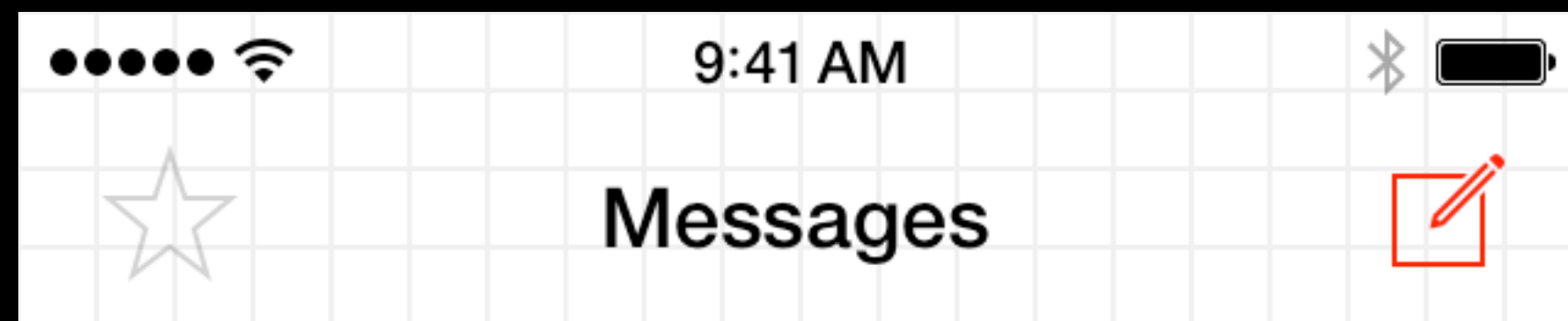


Bar Backgrounds



```
[bar setBackgroundImage:tallImage  
forBarPosition: UIBarPositionTopAttached  
barMetrics: UIBarMetricsDefault];
```

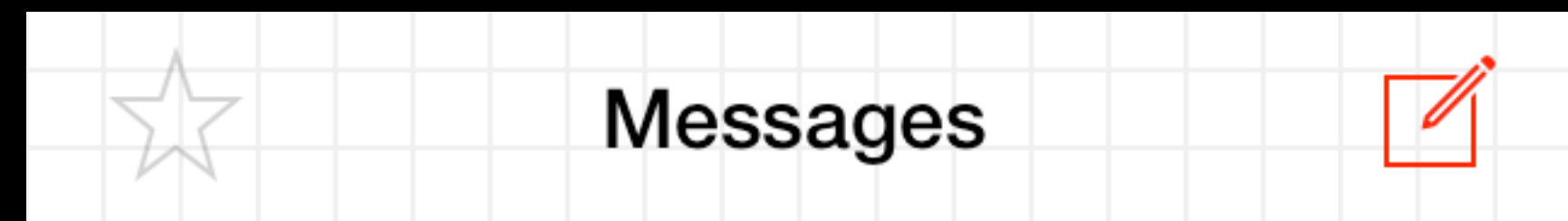
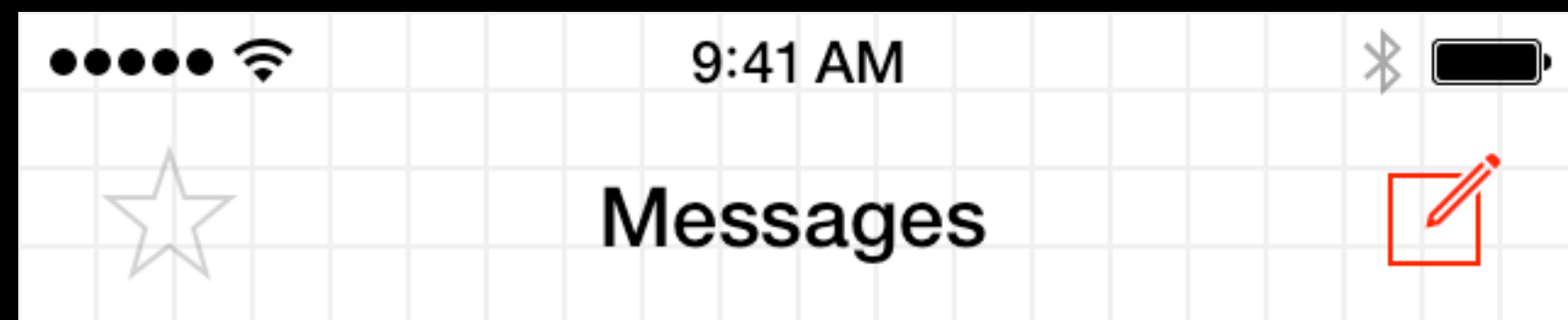
Bar Backgrounds



```
[bar setBackgroundImage:tallImage  
forBarPosition: UIBarPositionTopAttached  
barMetrics: UIBarMetricsDefault];
```

```
[bar setBackgroundImage:image  
forBarPosition: UIBarPositionTop  
barMetrics: UIBarMetricsDefault];
```

Bar Backgrounds

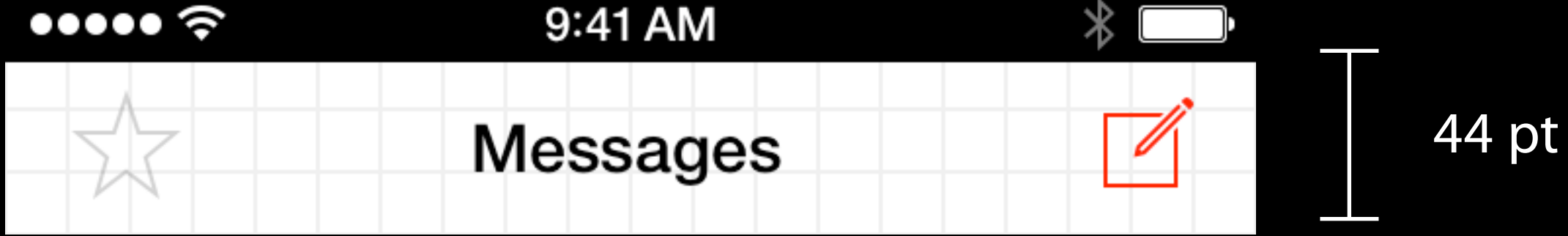


```
[bar setBackgroundImage:tallImage  
forBarPosition: UIBarPositionTopAttached  
barMetrics: UIBarMetricsDefault];
```

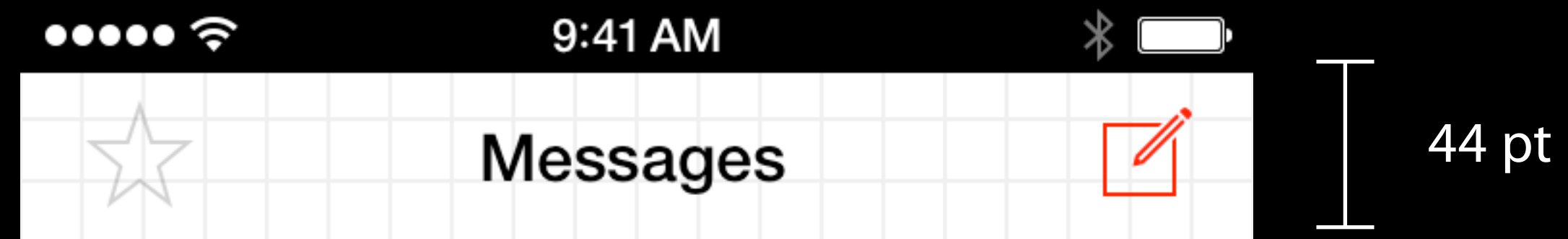
```
[bar setBackgroundImage:image  
forBarPosition: UIBarPositionTop  
barMetrics: UIBarMetricsDefault];
```

```
[bar setBackgroundImage:image  
forBarPosition: UIBarPositionAny  
barMetrics: UIBarMetricsDefault];
```

Bar Backgrounds



Bar Backgrounds



```
@property(nonatomic, retain) UIImage *shadowImage;
```


Translucency

Translucency

Normal

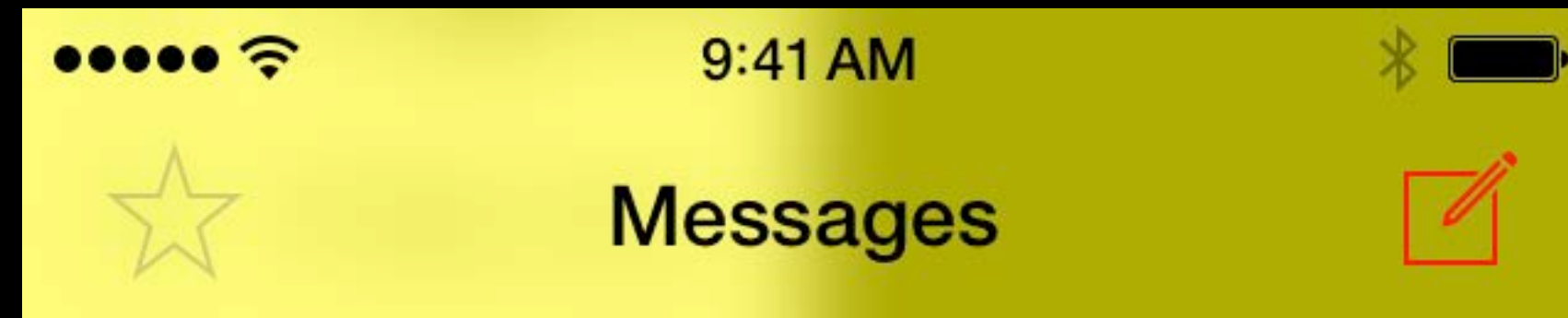


Translucency

Normal



Bar Tint Color

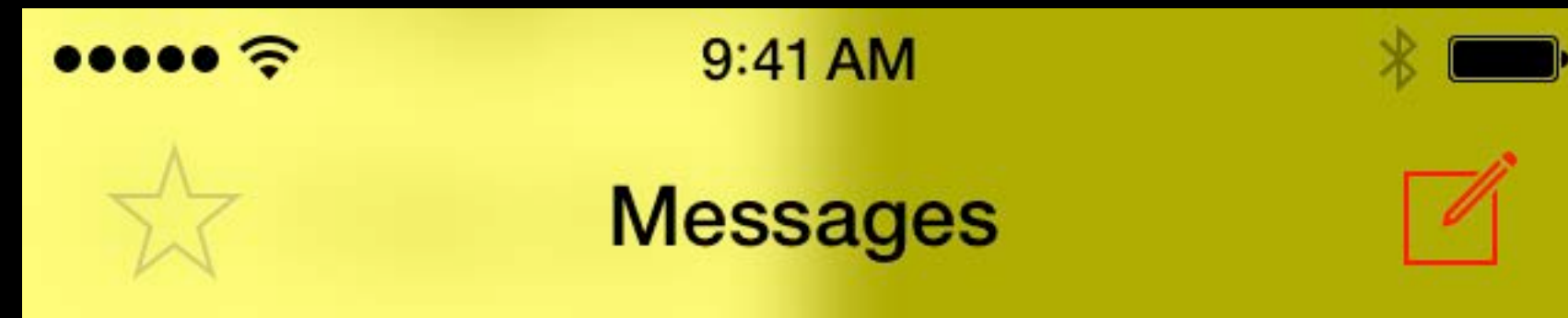


Translucency

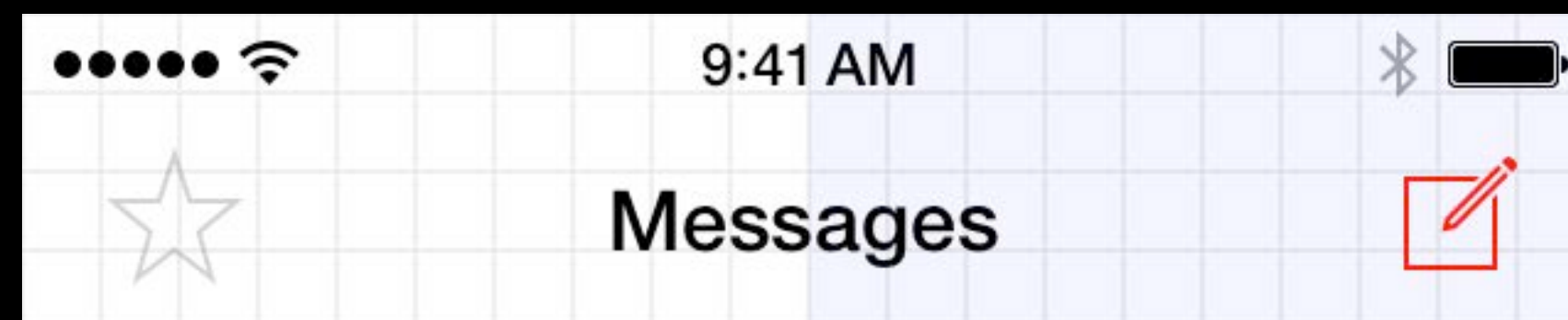
Normal



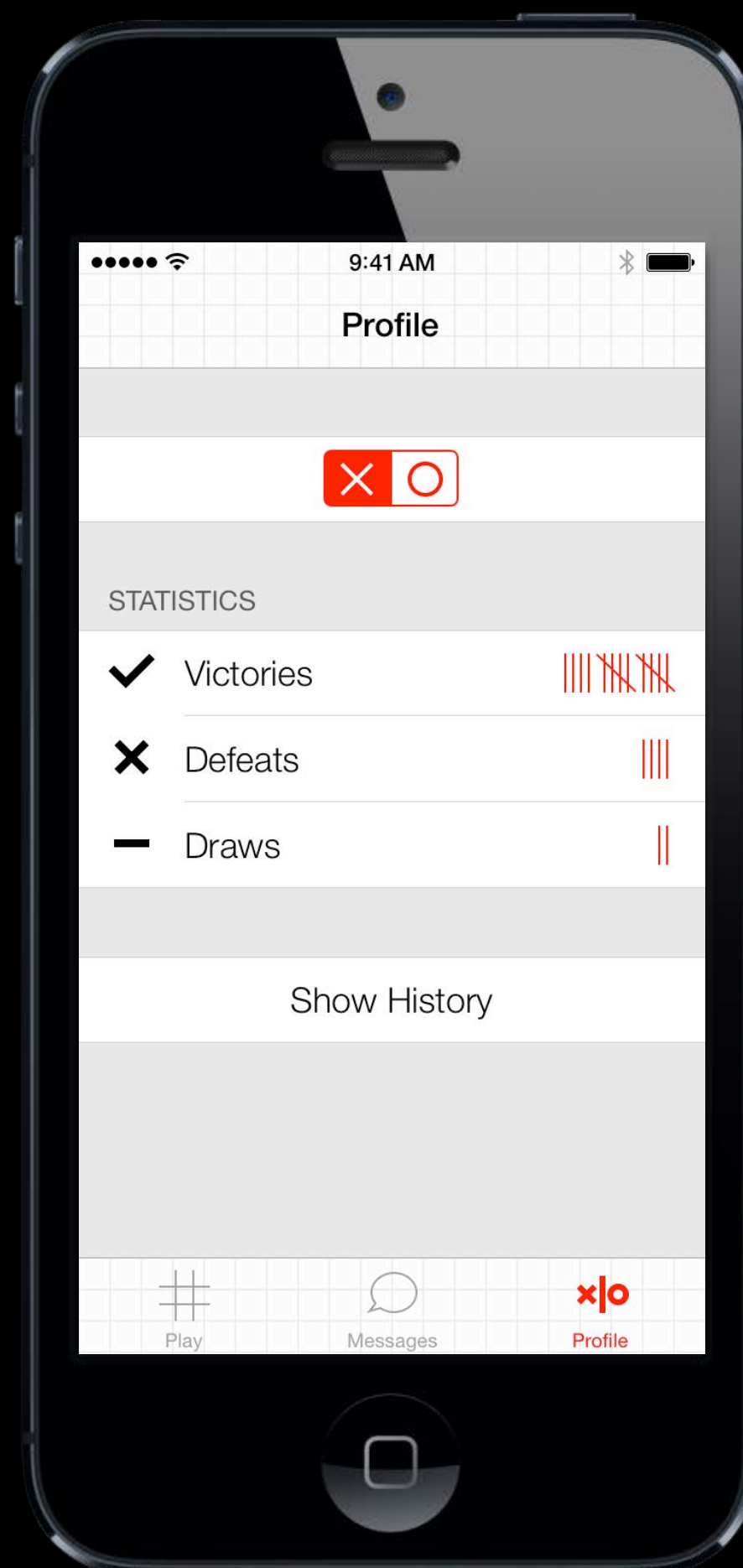
Bar Tint Color



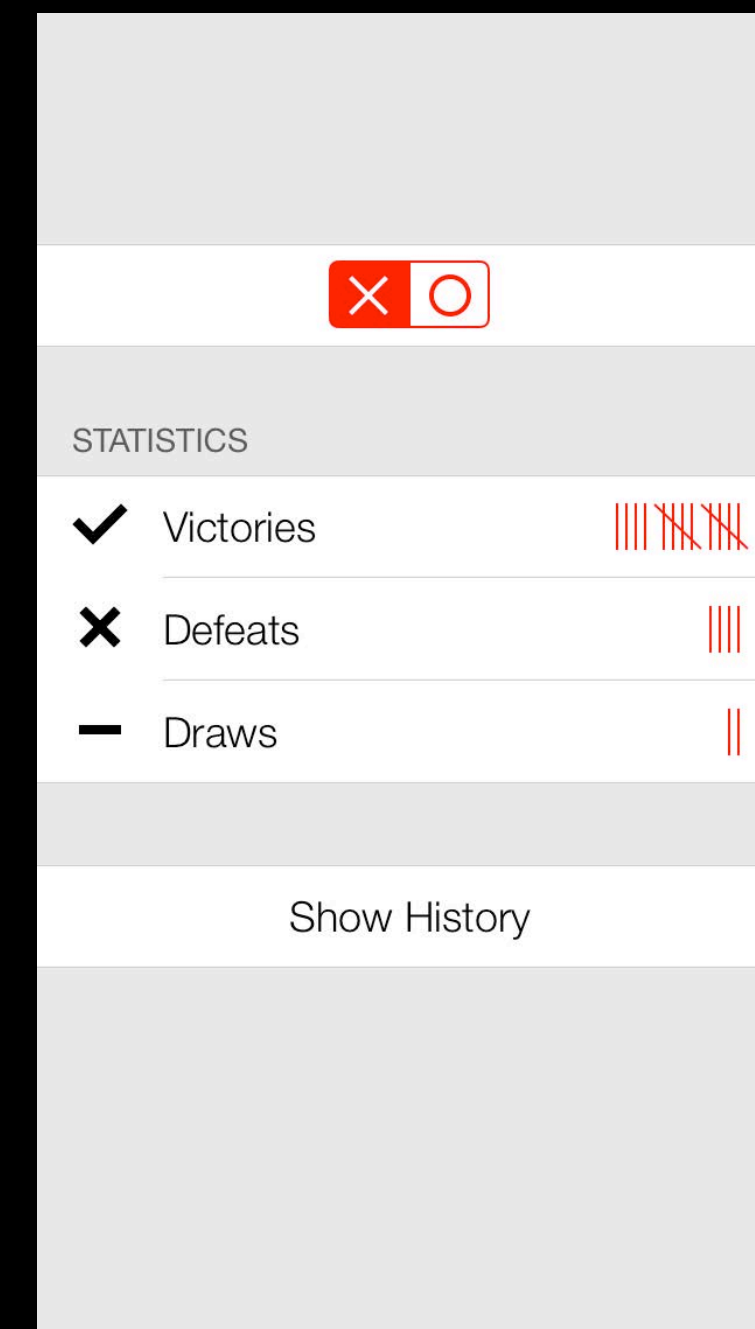
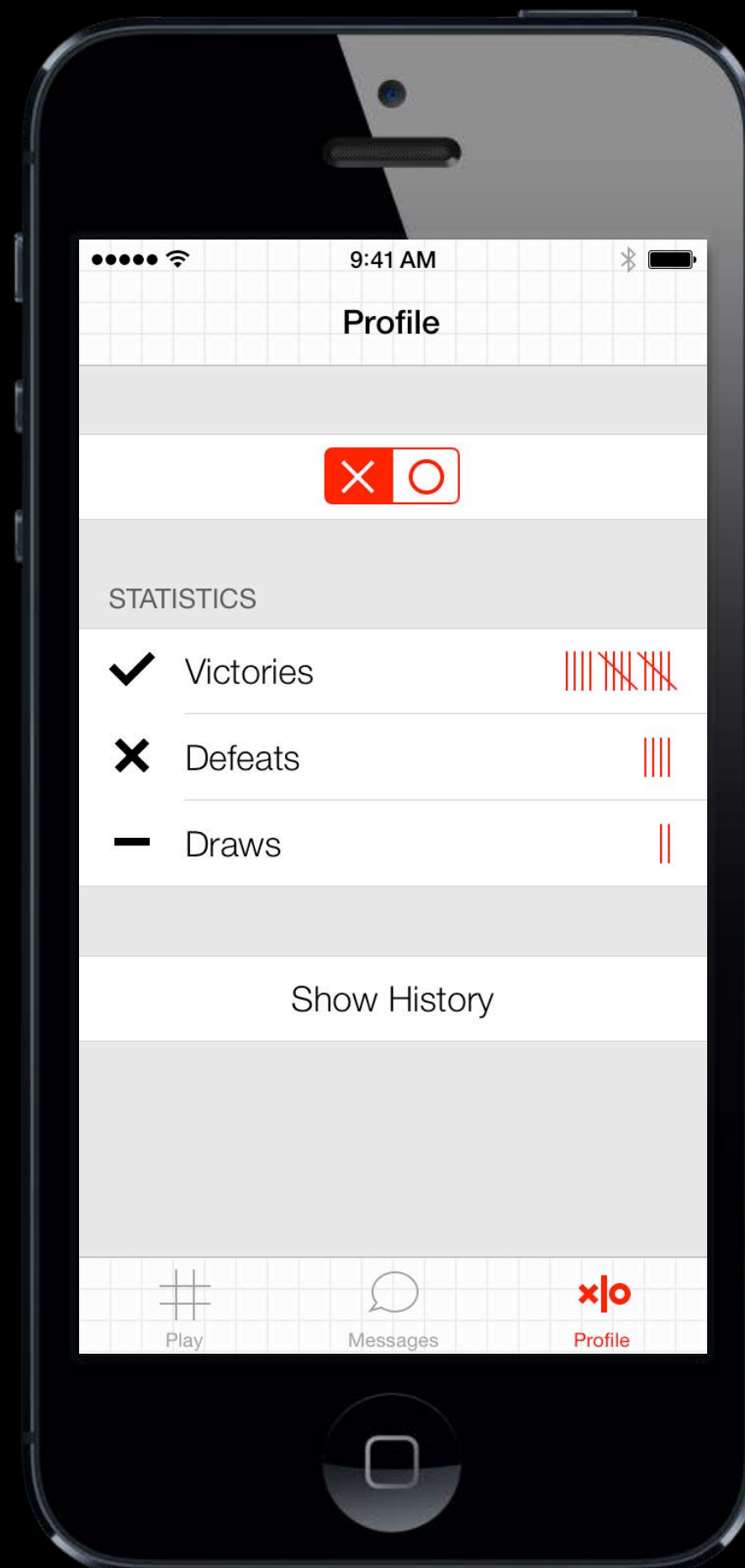
Custom Background



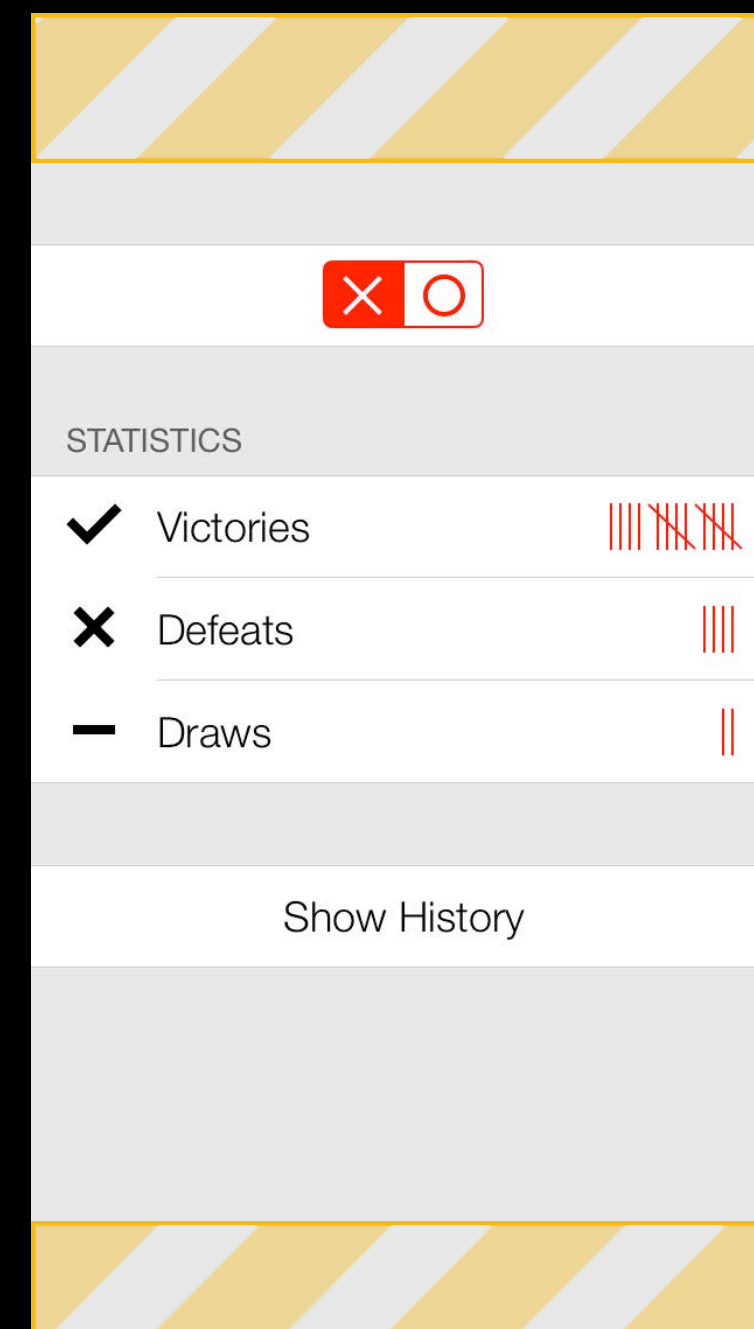
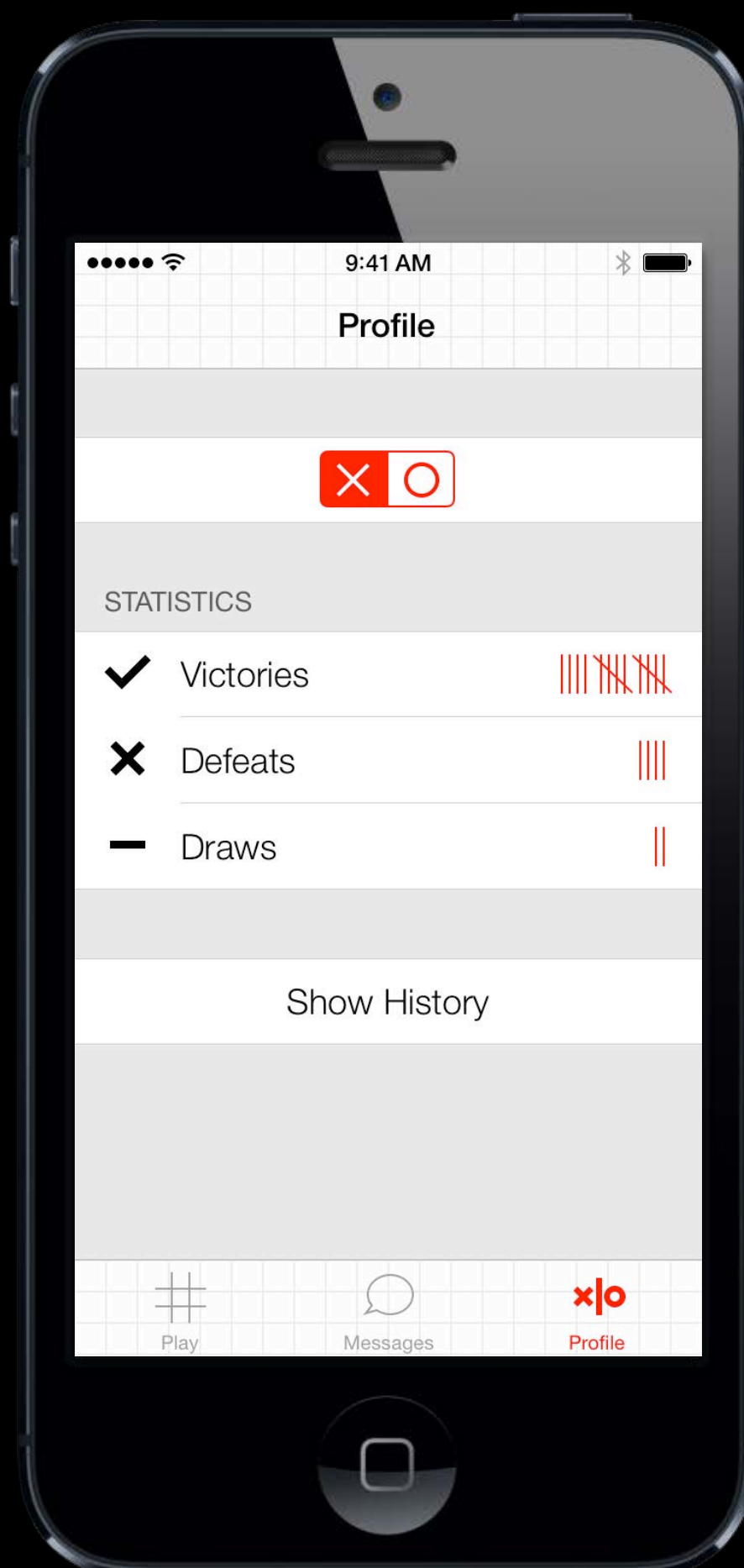
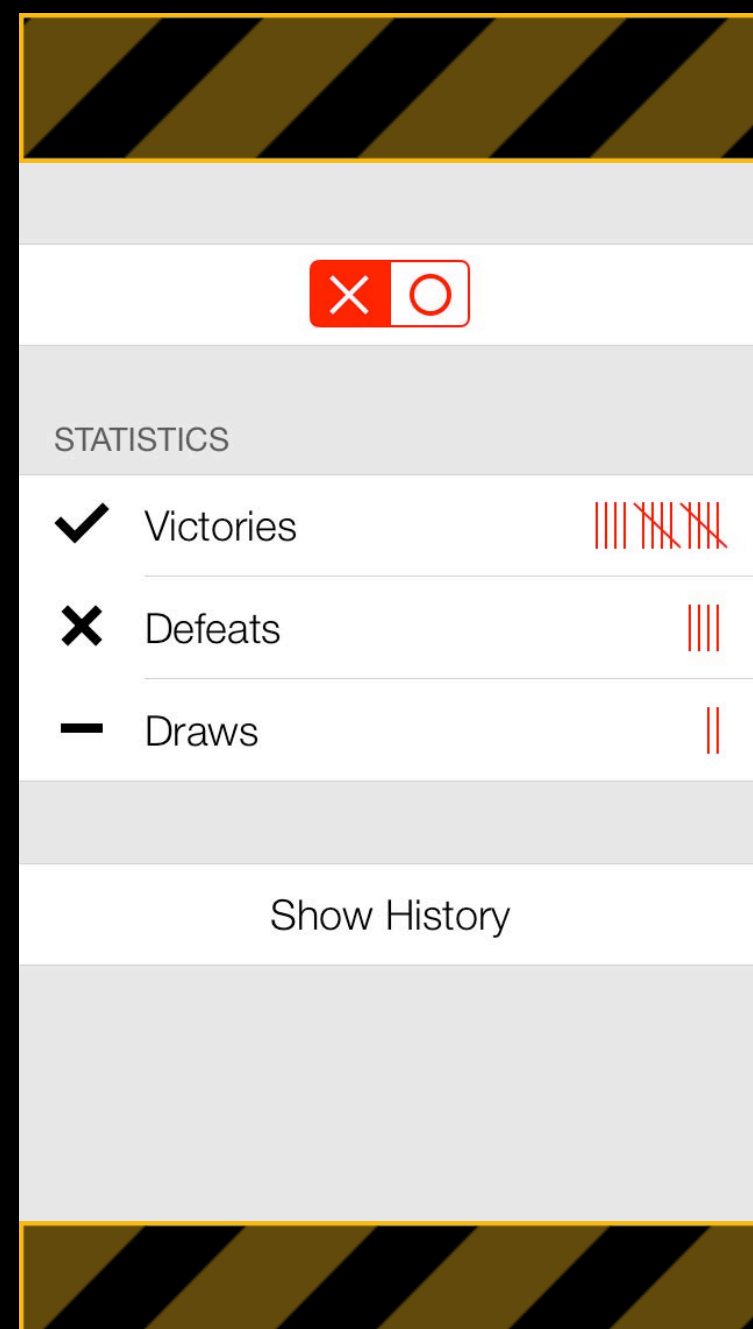
Translucency



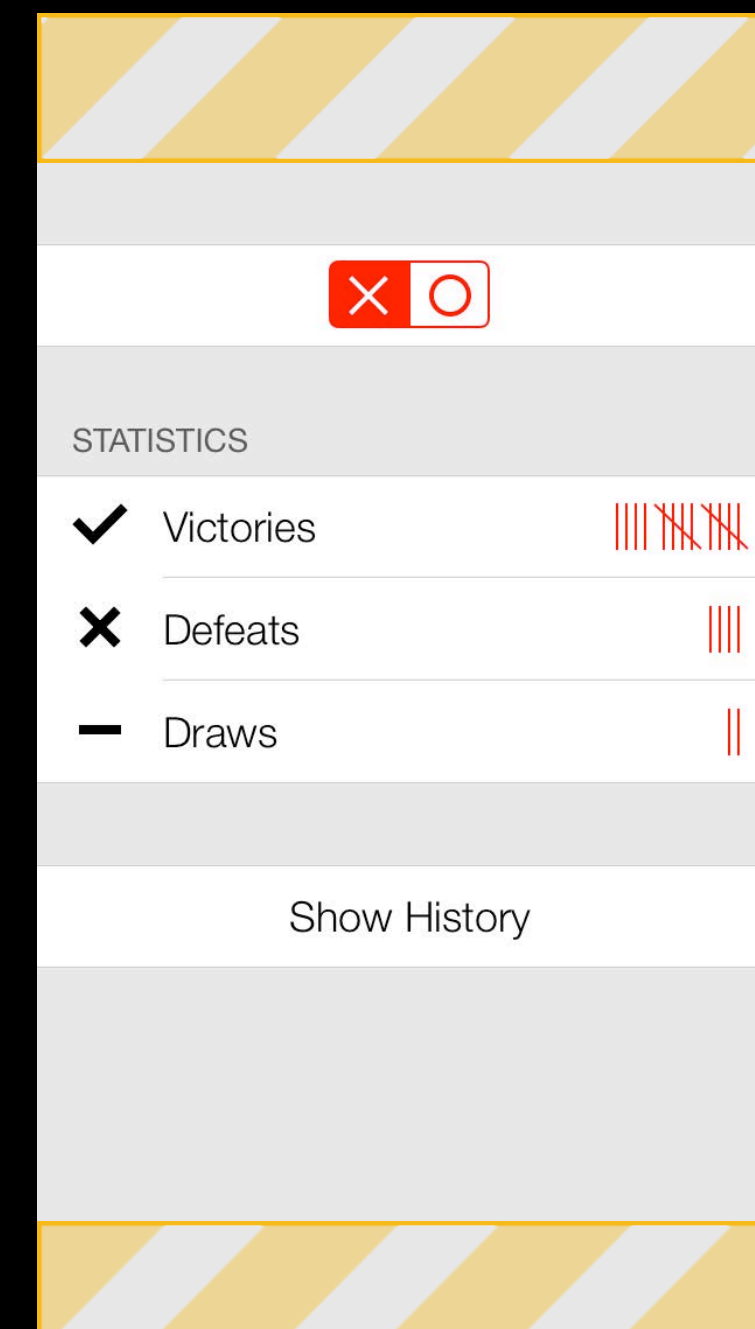
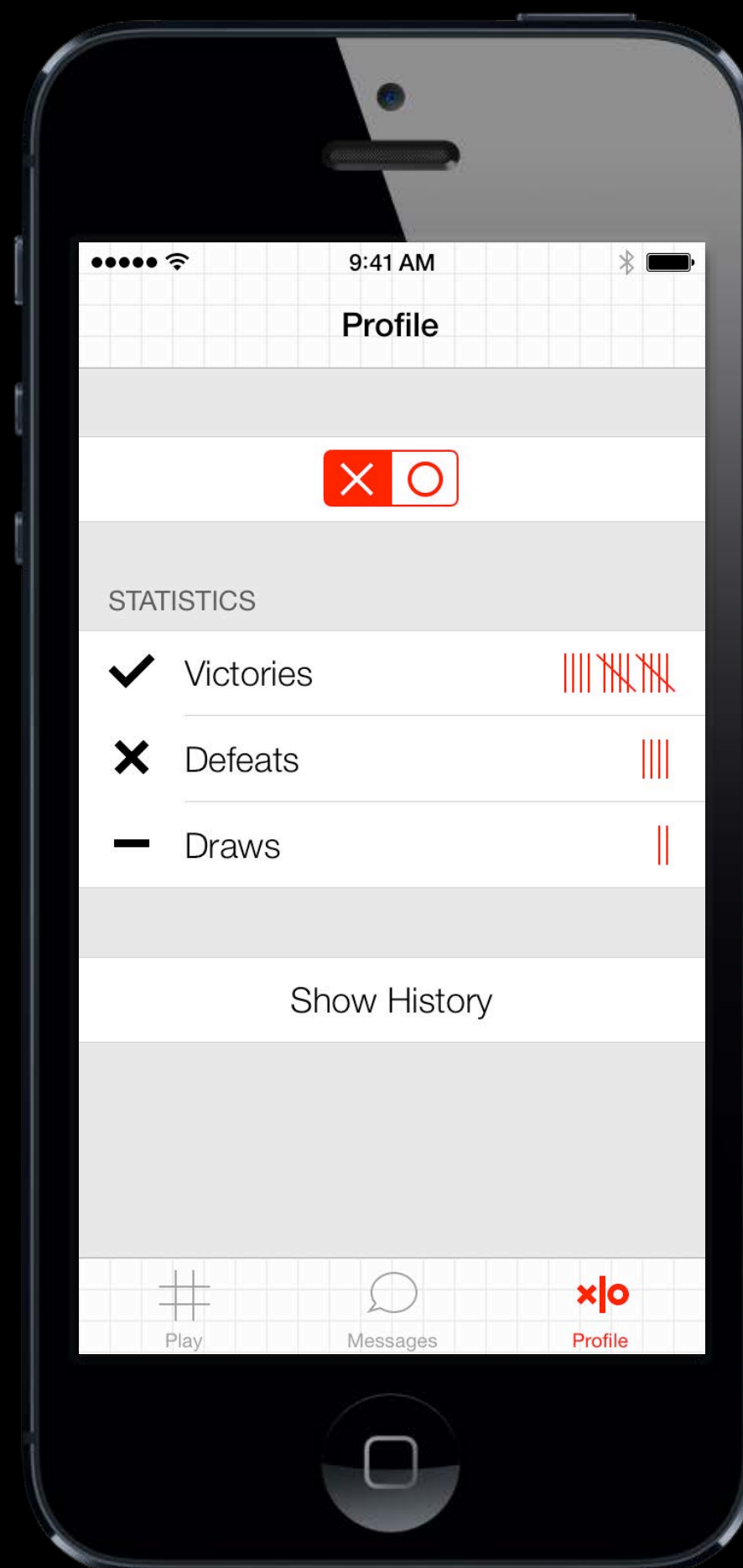
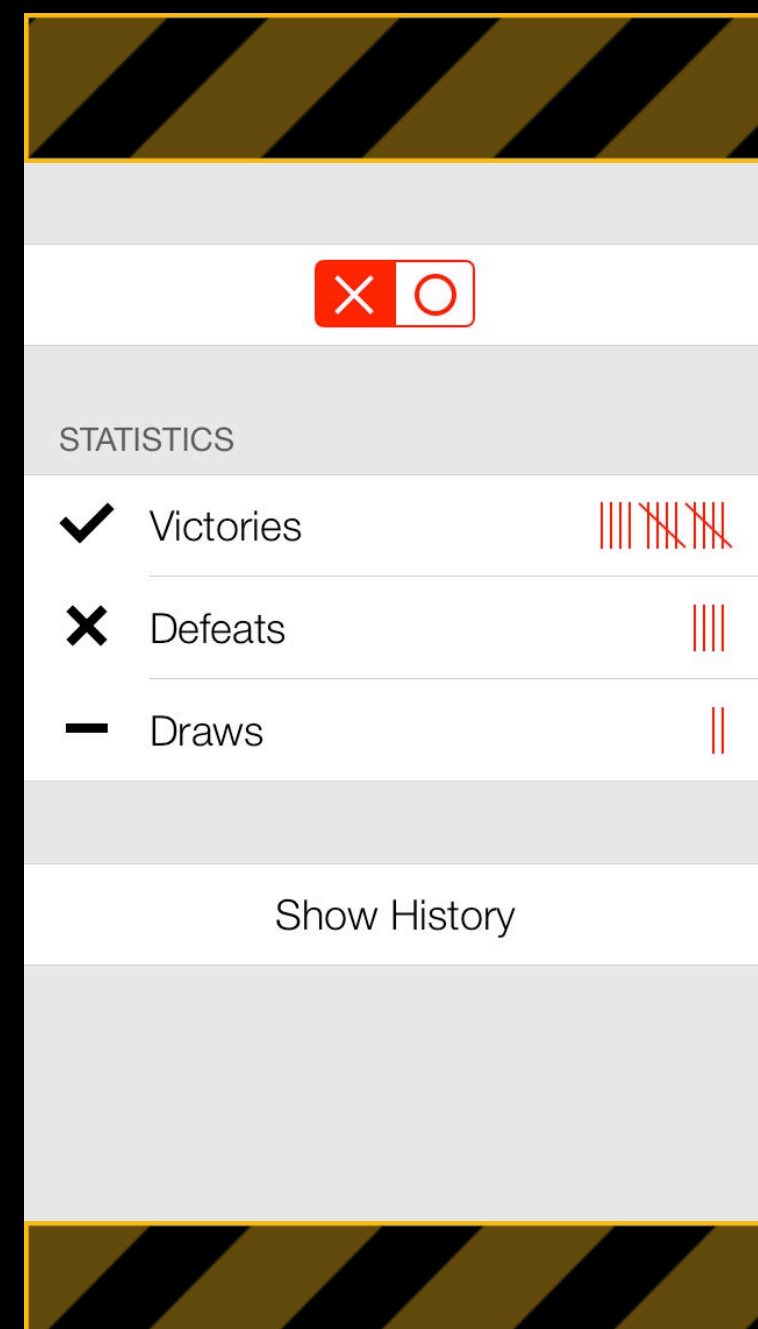
Translucency



Translucency



Translucency



UIViewController.h

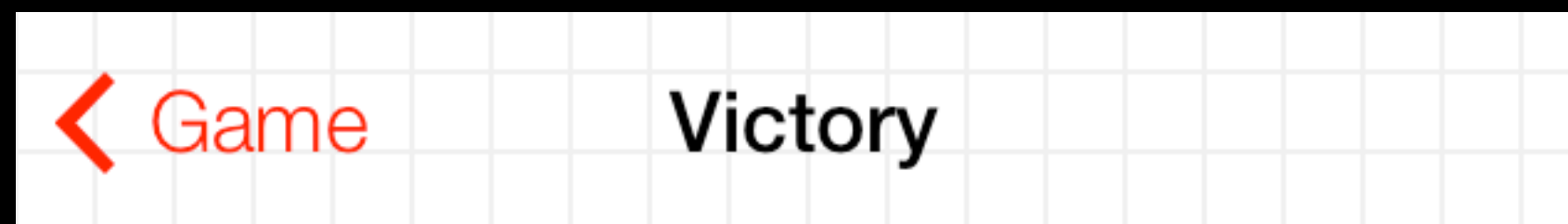
Navigation Bar



Navigation Bar

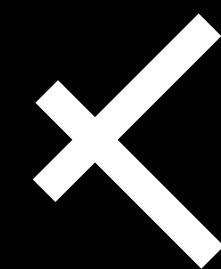


Navigation Bar



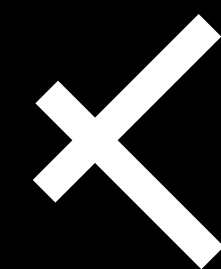
```
@property(nonatomic, retain) UIImage *backIndicatorImage;
```

Navigation Bar



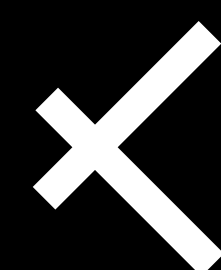
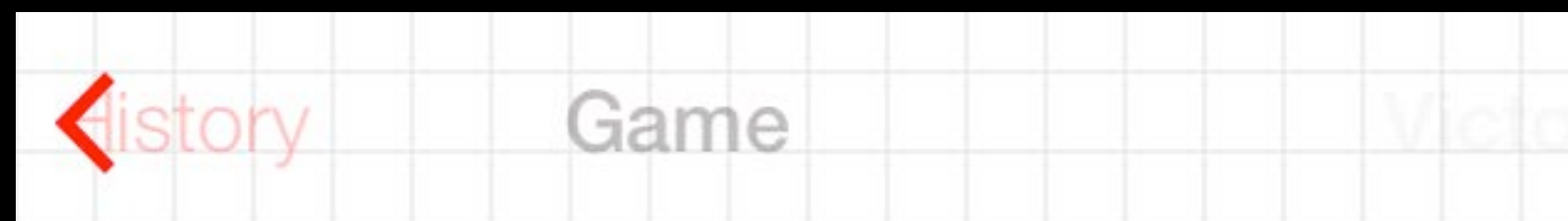
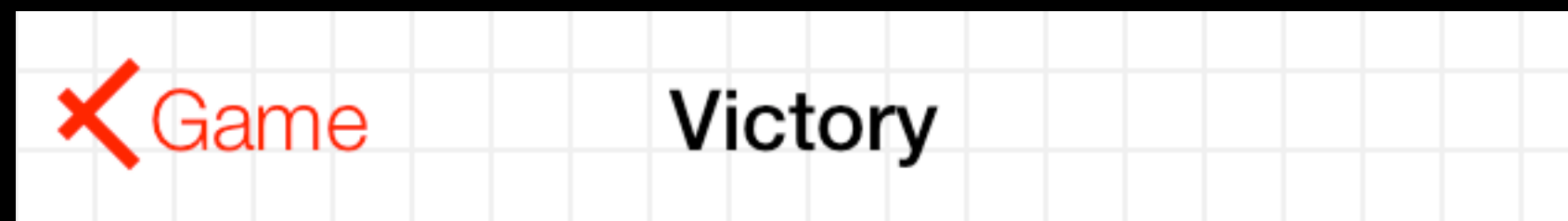
```
@property(nonatomic, retain) UIImage *backIndicatorImage;
```

Navigation Bar



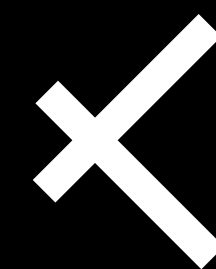
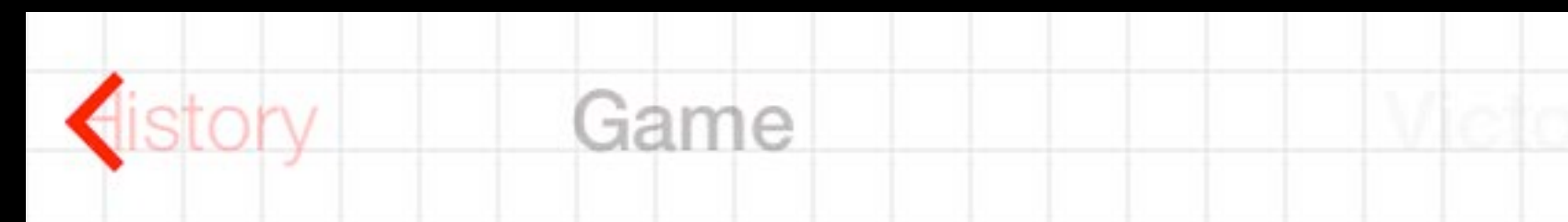
```
@property(nonatomic, retain) UIImage *backIndicatorImage;
```

Navigation Bar



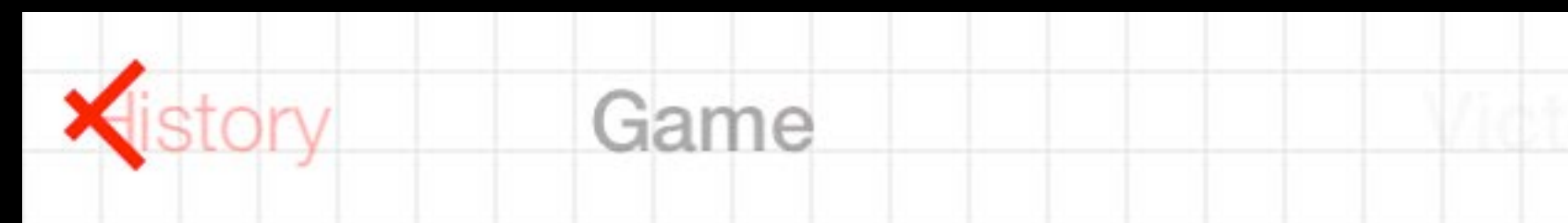
```
@property(nonatomic, retain) UIImage *backIndicatorImage;
```

Navigation Bar



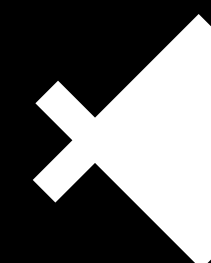
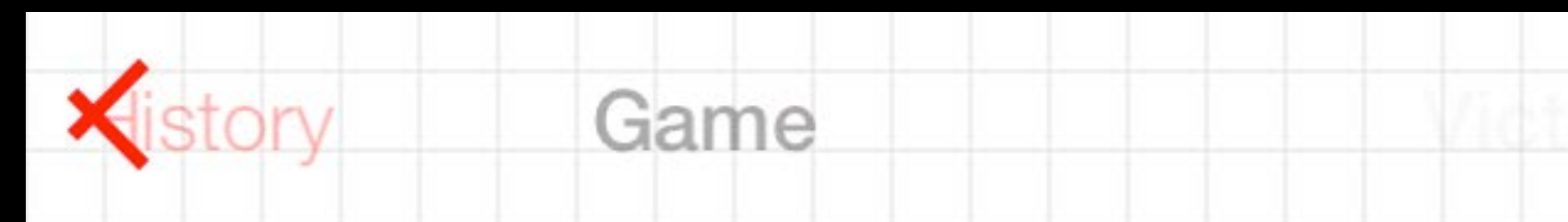
```
@property(nonatomic, retain) UIImage *backIndicatorImage;  
@property(nonatomic, retain) UIImage *backIndicatorTransitionMaskImage;
```

Navigation Bar



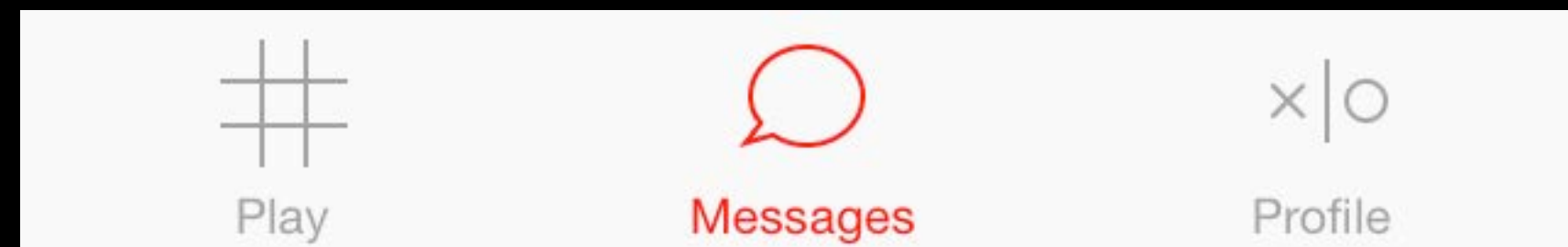
```
@property(nonatomic, retain) UIImage *backIndicatorImage;  
@property(nonatomic, retain) UIImage *backIndicatorTransitionMaskImage;
```


Navigation Bar



```
@property(nonatomic, retain) UIImage *backIndicatorImage;  
@property(nonatomic, retain) UIImage *backIndicatorTransitionMaskImage;
```

Tab Bar



Tab Bar



```
@property(nonatomic) UIBarStyle barStyle;
```

Tab Bar



UIBarStyleDefault

```
@property(nonatomic) UIBarStyle barStyle;
```

Tab Bar



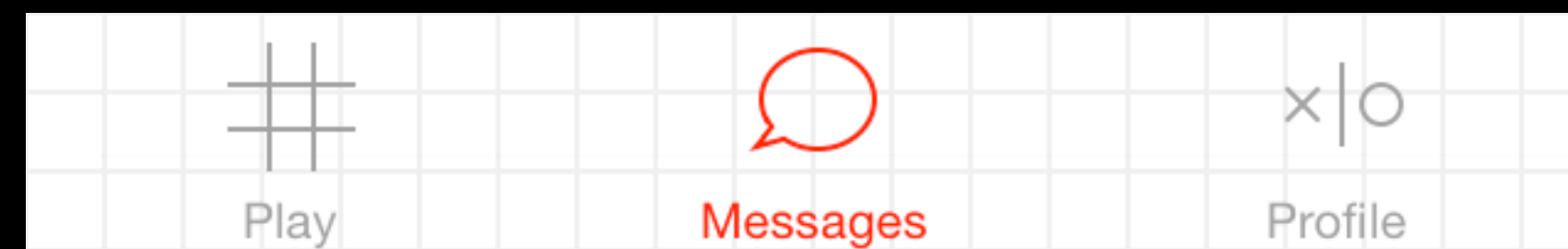
UIBarStyleDefault



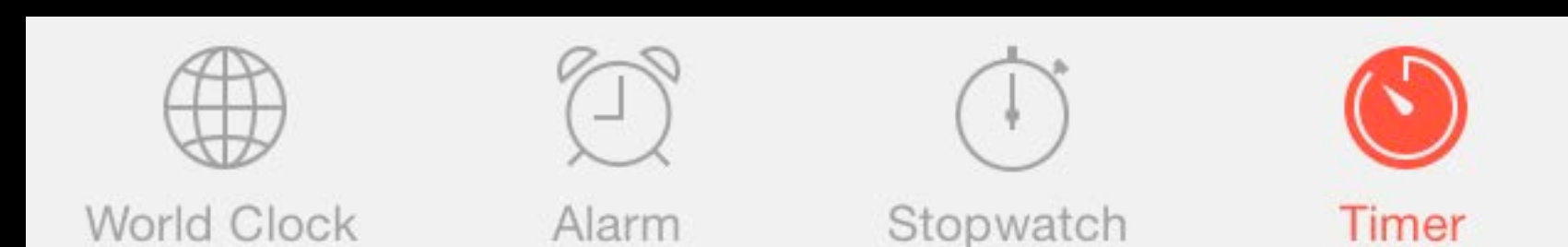
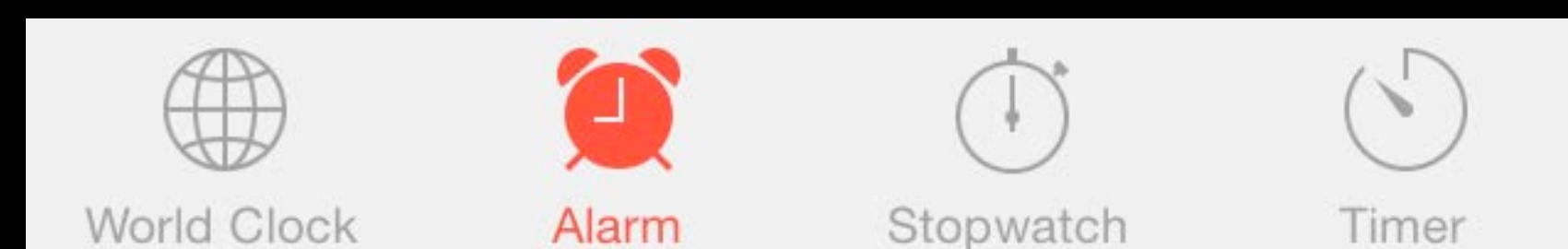
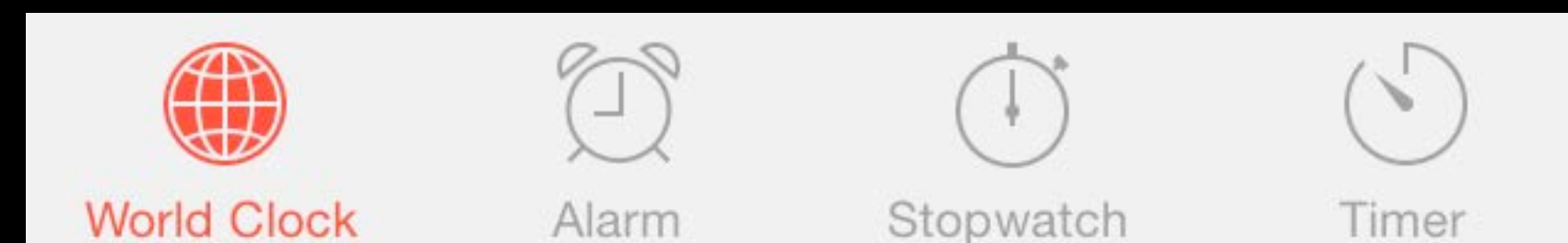
UIBarStyleBlack

```
@property(nonatomic) UIBarStyle barStyle;
```

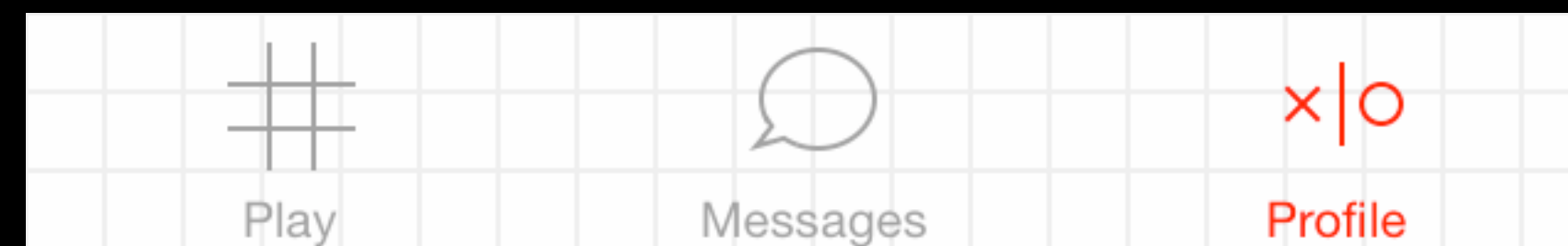
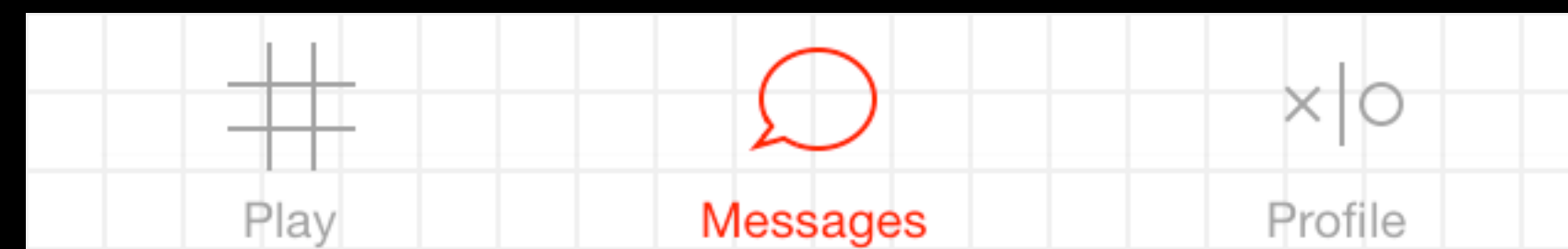
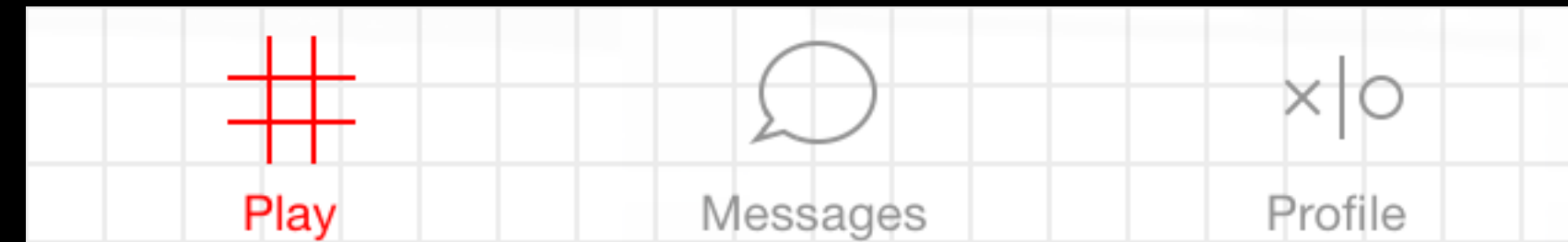
Tab Bar



Tab Bar

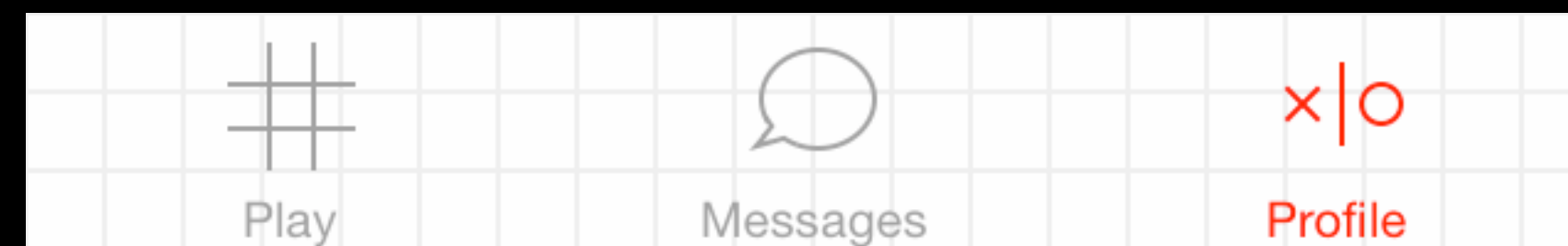
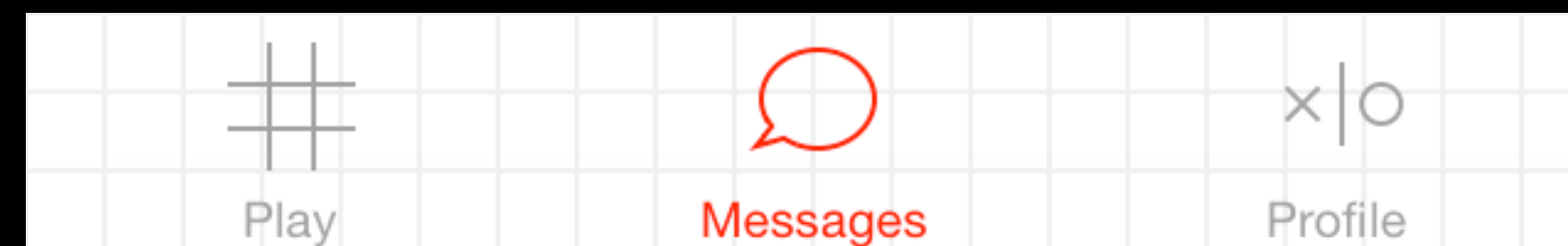
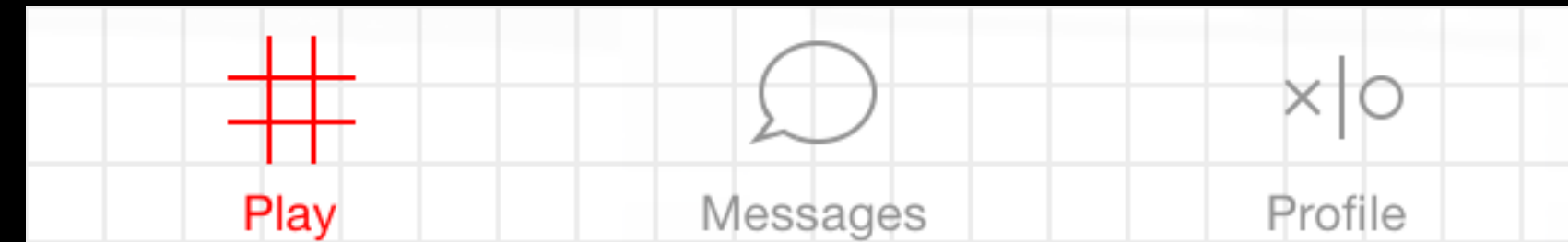


Tab Bar



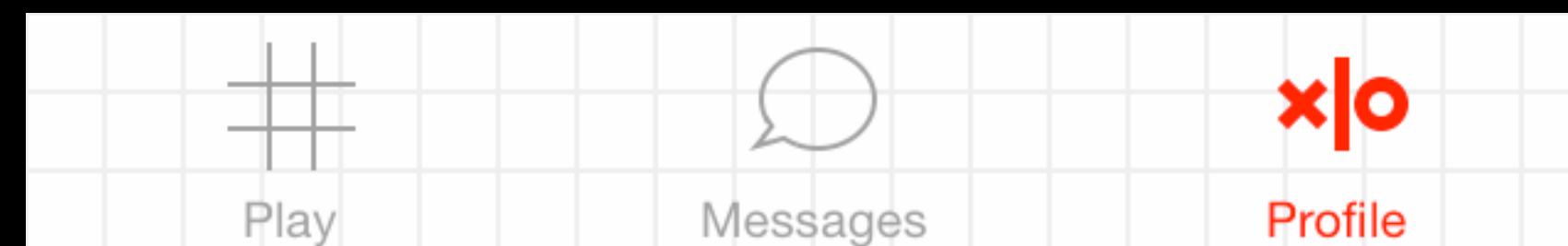
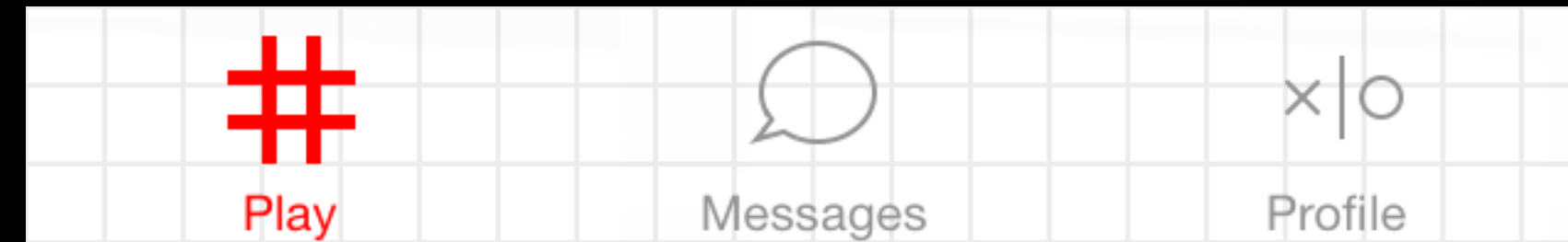
```
@property(nonatomic, retain) UIImage *image;
```


Tab Bar



```
@property(nonatomic, retain) UIImage *image;  
@property(nonatomic, retain) UIImage *selectedImage;
```

Tab Bar



```
@property(nonatomic, retain) UIImage *image;  
@property(nonatomic, retain) UIImage *selectedImage;
```

Table View

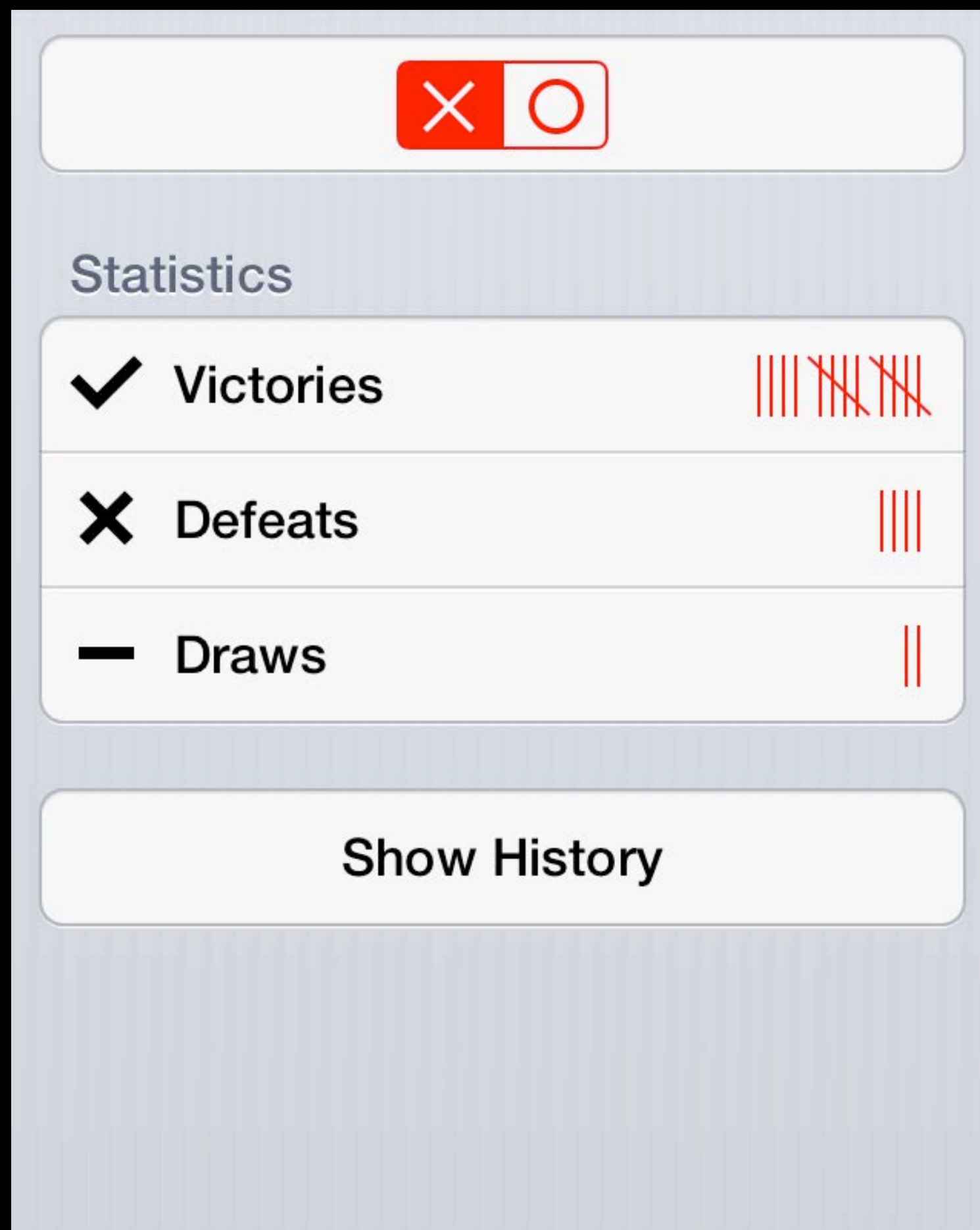


Table View

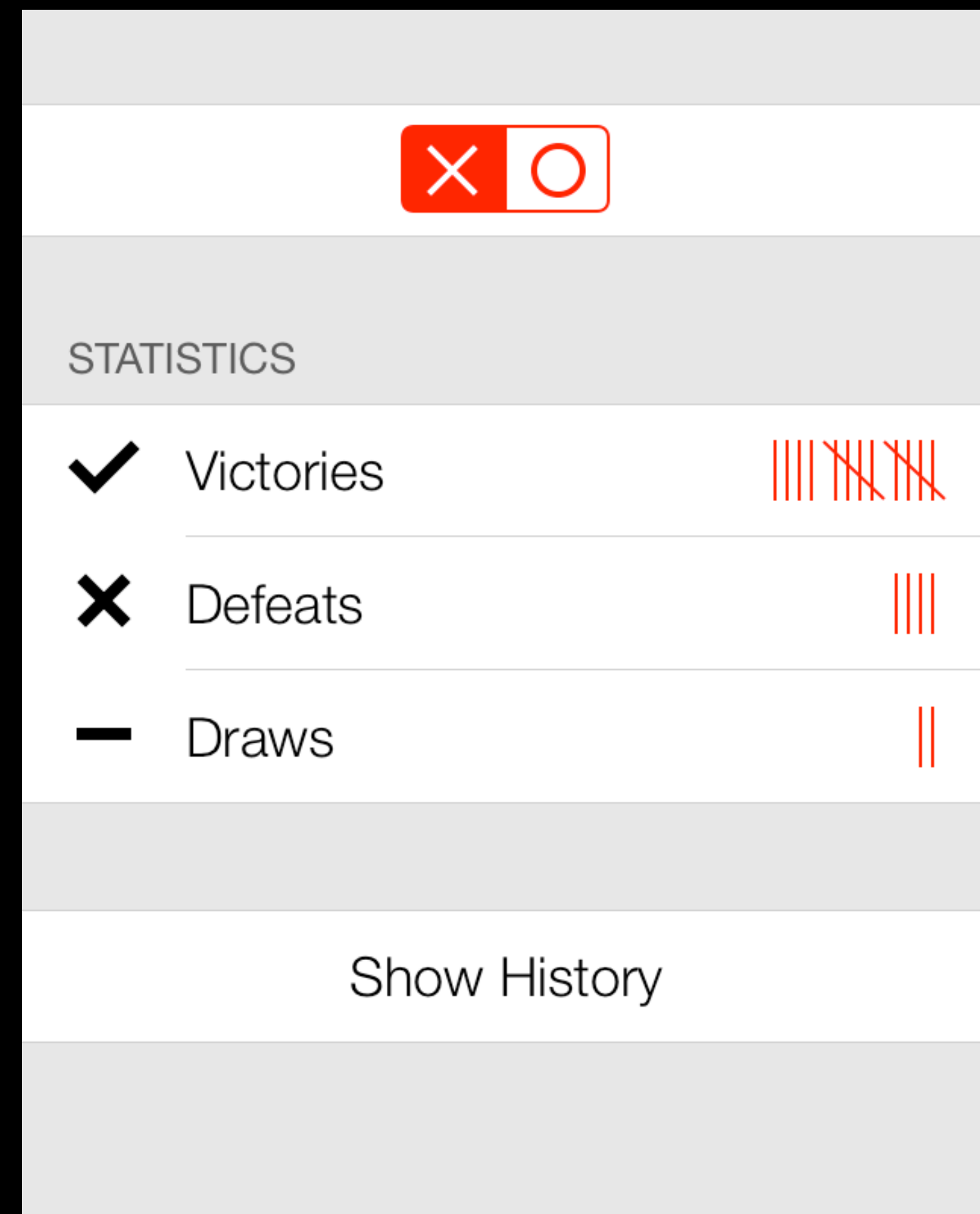
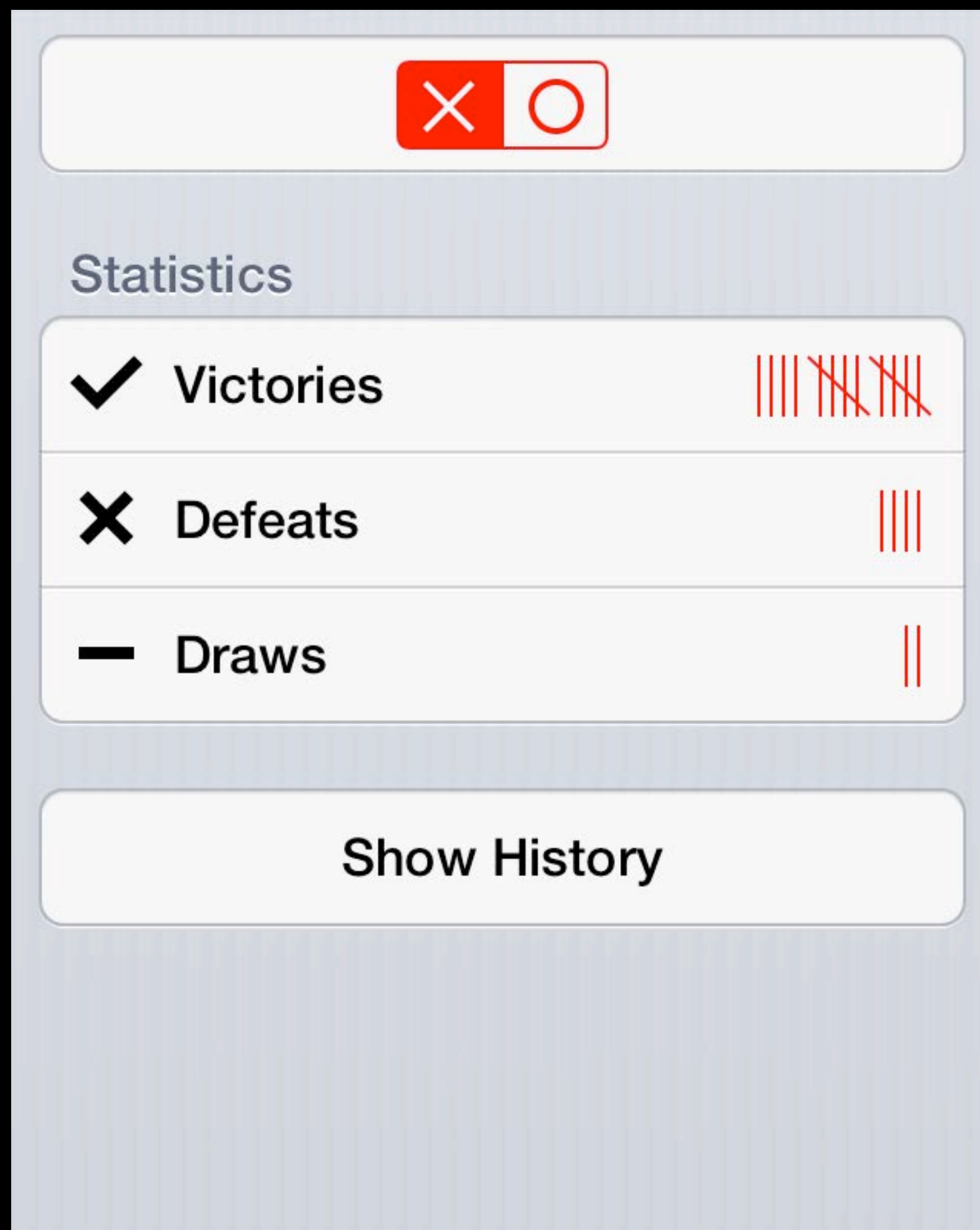


Table View

✗ This game is hard.

✗ Three wins in a row!

✗ Are you free later?

○ I want a rematch!

✗ Yes, I won!

○ Sure!

✗ Let's play a game

Table View

✗ This game is hard.

✗ Three wins in a row!

✗ Are you free later?

○ I want a rematch!

✗ Yes, I won!

○ Sure!

✗ Let's play a game

✗ This game is hard.

✗ Three wins in a row!

✗ Are you free later?

○ I want a rematch!

✗ Yes, I won!

○ Sure!

✗ Let's play a game

Table View

```
@property(nonatomic, retain)  
UIView *selectedBackgroundView;
```

- ✗ This game is hard.
- ✗ Three wins in a row!
- ✗ Are you free later?
- I want a rematch!
- ✗ Yes, I won!
- Sure!
- ✗ Let's play a game

Buttons

Pause

New Game



Buttons

UIButtonTypeSystem

Pause

New Game



Buttons

UIButtonTypeSystem



~~UIButtonTypeRoundedRect~~

Buttons

UIButtonTypeSystem

Pause

New Game



Buttons

UIButtonTypeSystem

Pause

New Game



Buttons

UIButtonTypeSystem



```
pauseButton.selected = YES;
```

Buttons

UIButtonTypeSystem

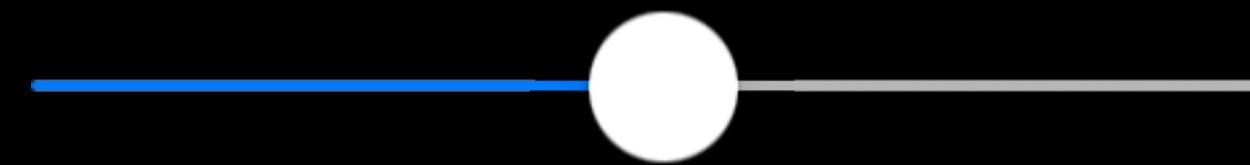
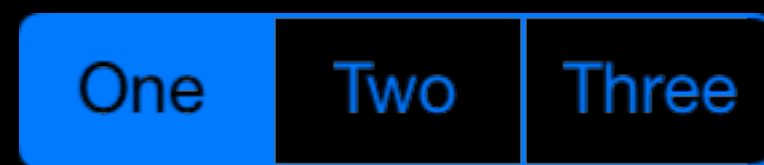
Pause

New Game

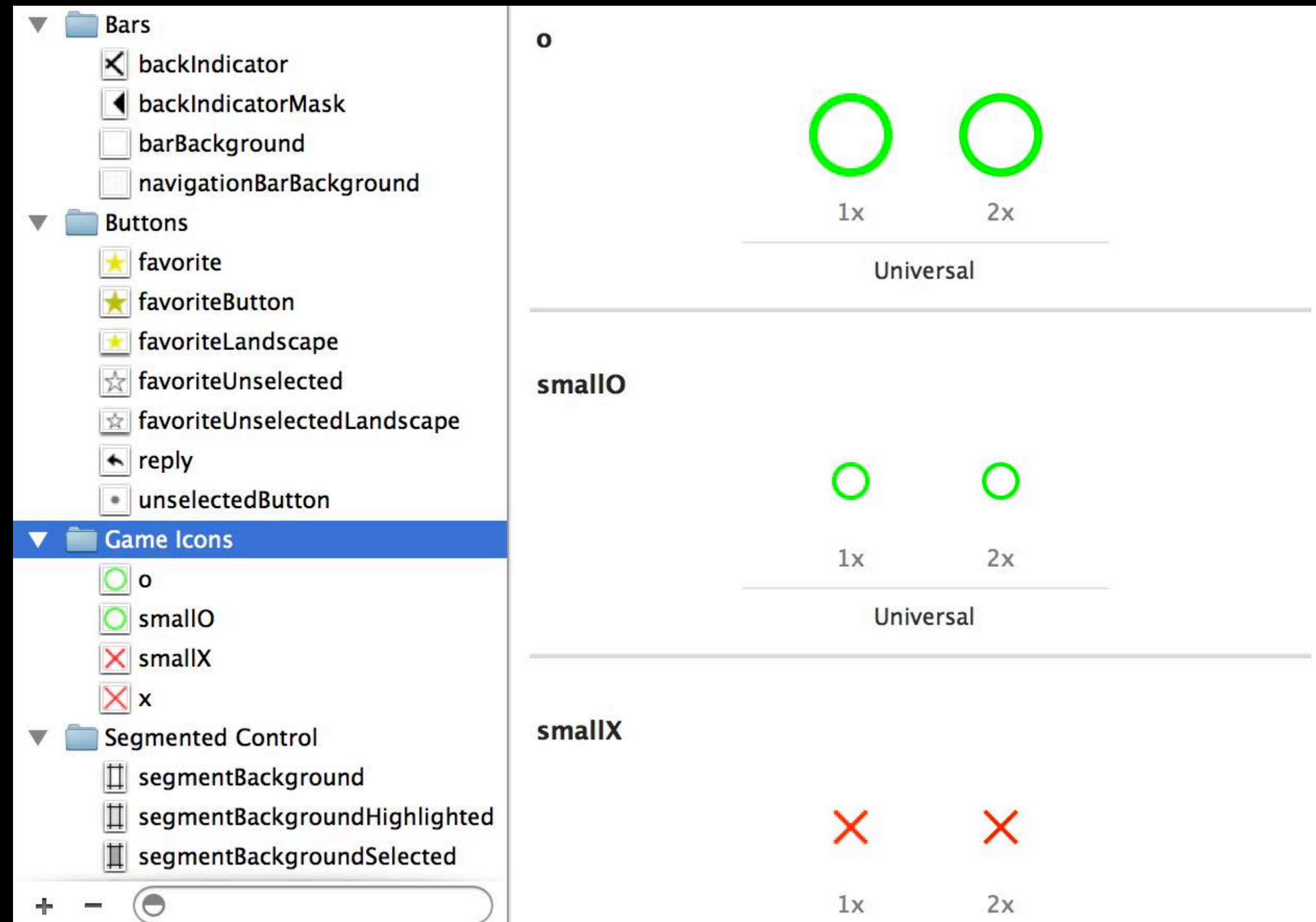


Other Controls

Other Controls

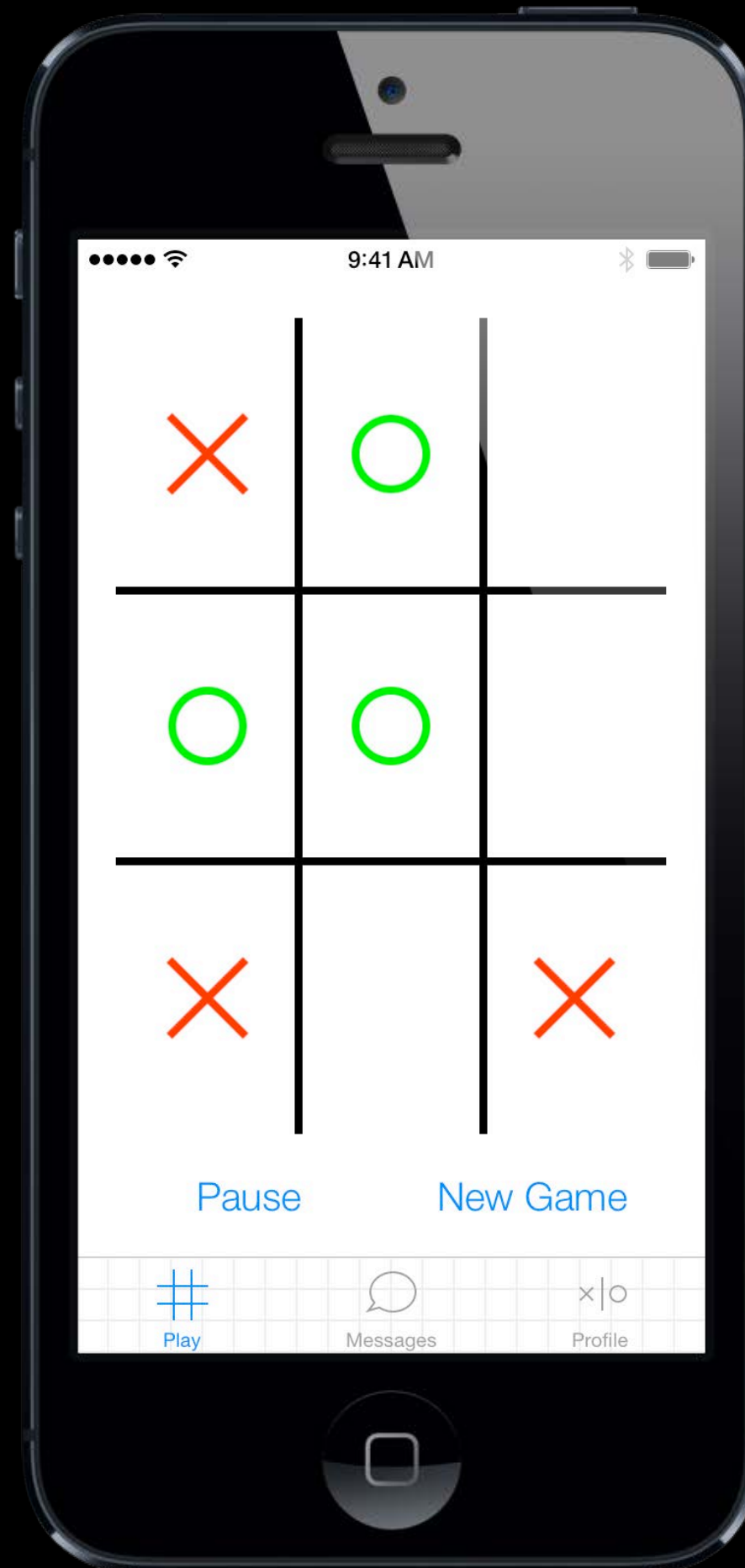


Asset Catalog

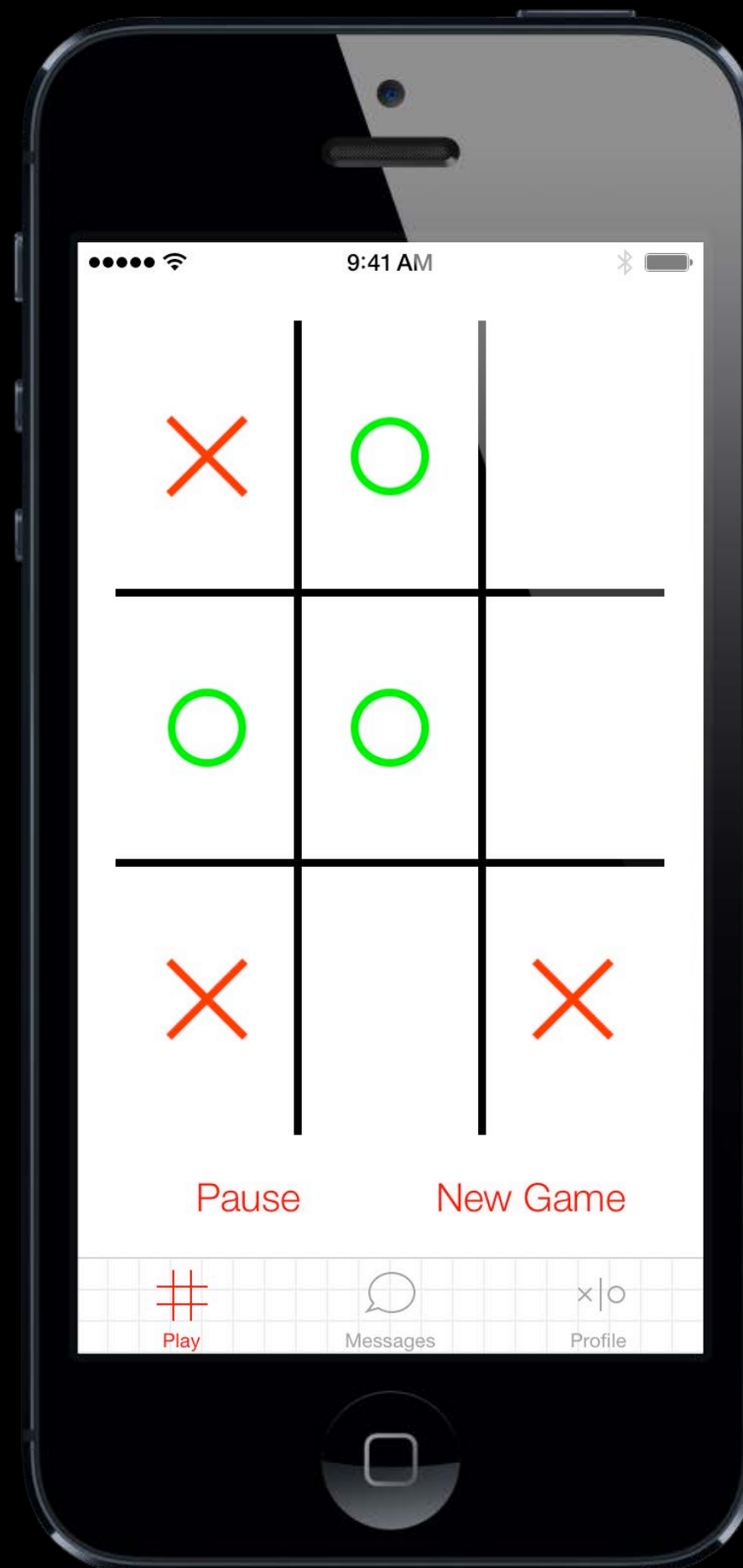


Advanced Customization

Tint Color

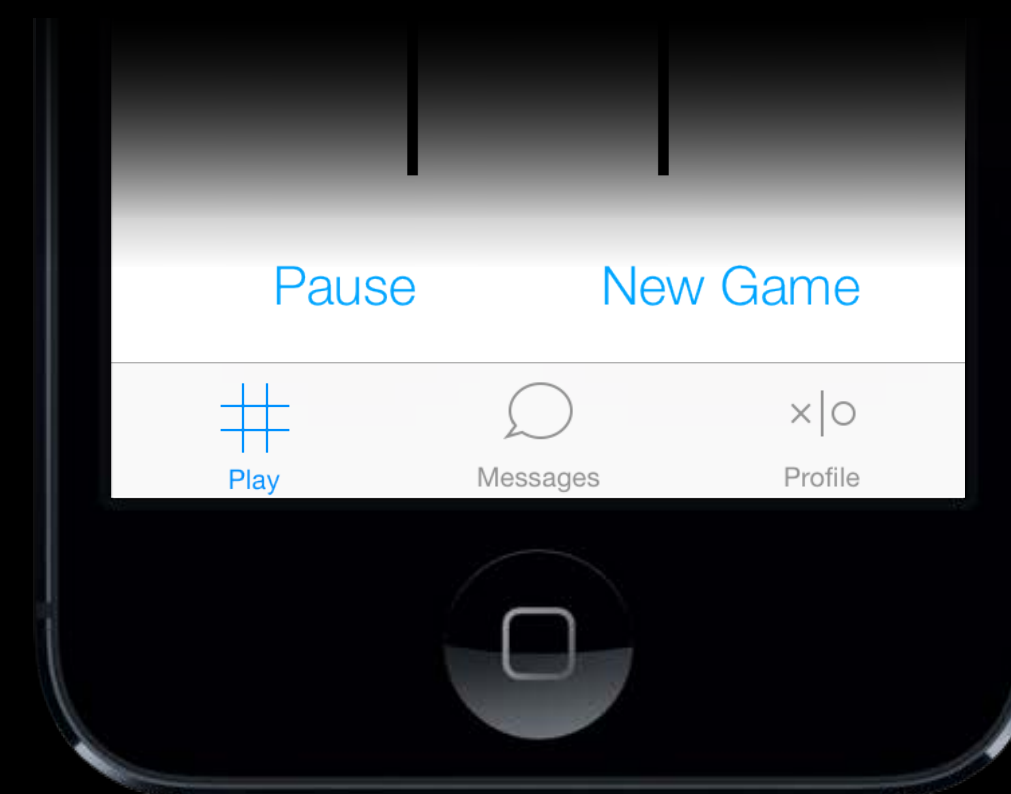
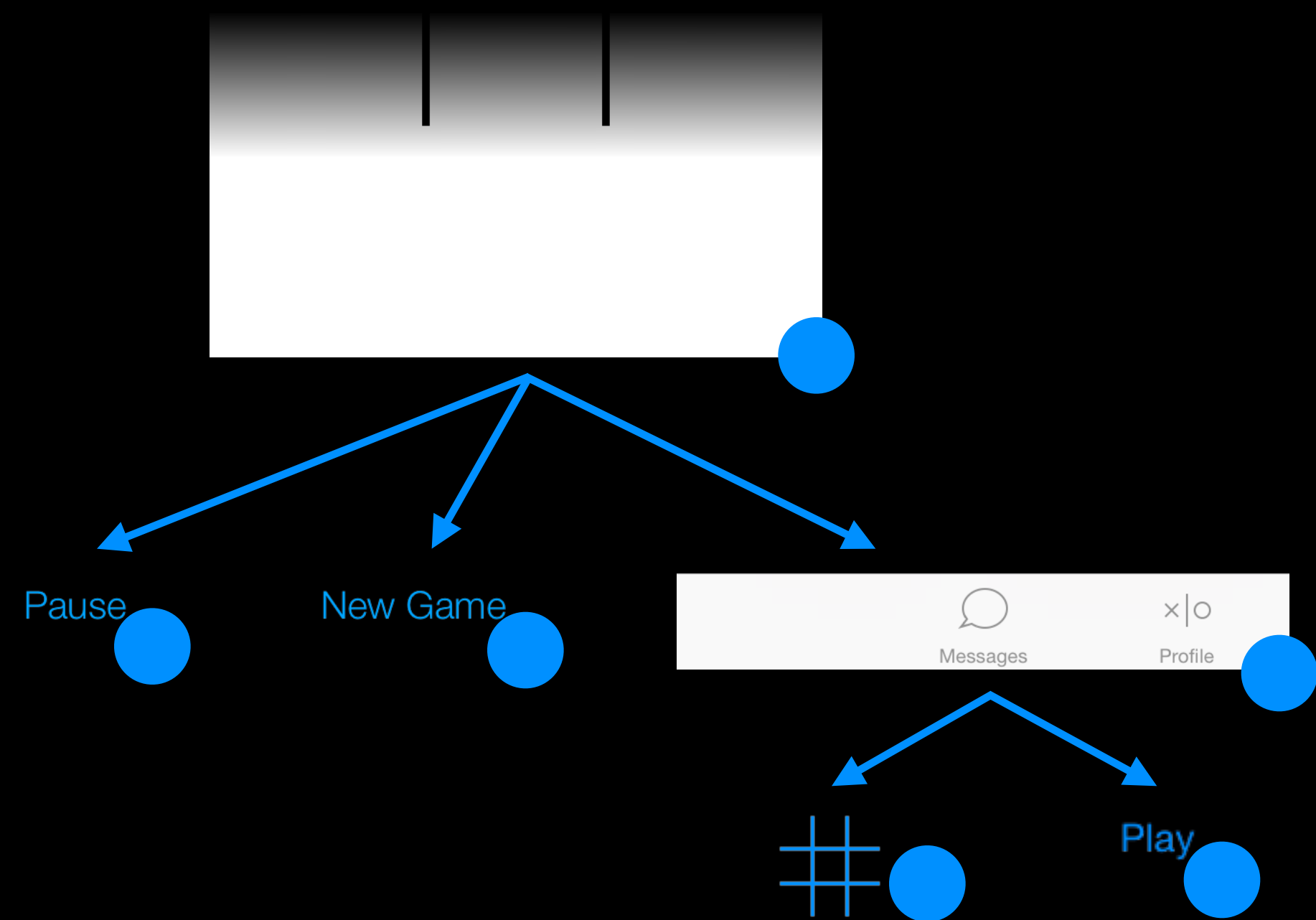


Tint Color

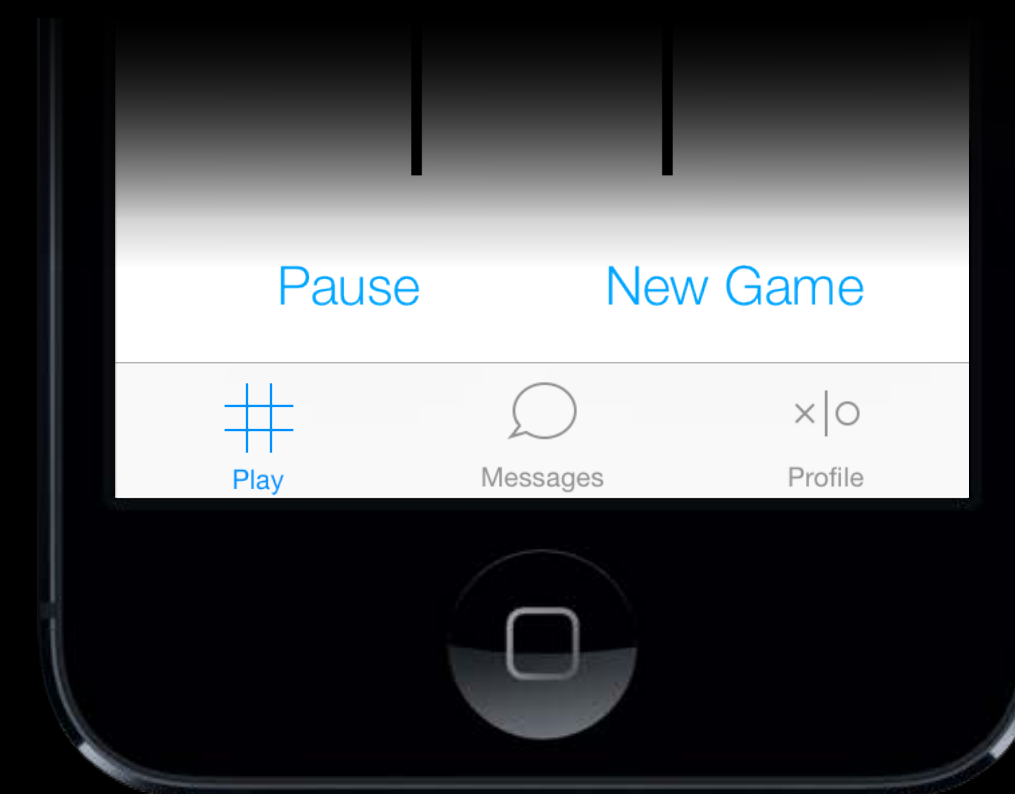
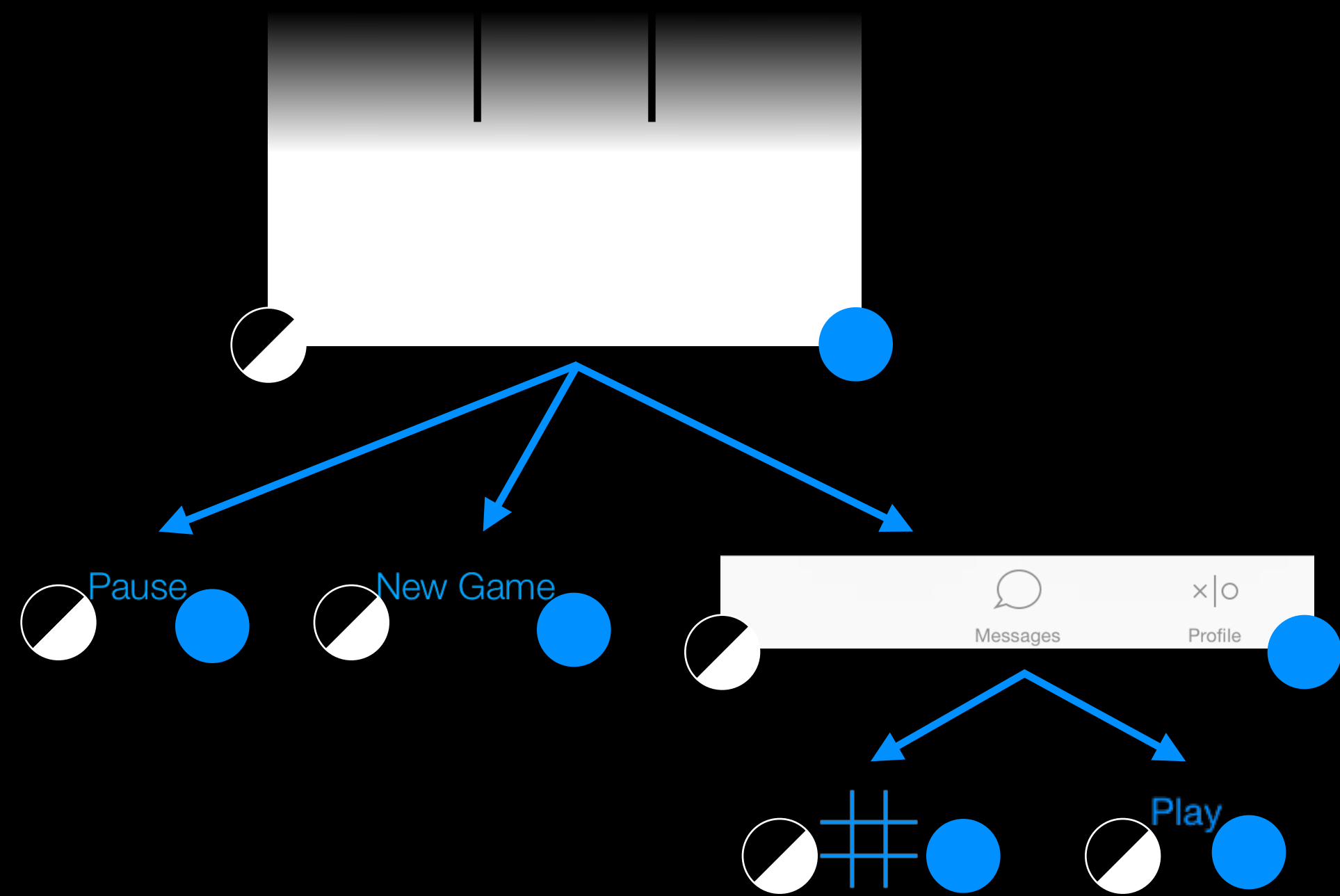


```
window.tintColor = [UIColor redColor];
```

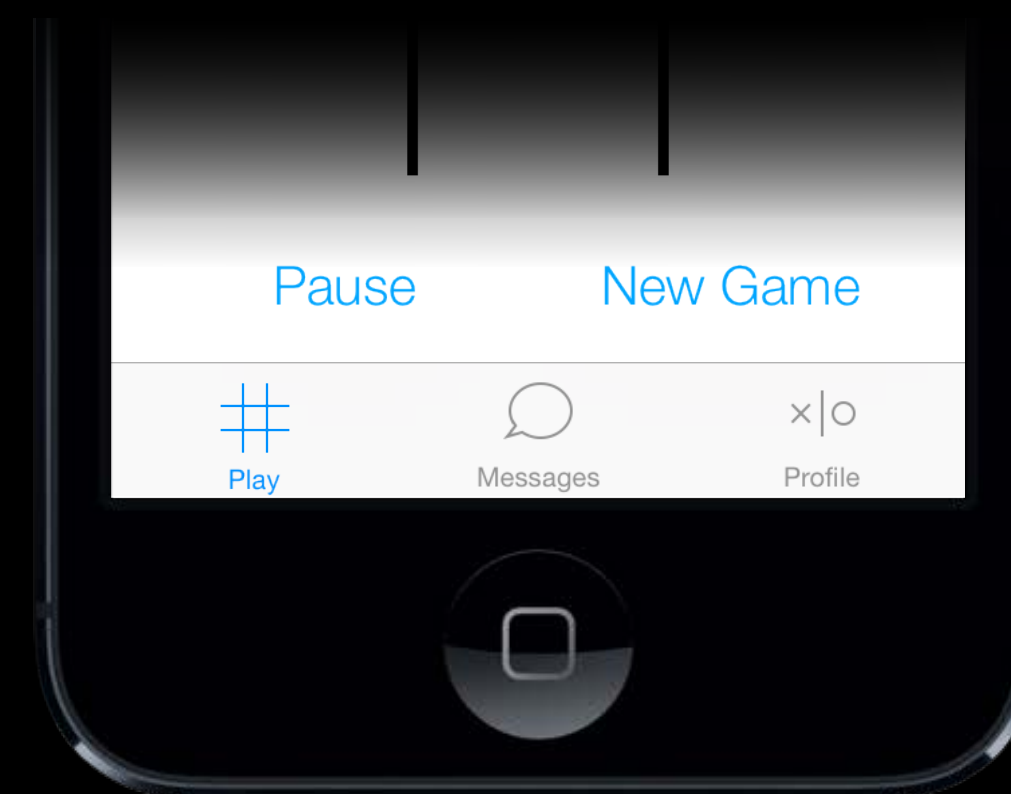
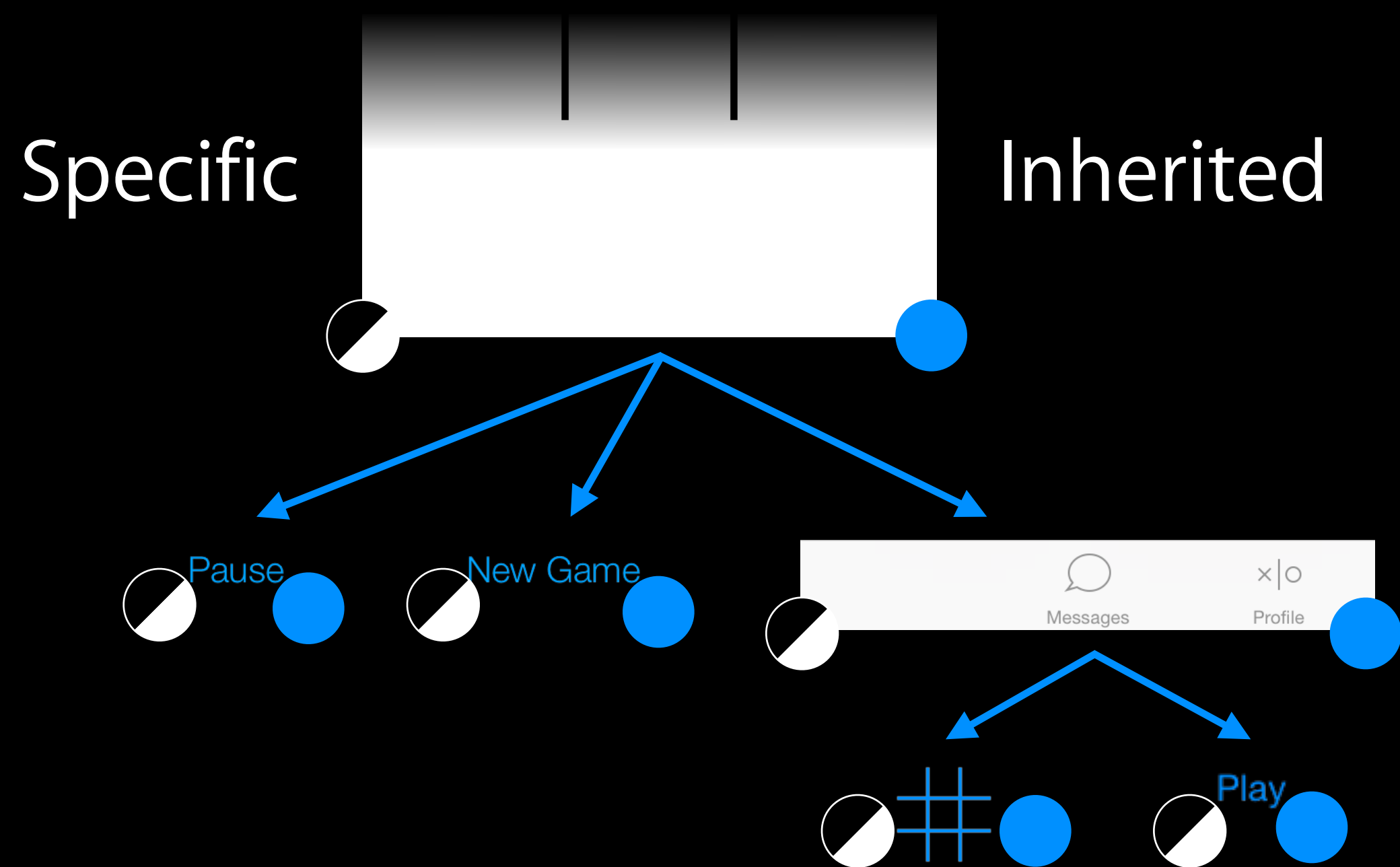
Tint Color



Tint Color

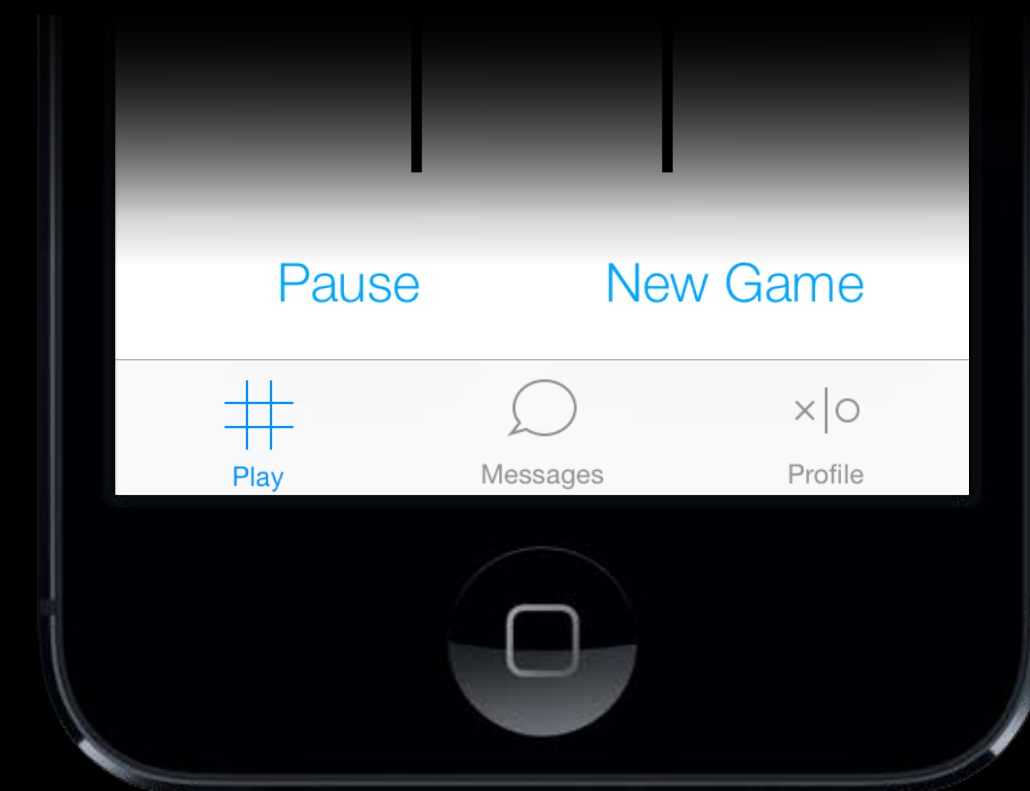
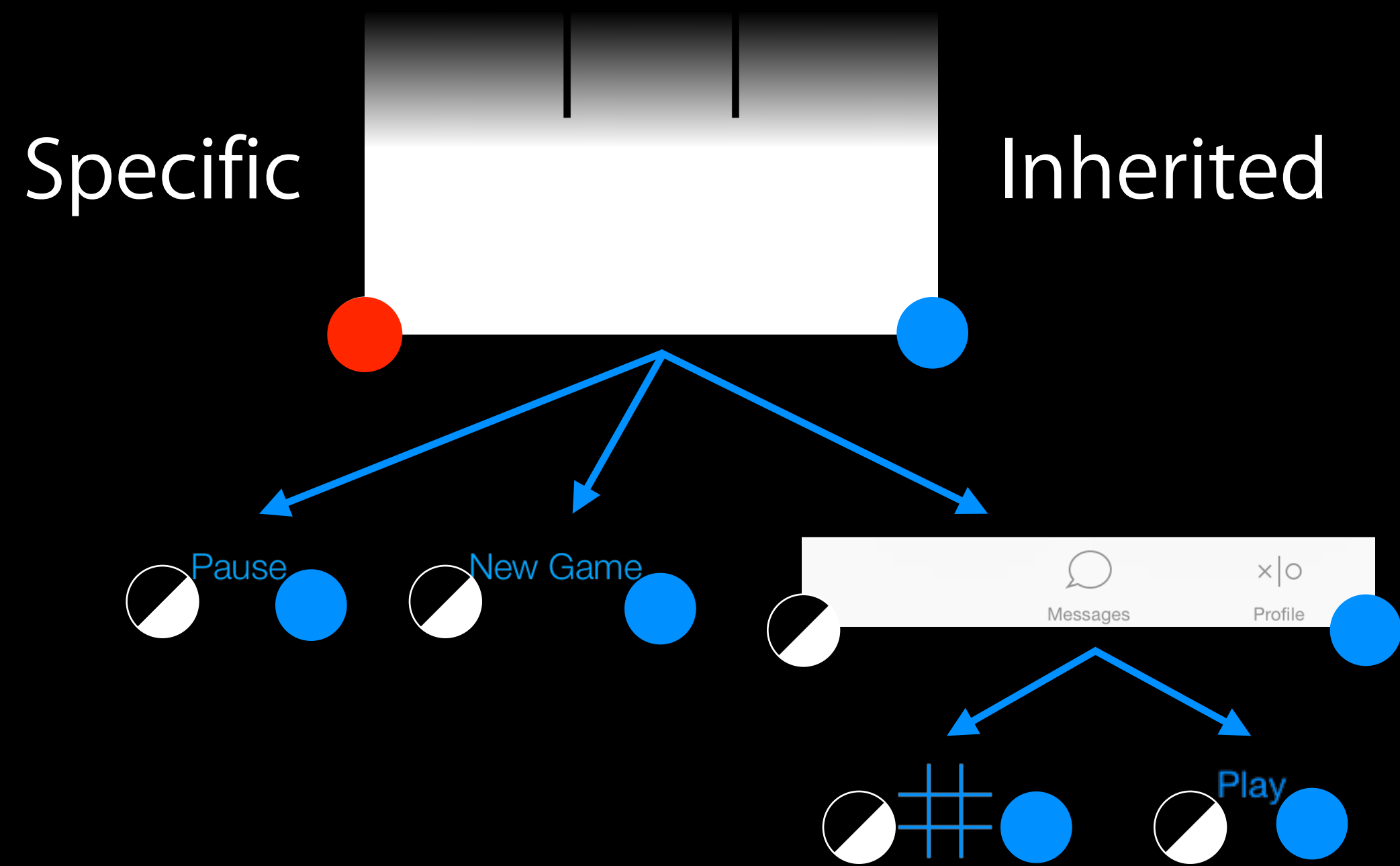


Tint Color



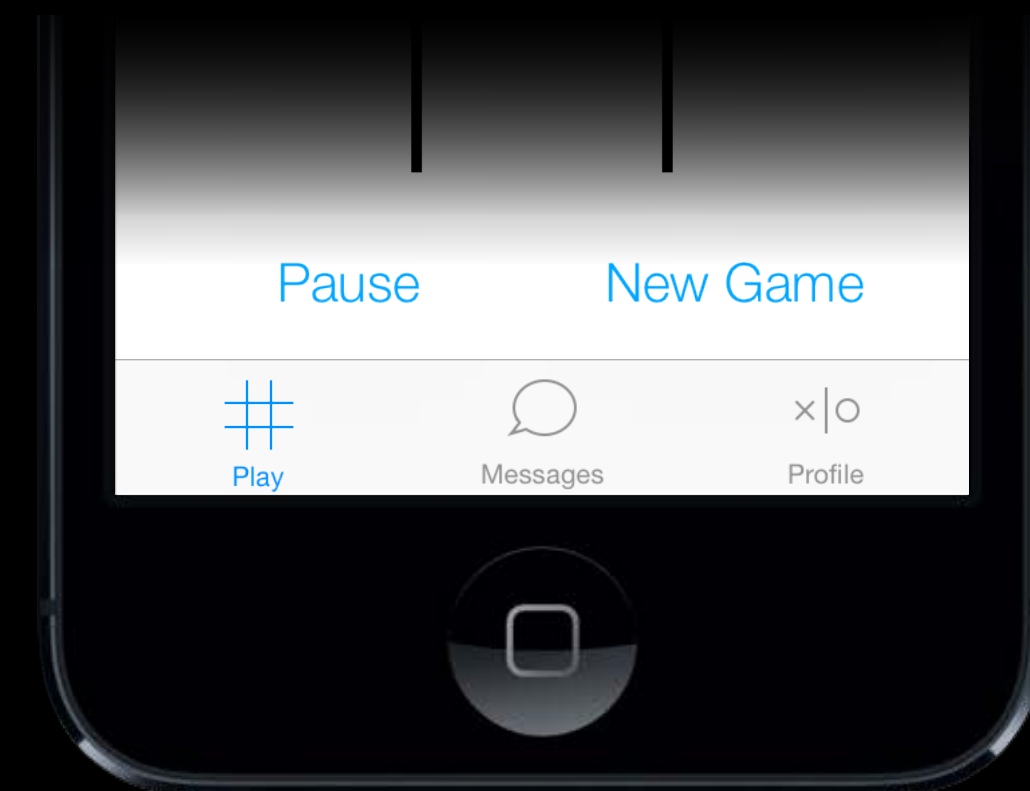
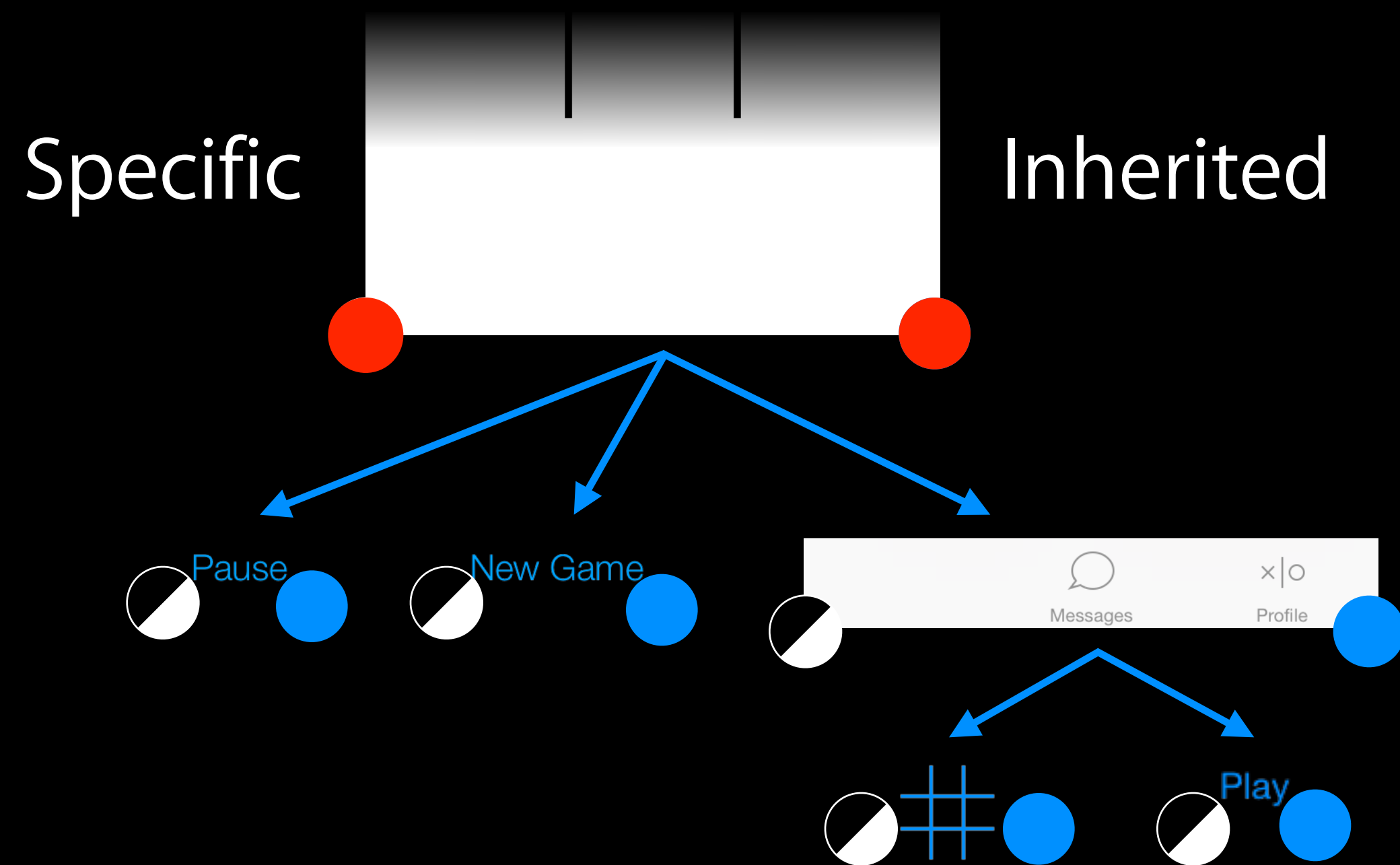
Tint Color

```
window.tintColor = [UIColor redColor];
```



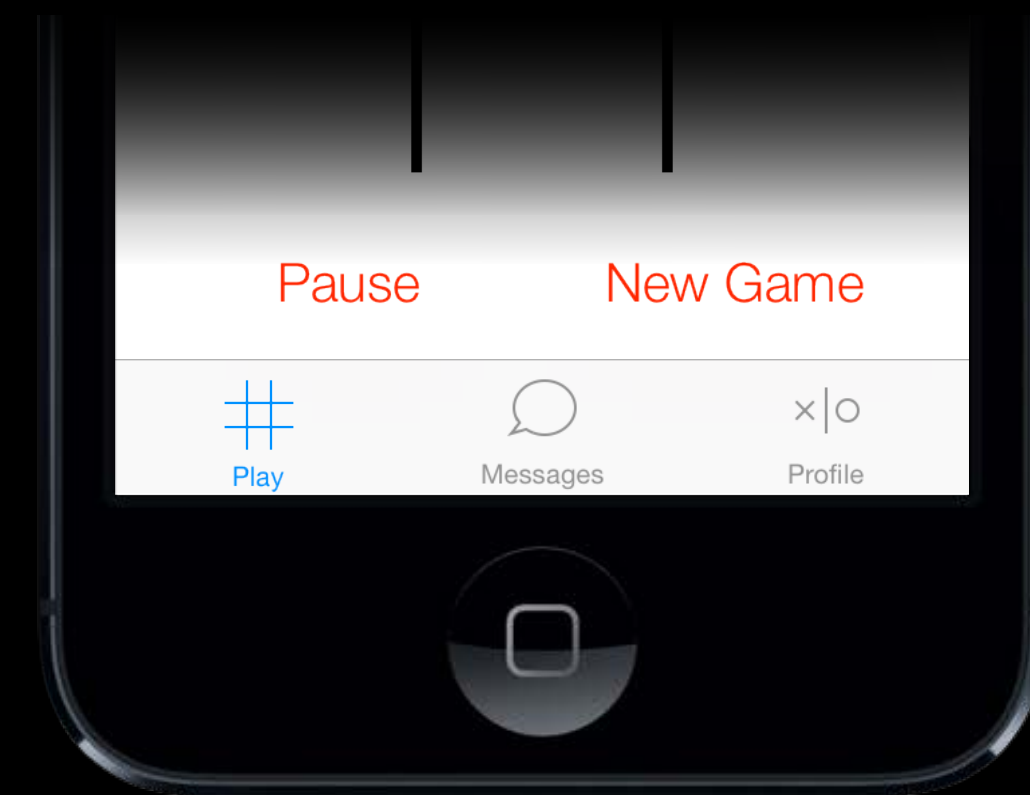
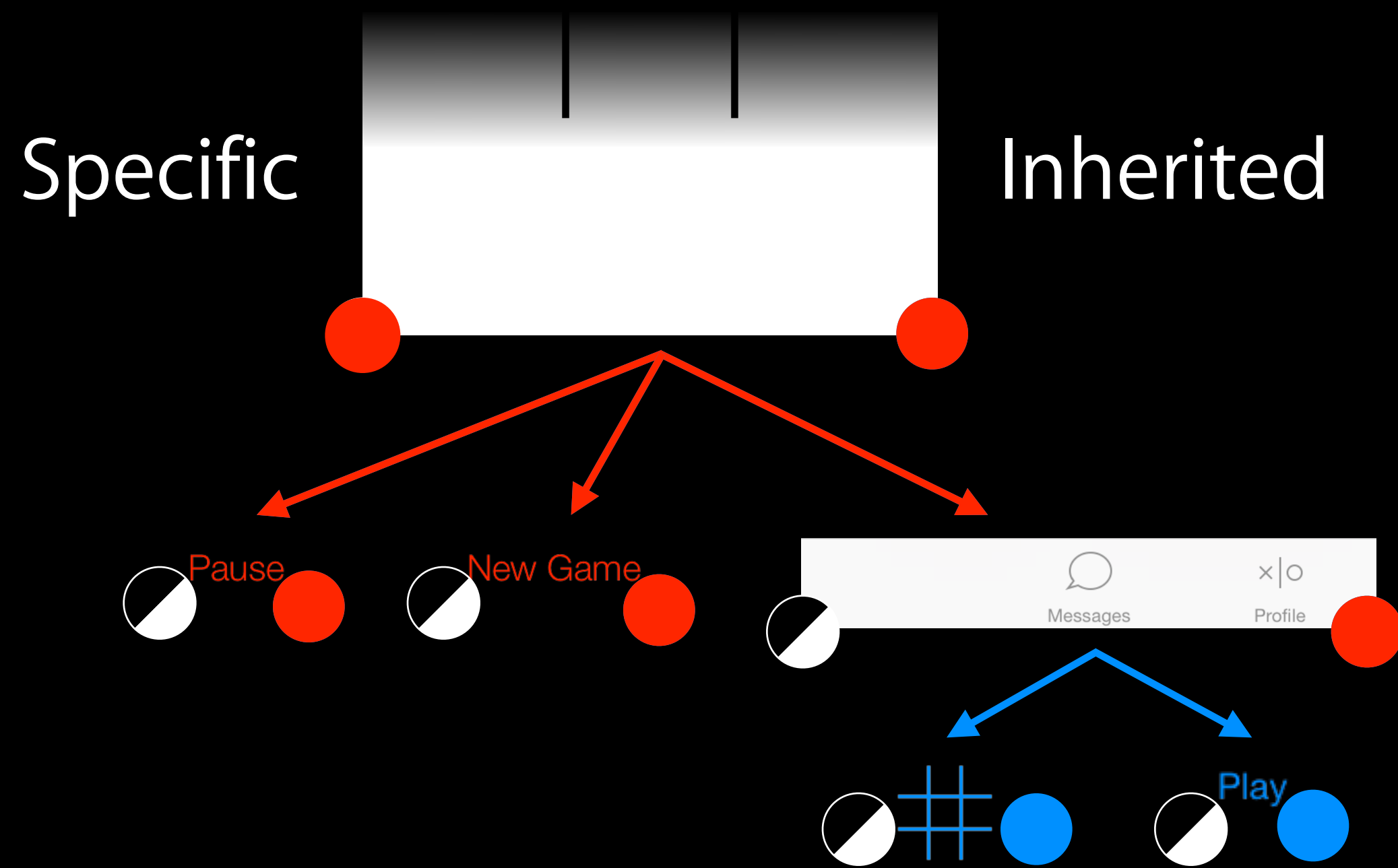
Tint Color

```
window.tintColor = [UIColor redColor];
```



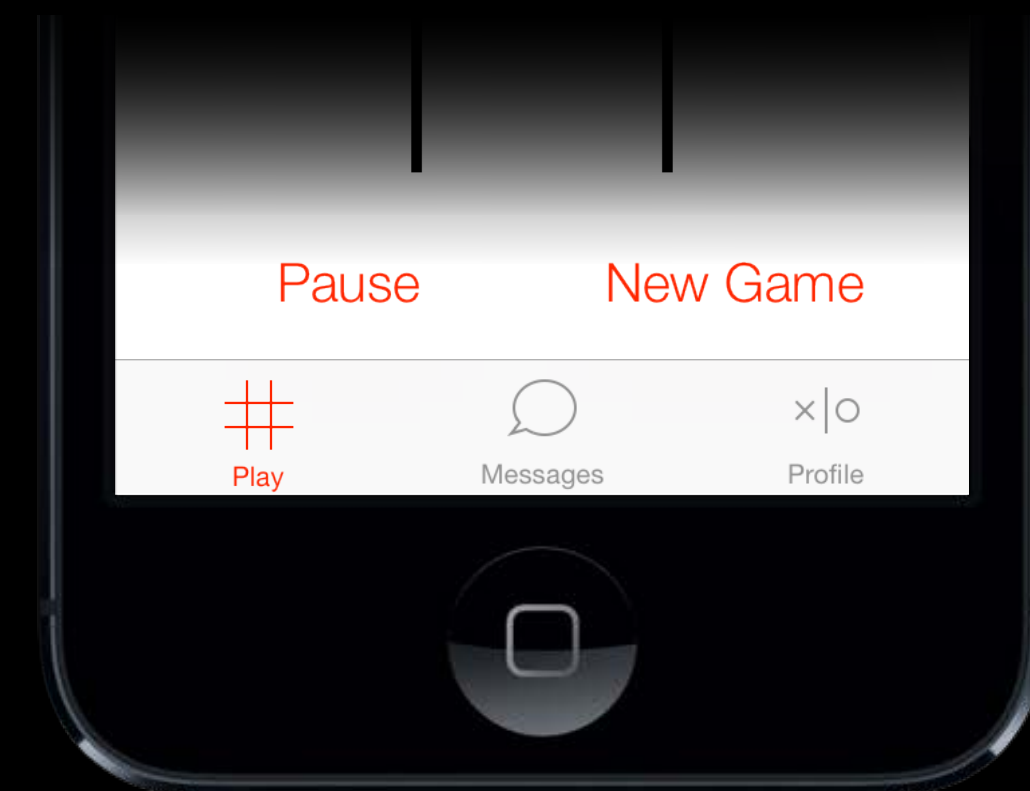
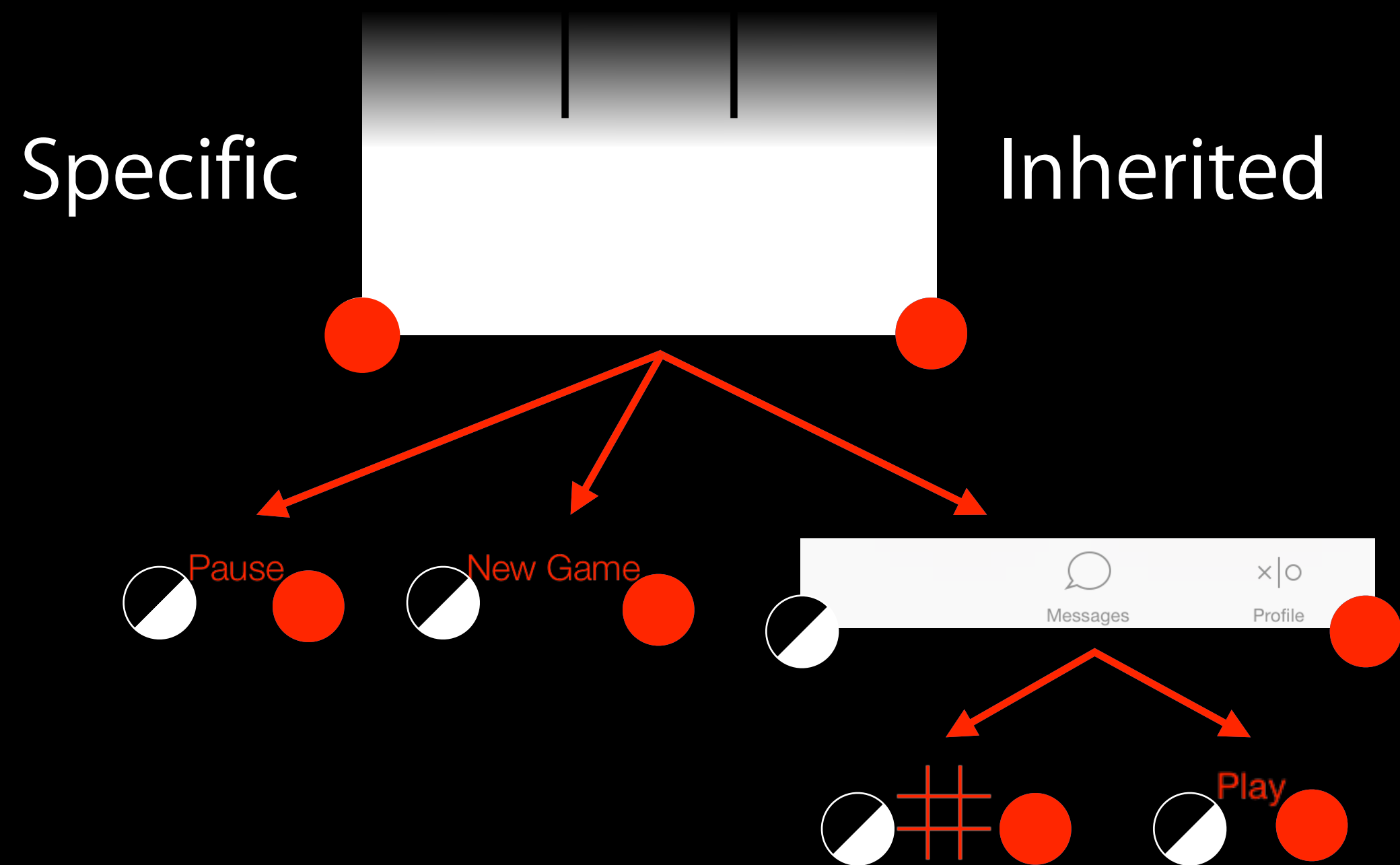
Tint Color

```
window.tintColor = [UIColor redColor];
```



Tint Color

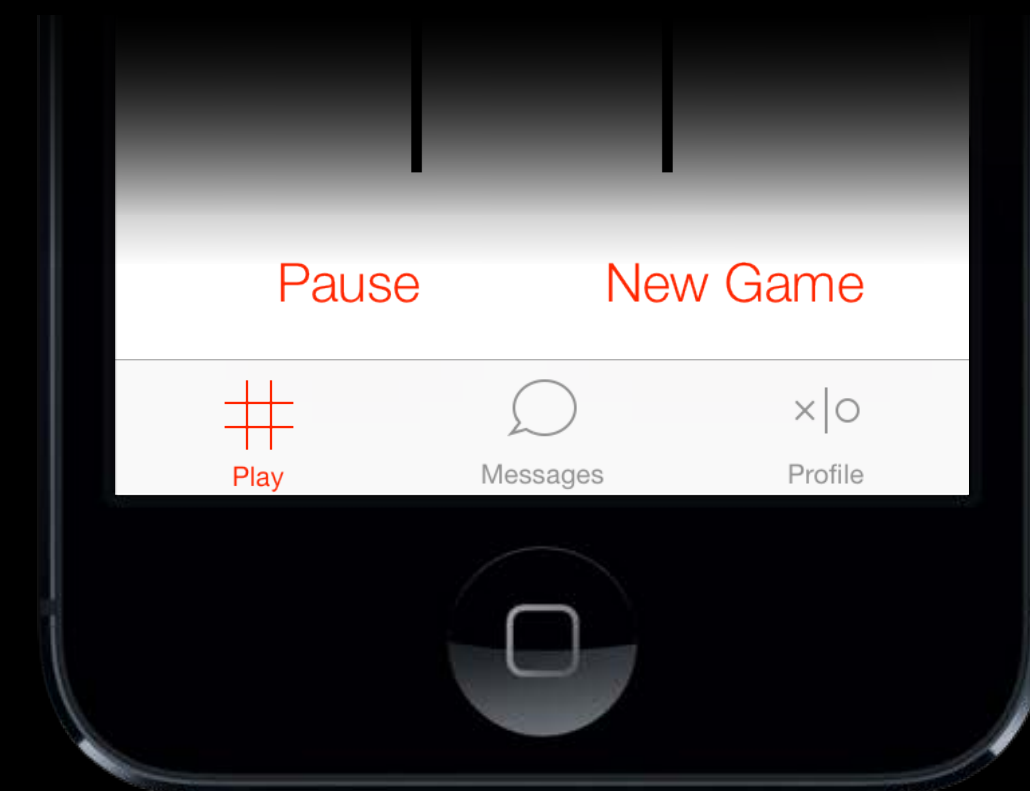
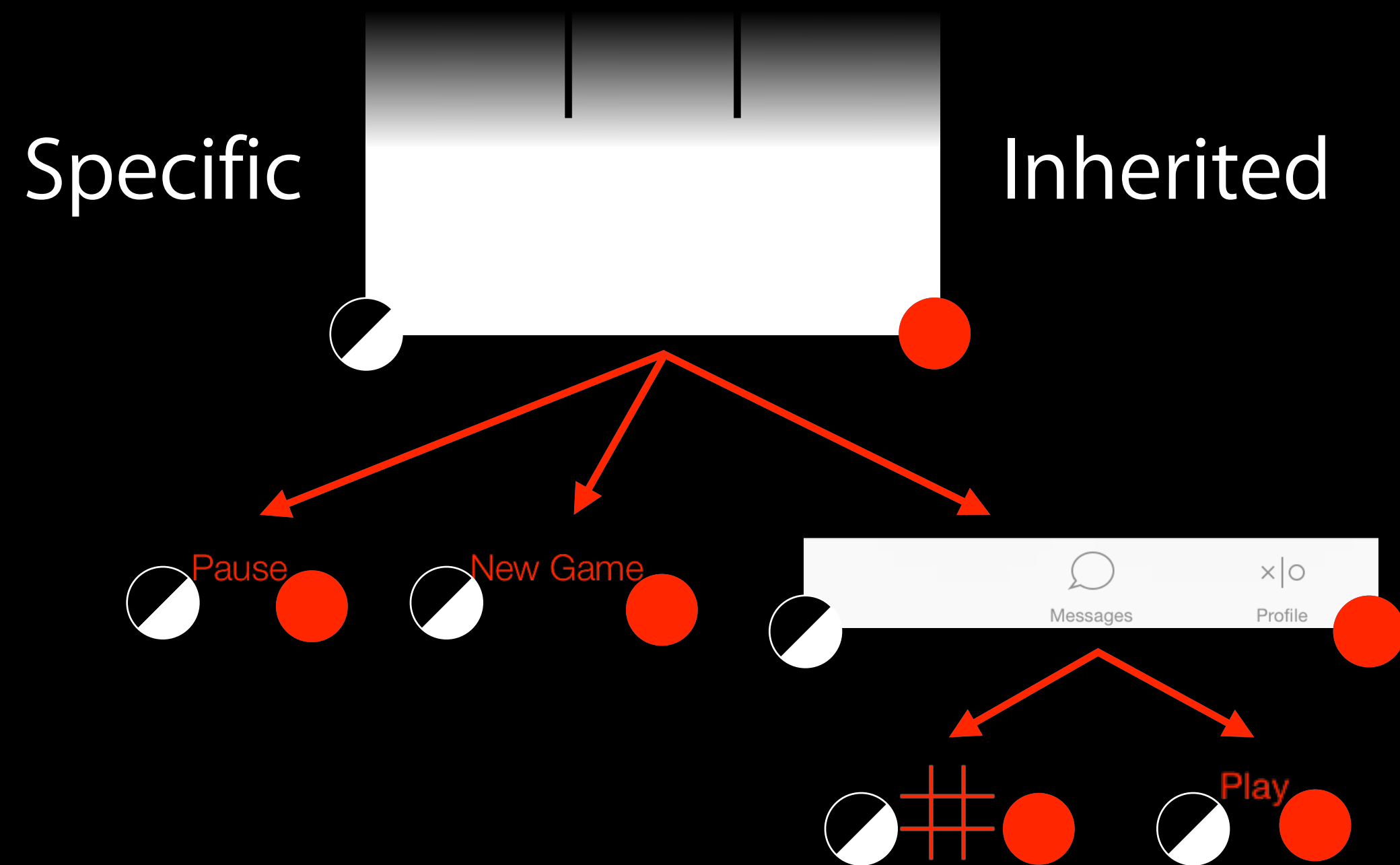
```
window.tintColor = [UIColor redColor];
```



Tint Color

```
window.tintColor = [UIColor redColor];
```

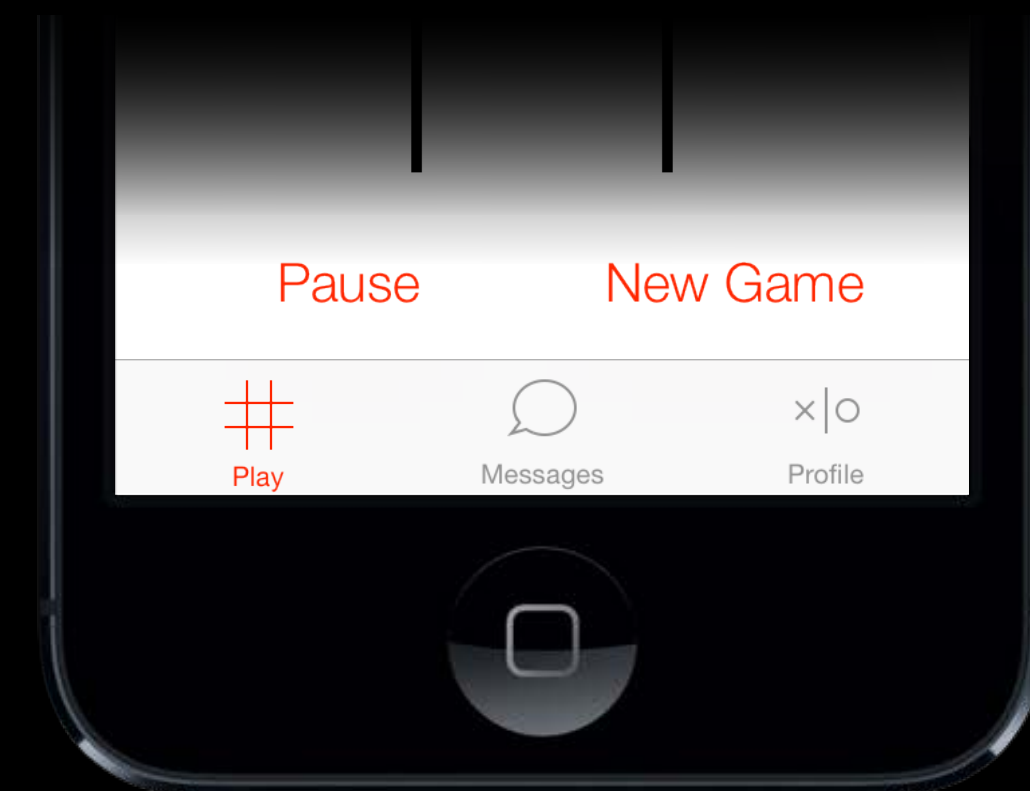
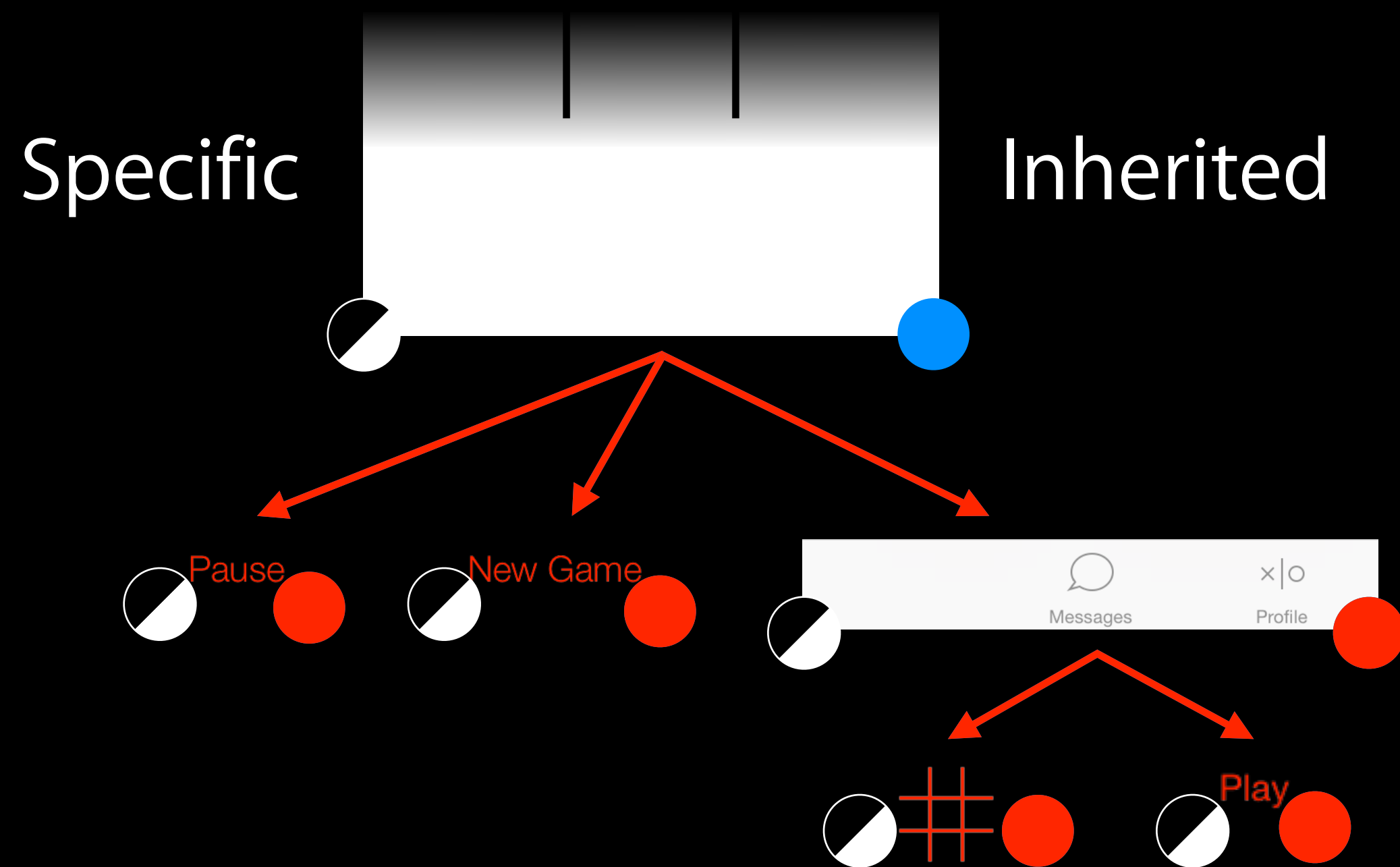
```
window.tintColor = nil;
```



Tint Color

```
window.tintColor = [UIColor redColor];
```

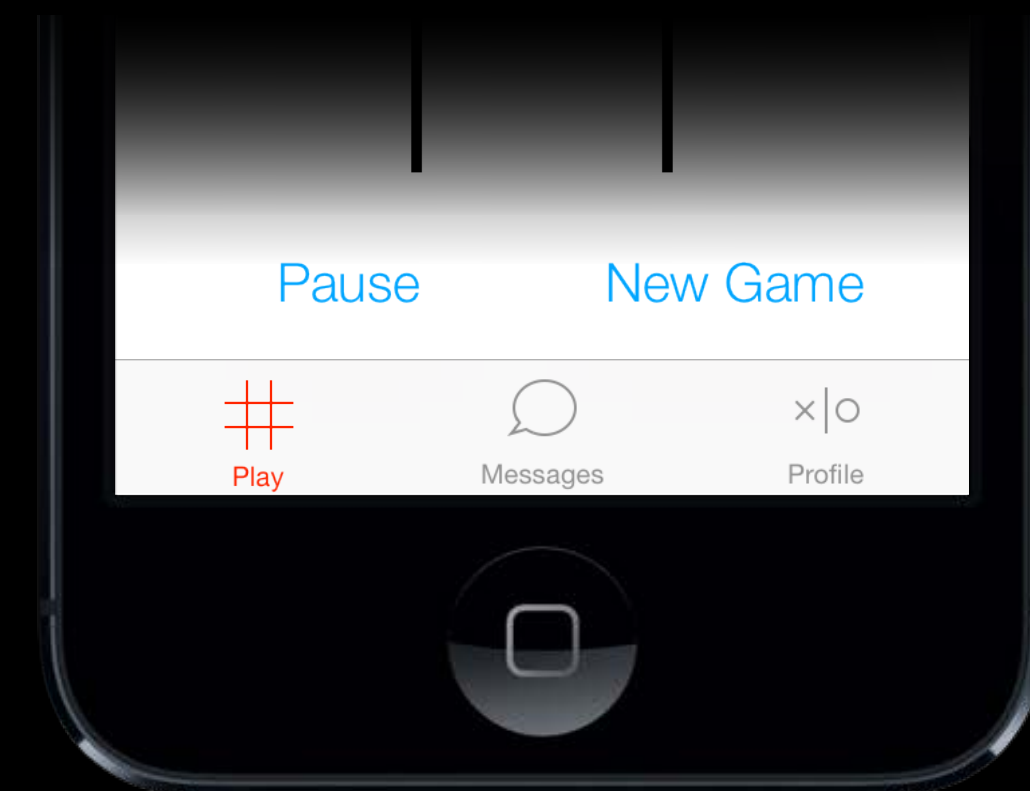
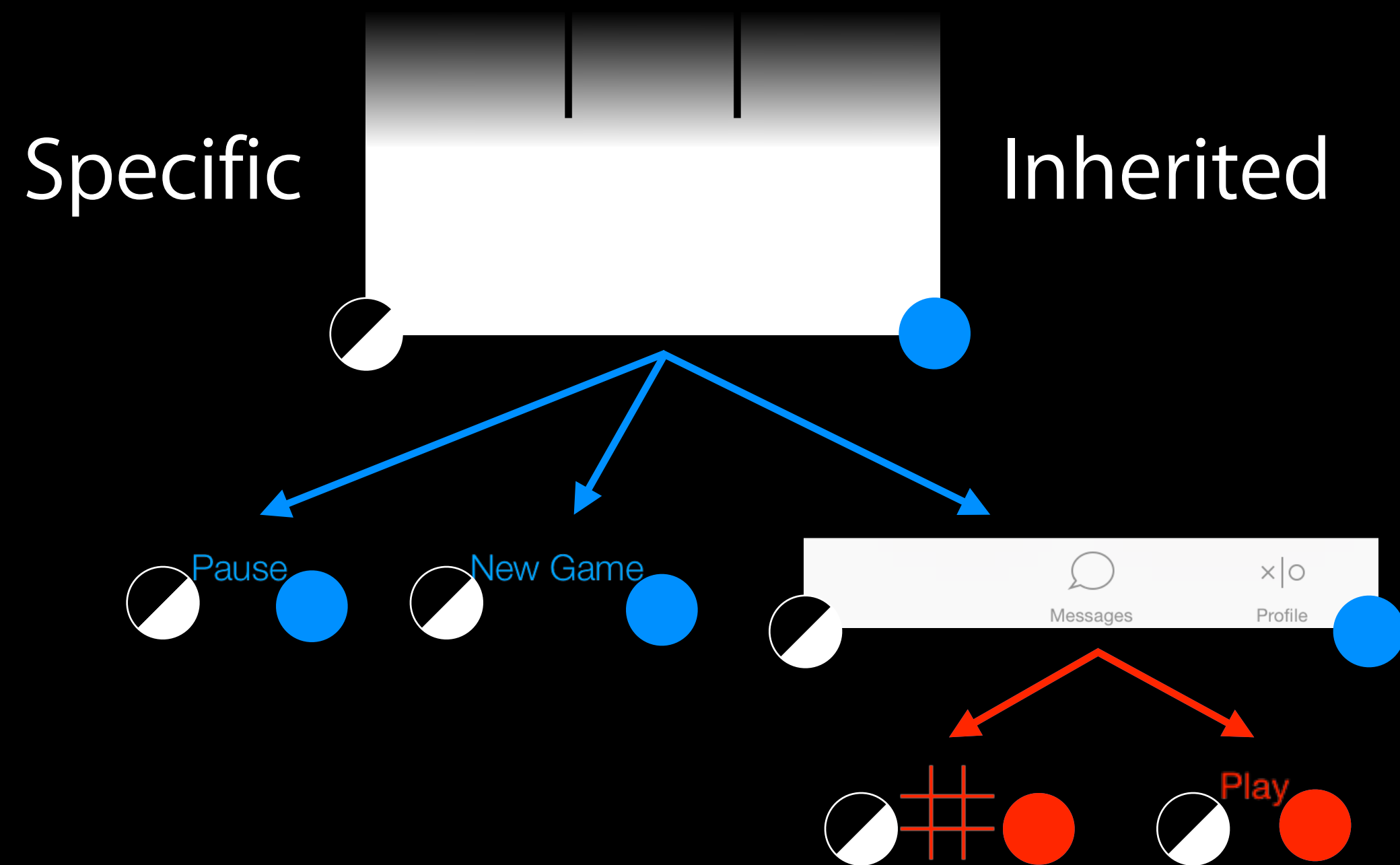
```
window.tintColor = nil;
```



Tint Color

```
window.tintColor = [UIColor redColor];
```

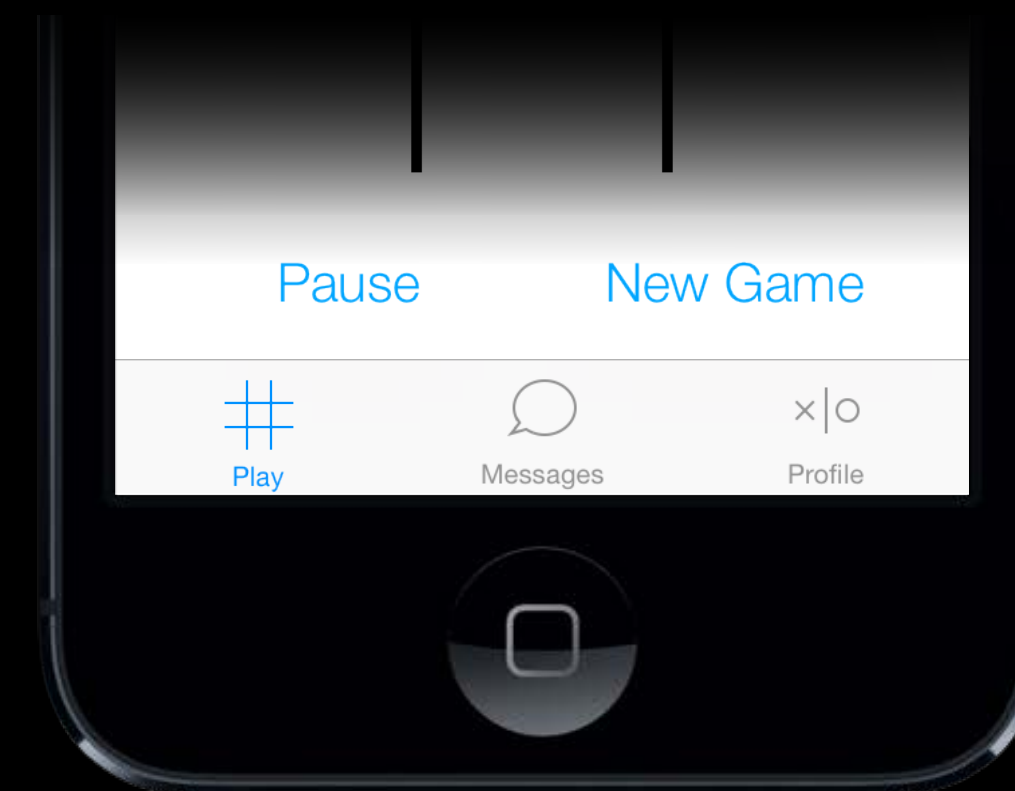
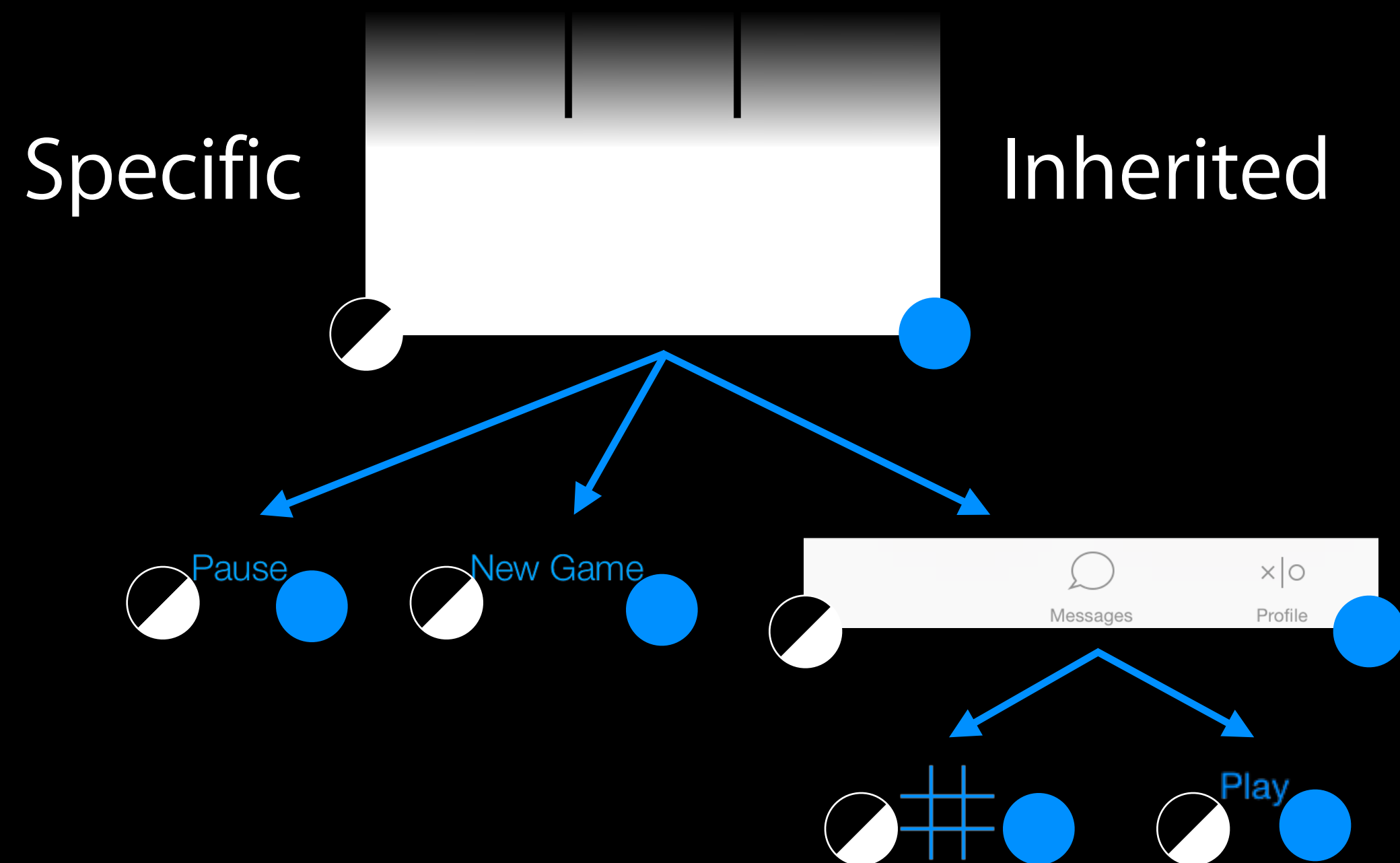
```
window.tintColor = nil;
```



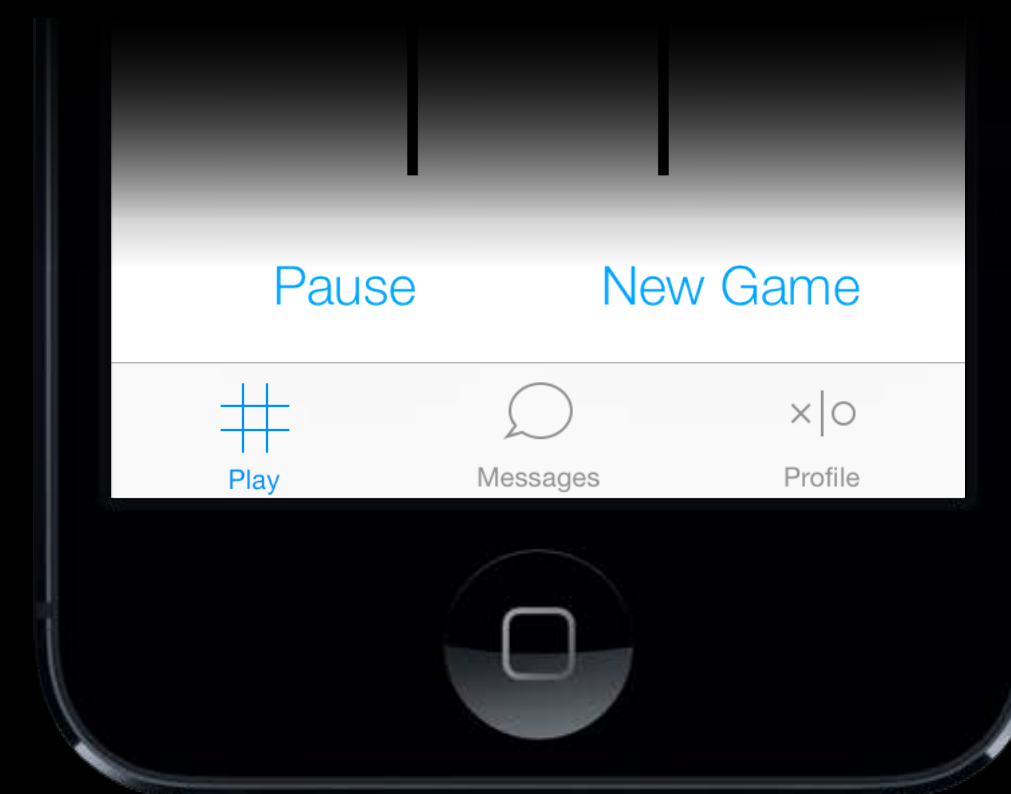
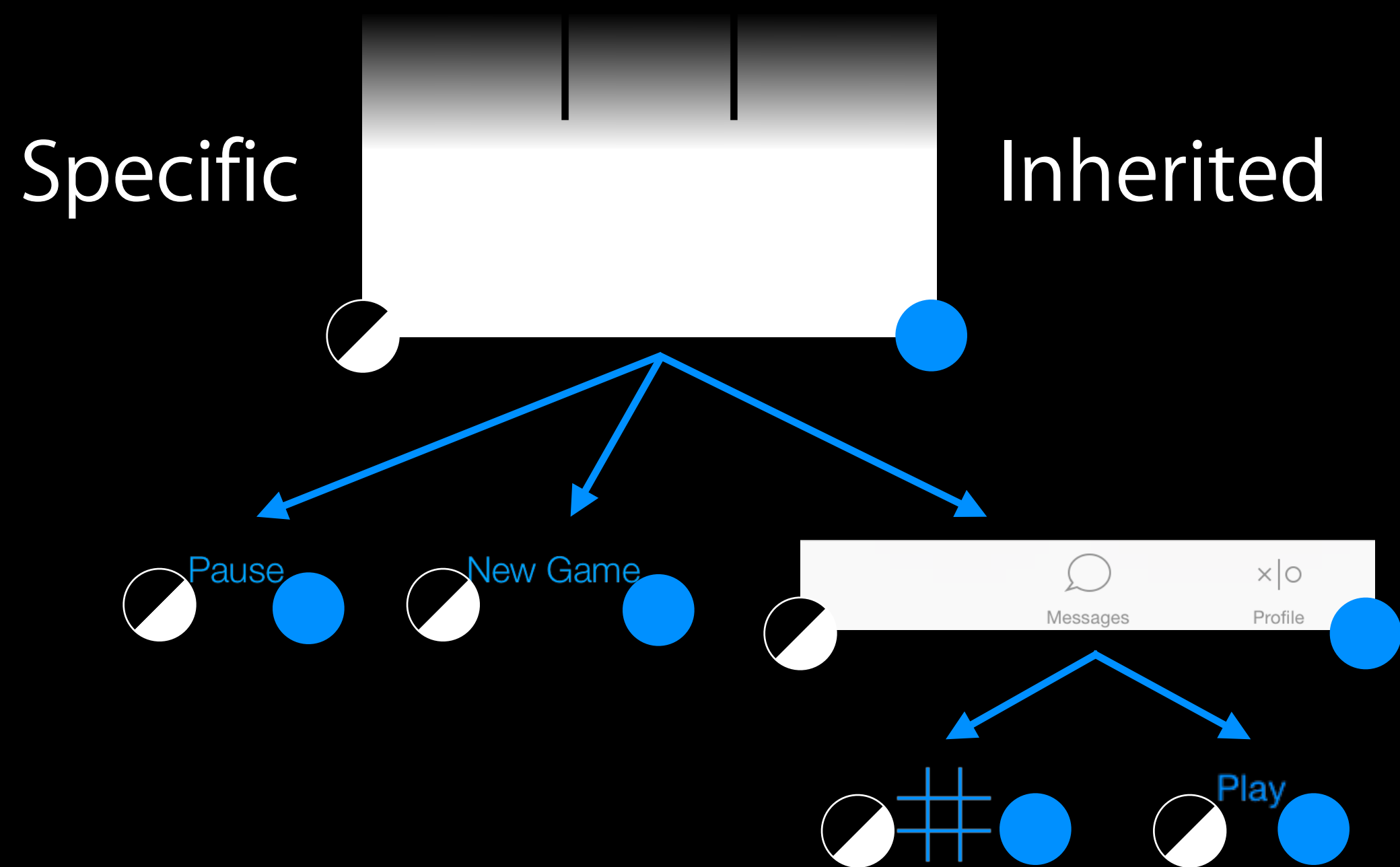
Tint Color

```
window.tintColor = [UIColor redColor];
```

```
window.tintColor = nil;
```

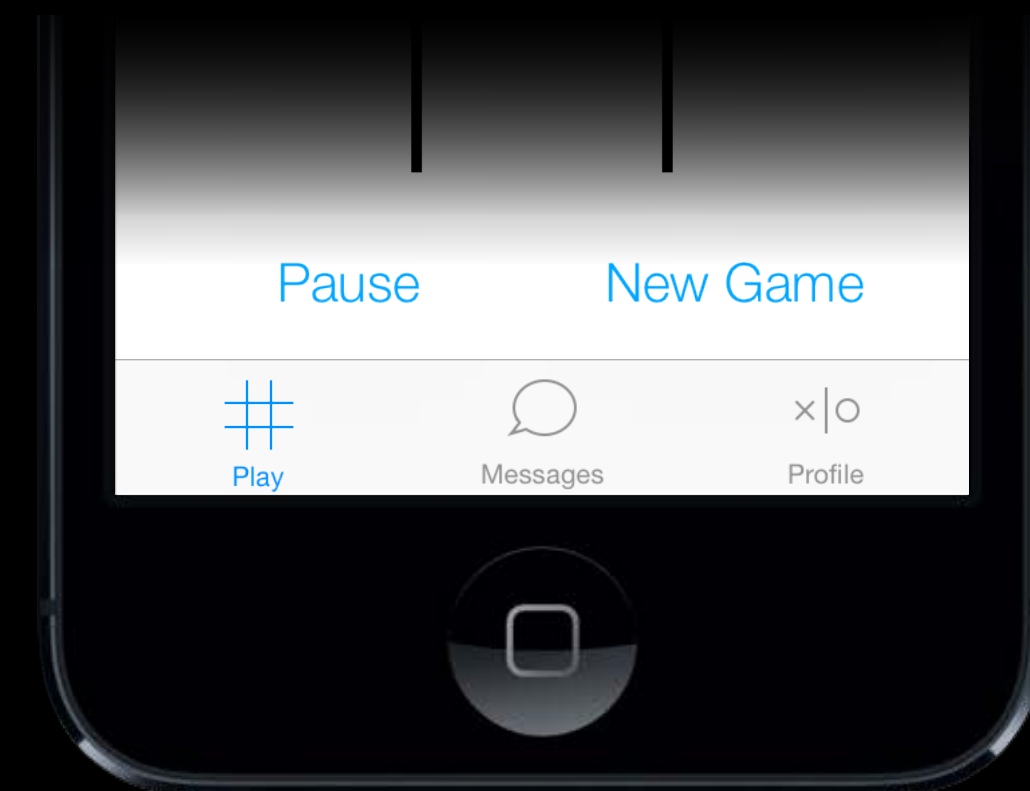
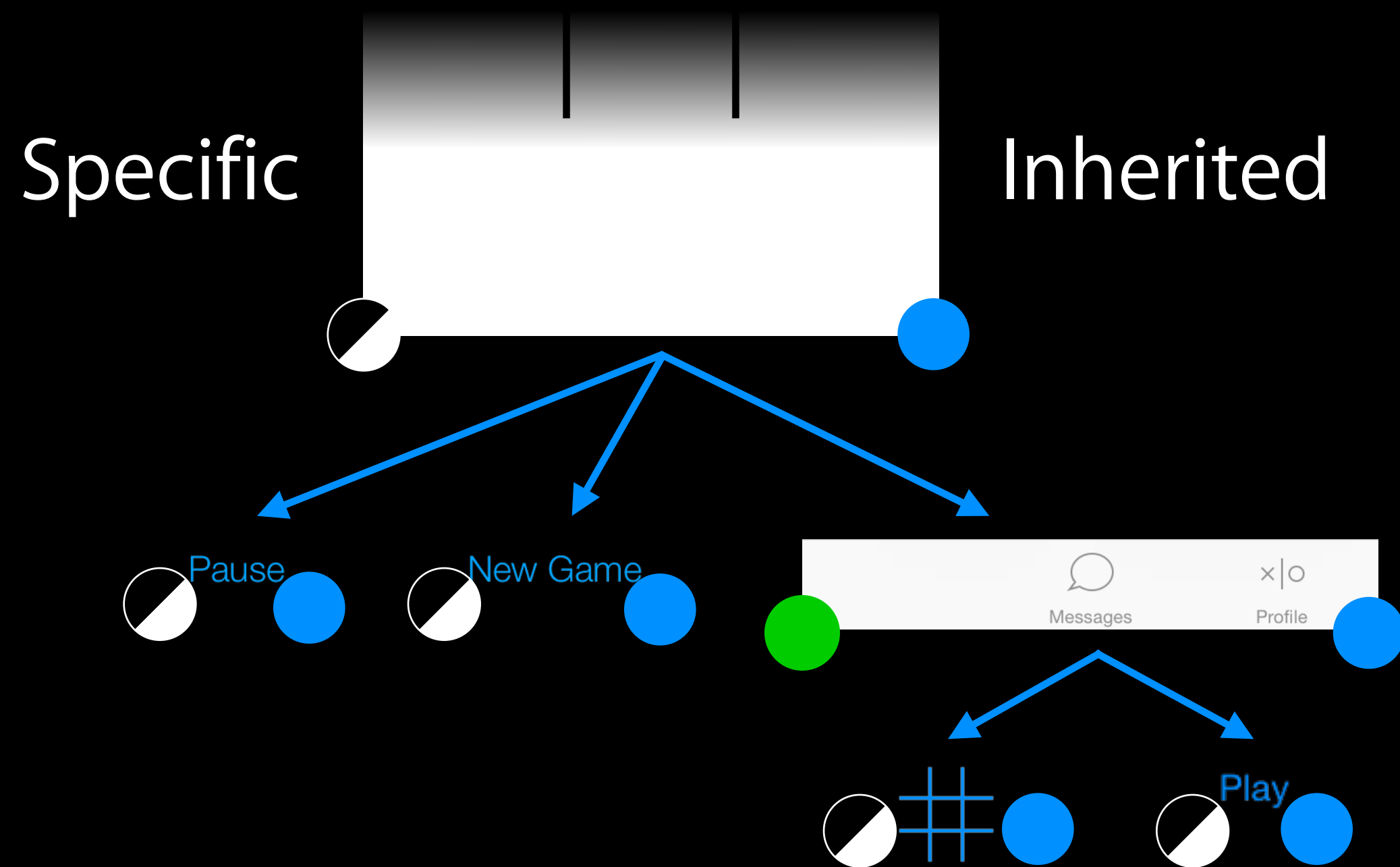


Tint Color



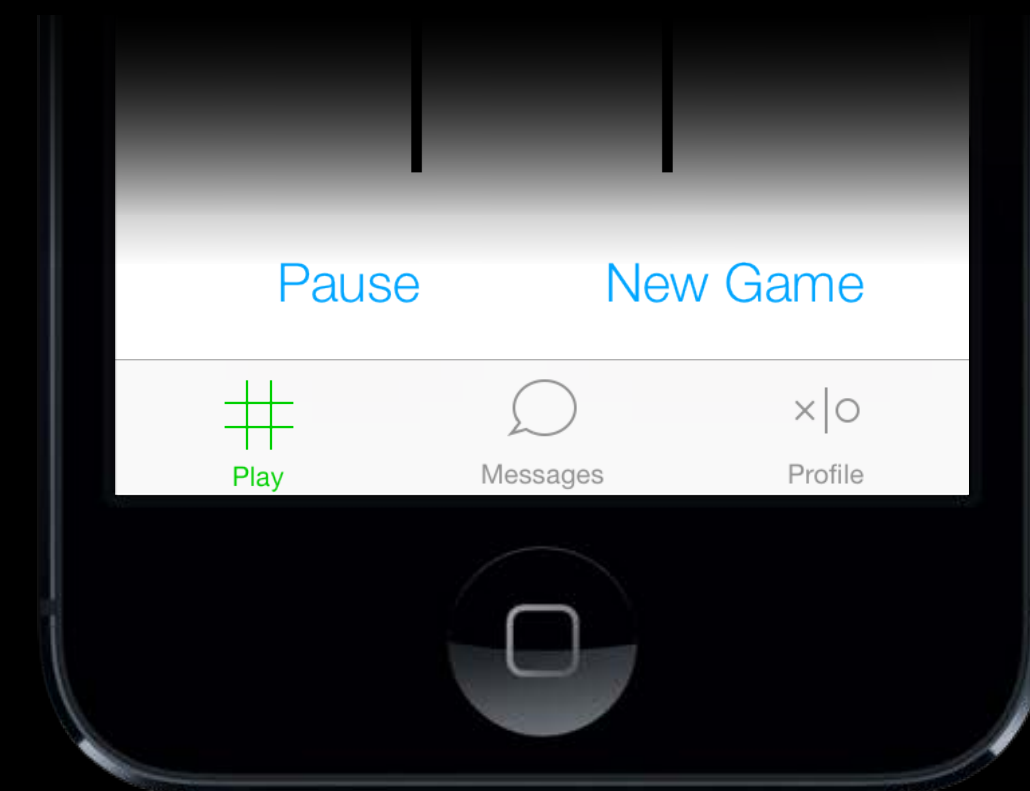
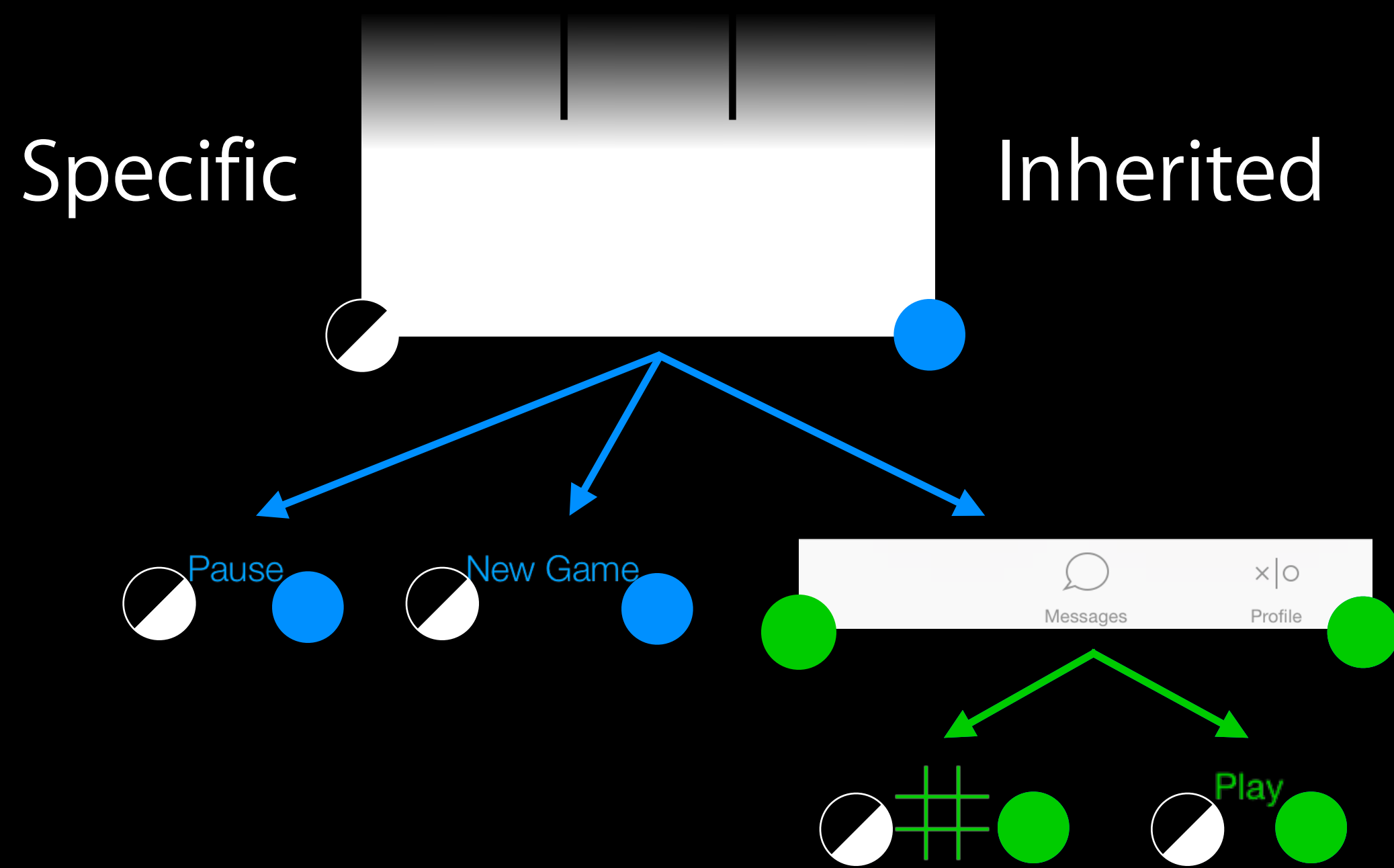
Tint Color

```
view.tintColor = [UIColor greenColor];
```



Tint Color

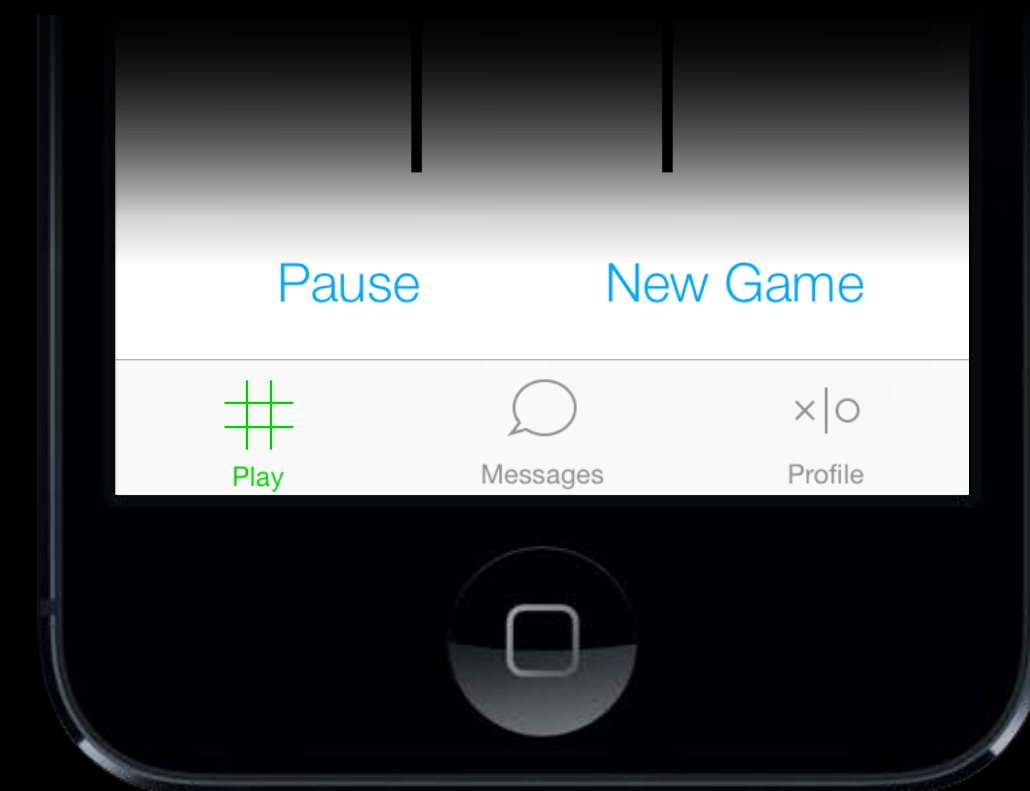
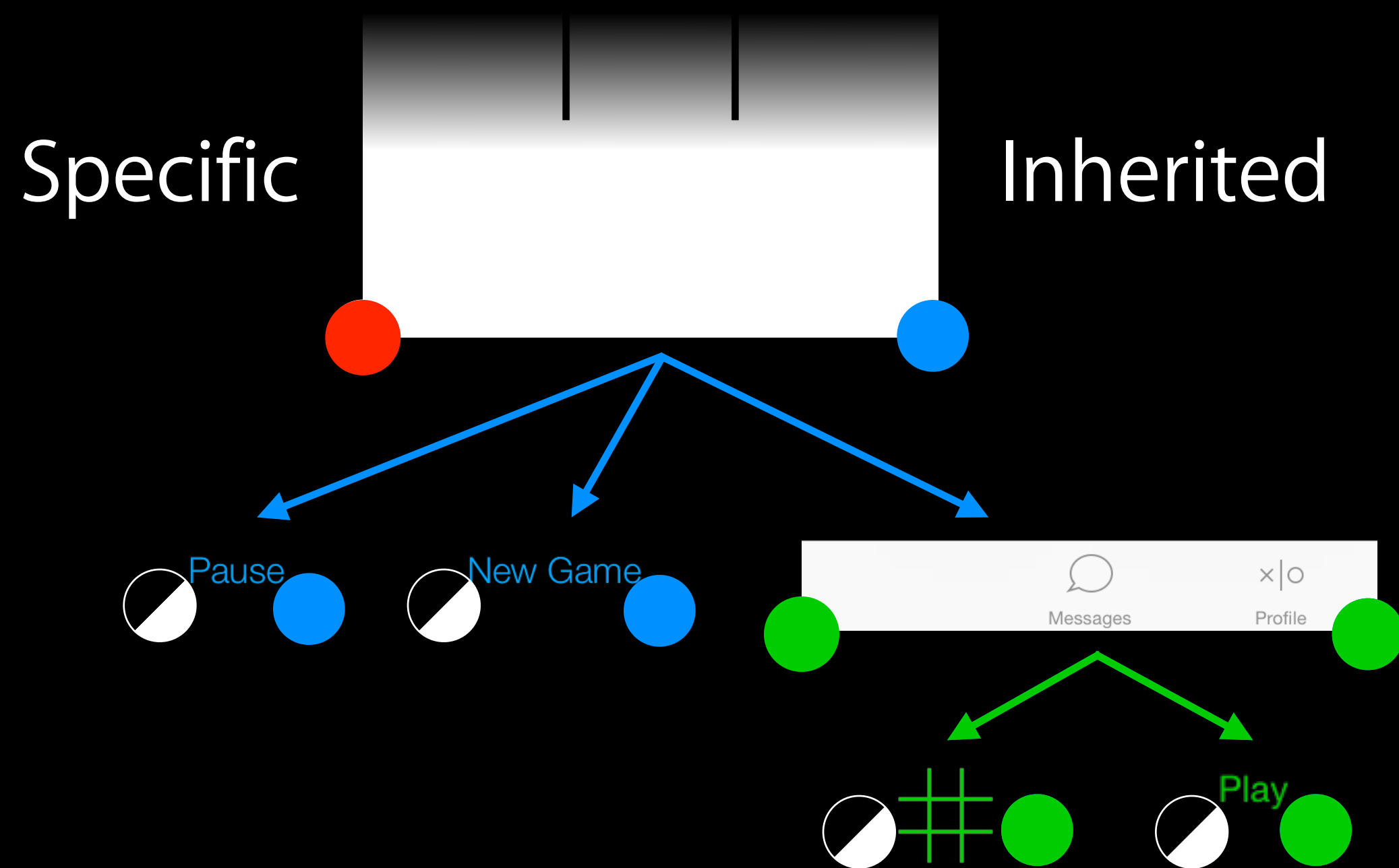
```
view.tintColor = [UIColor greenColor];
```



Tint Color

```
view.tintColor = [UIColor greenColor];
```

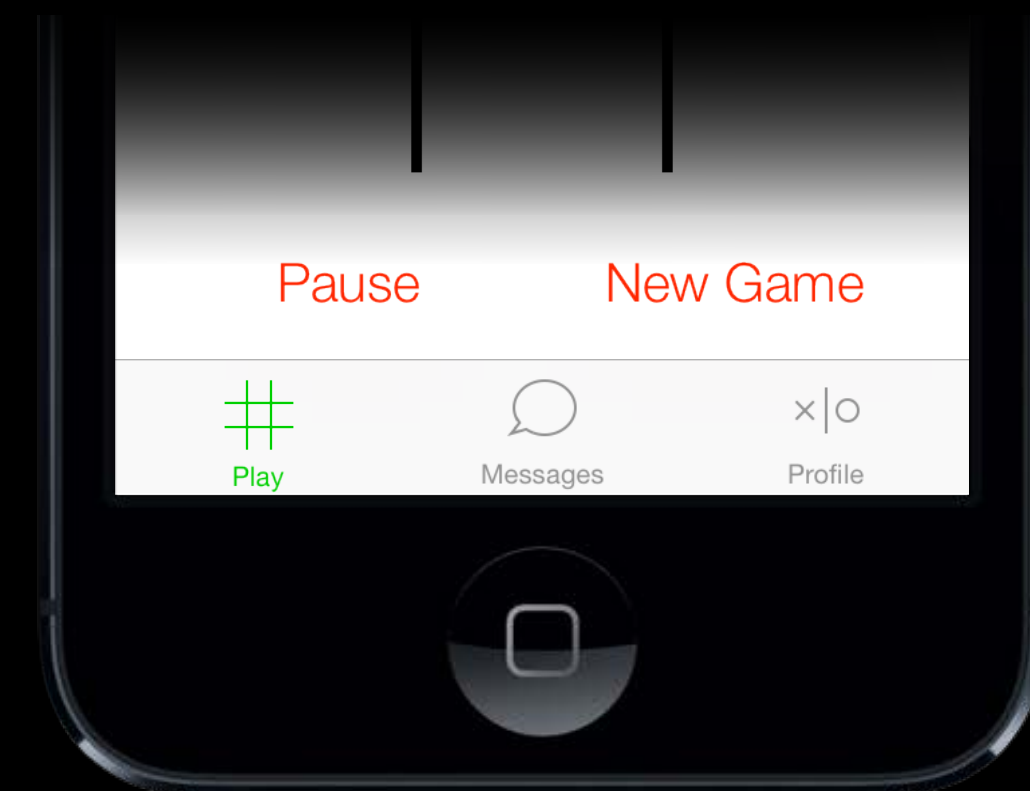
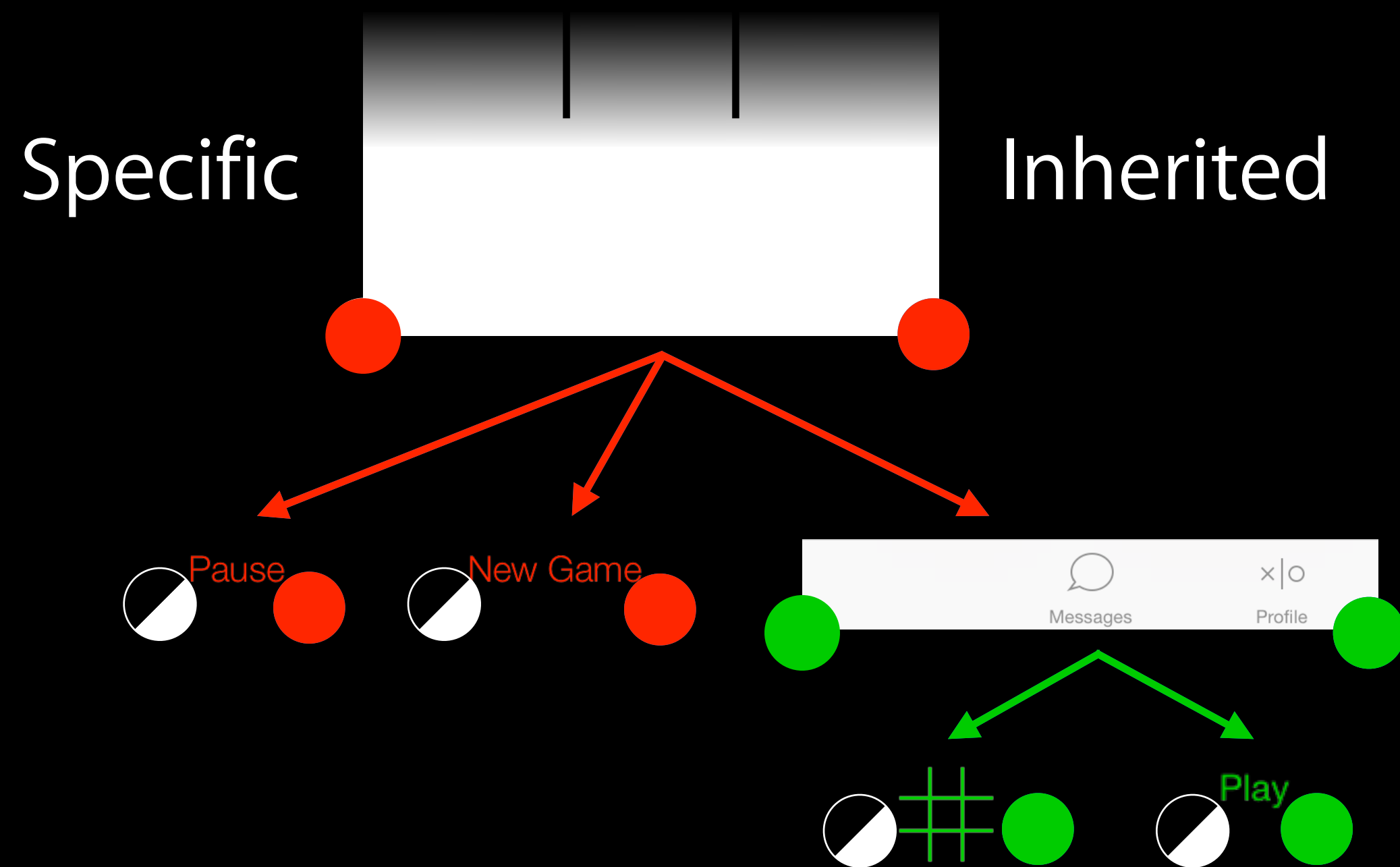
```
window.tintColor = [UIColor redColor];
```

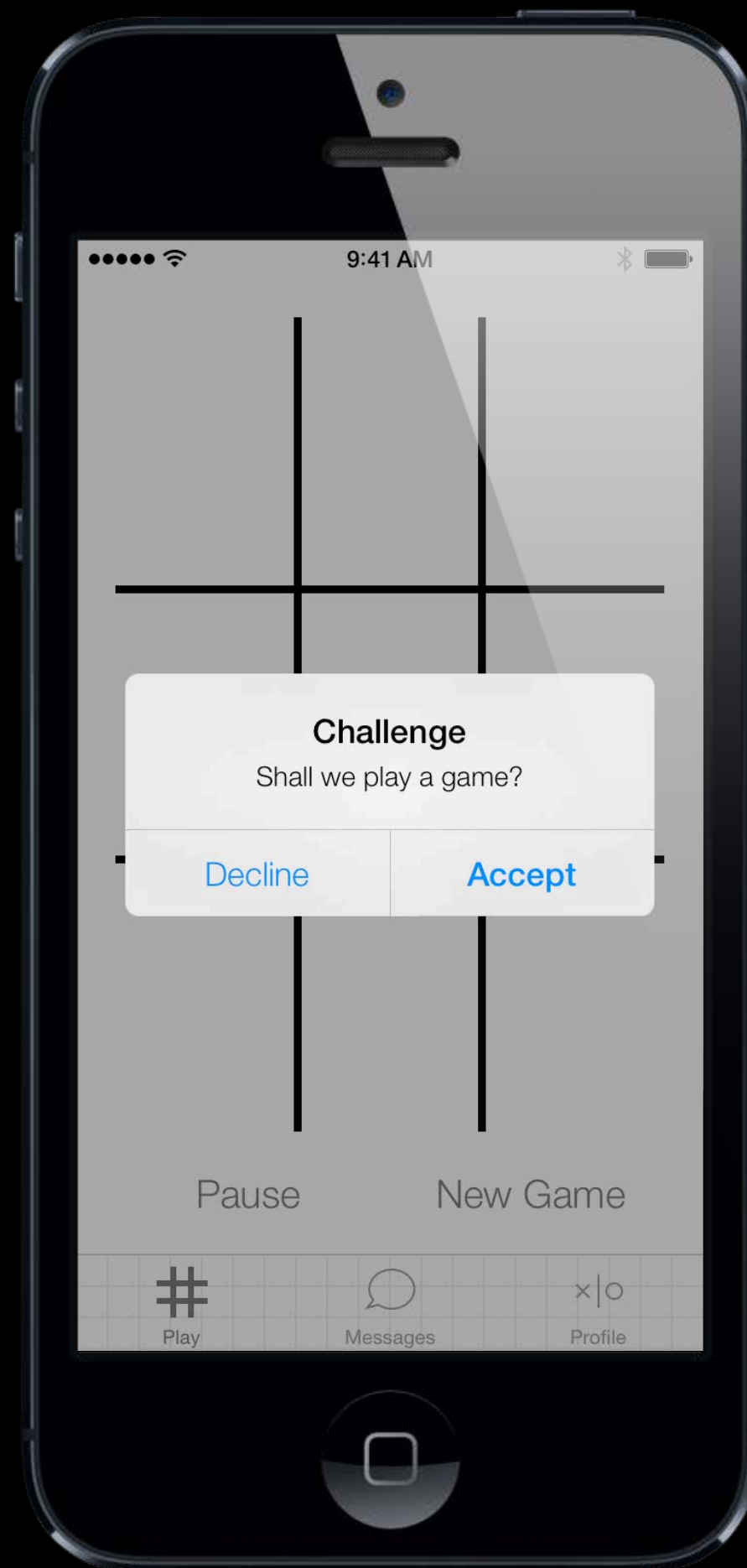


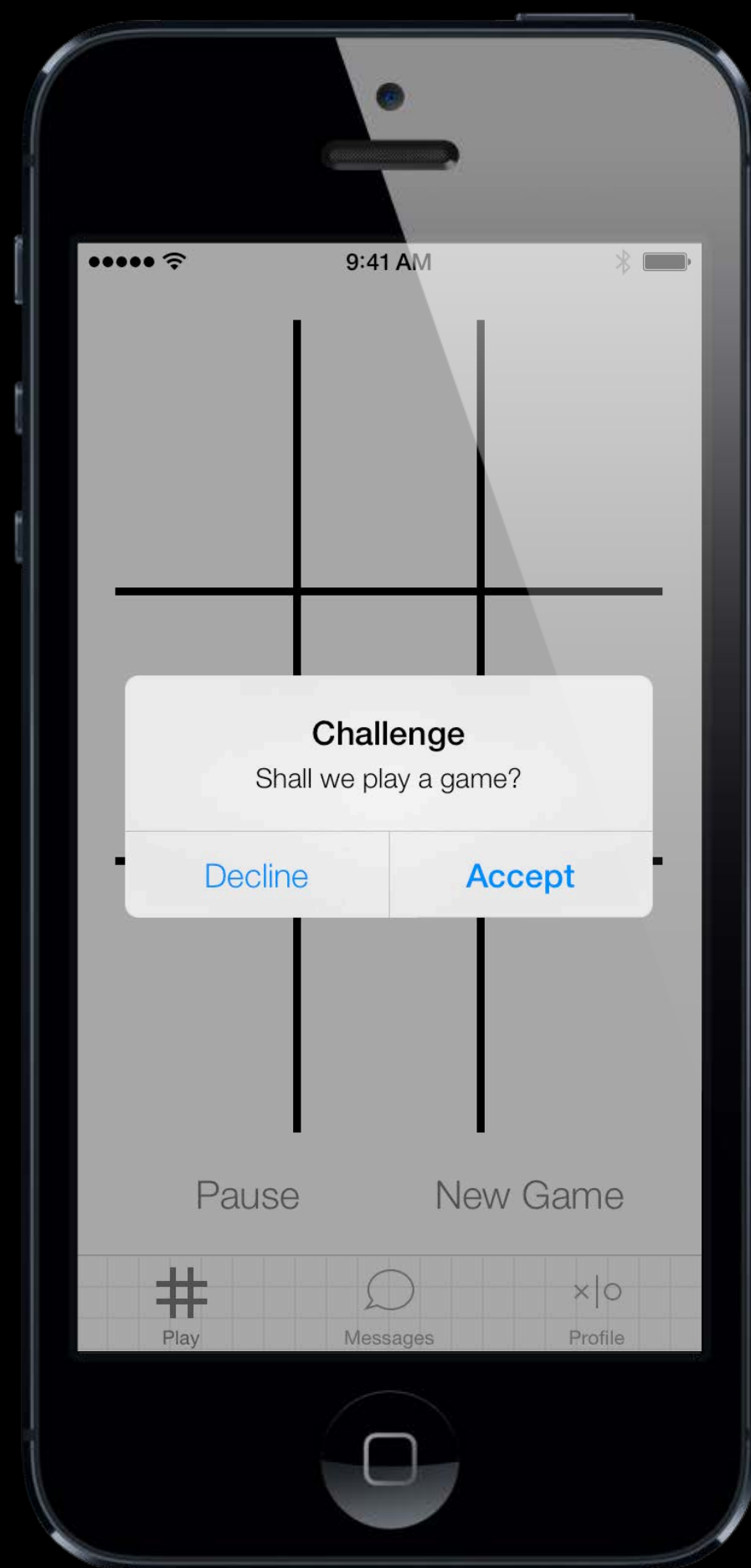
Tint Color

```
view.tintColor = [UIColor greenColor];
```

```
window.tintColor = [UIColor redColor];
```

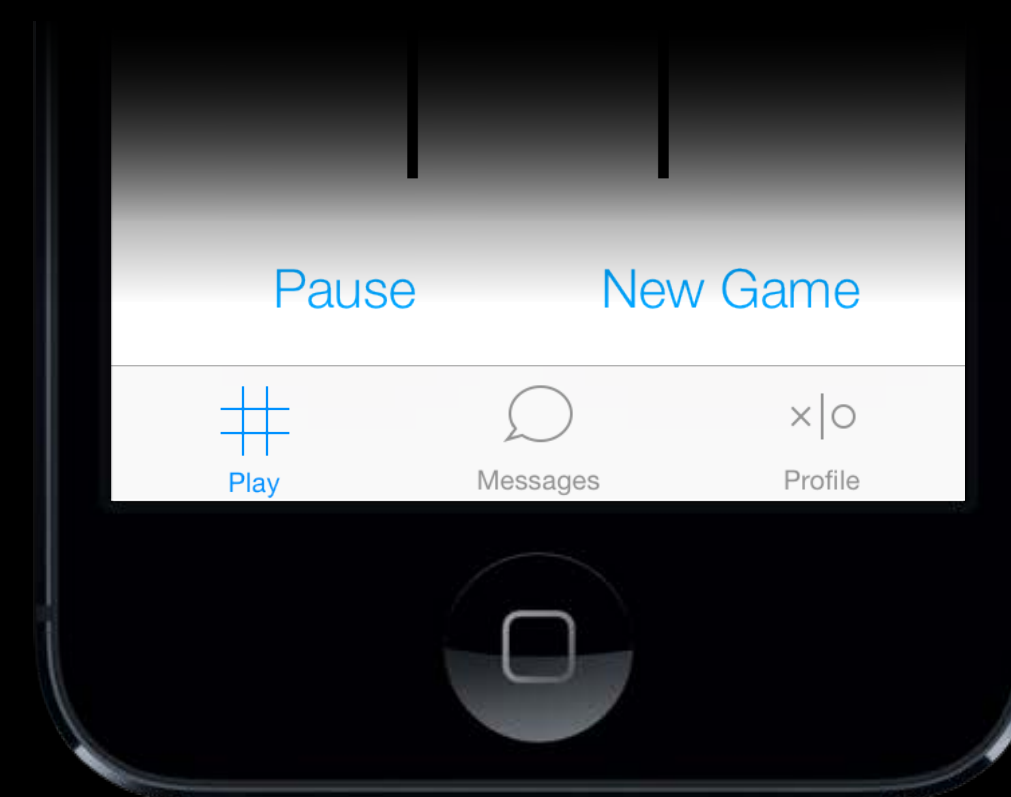
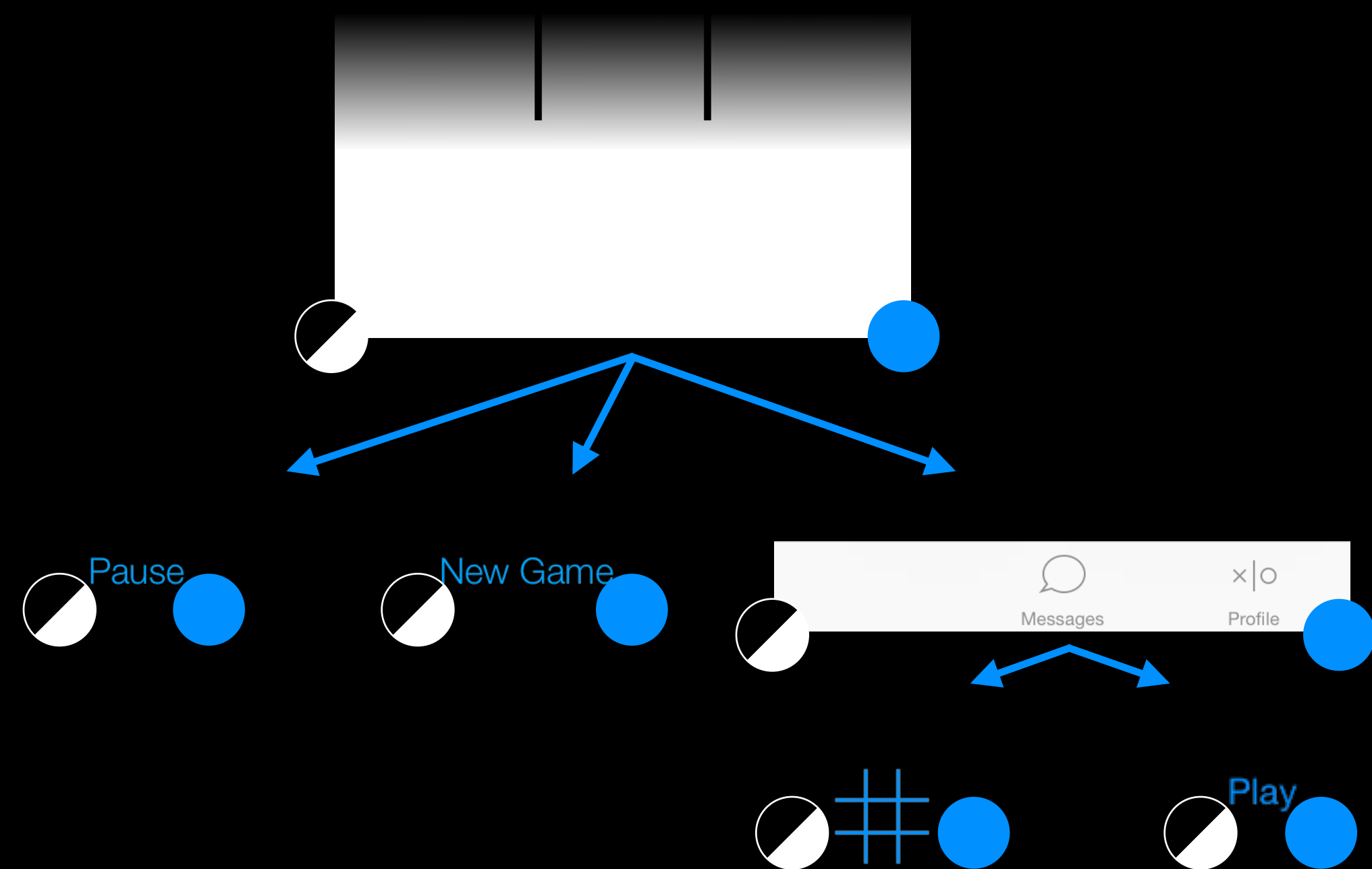






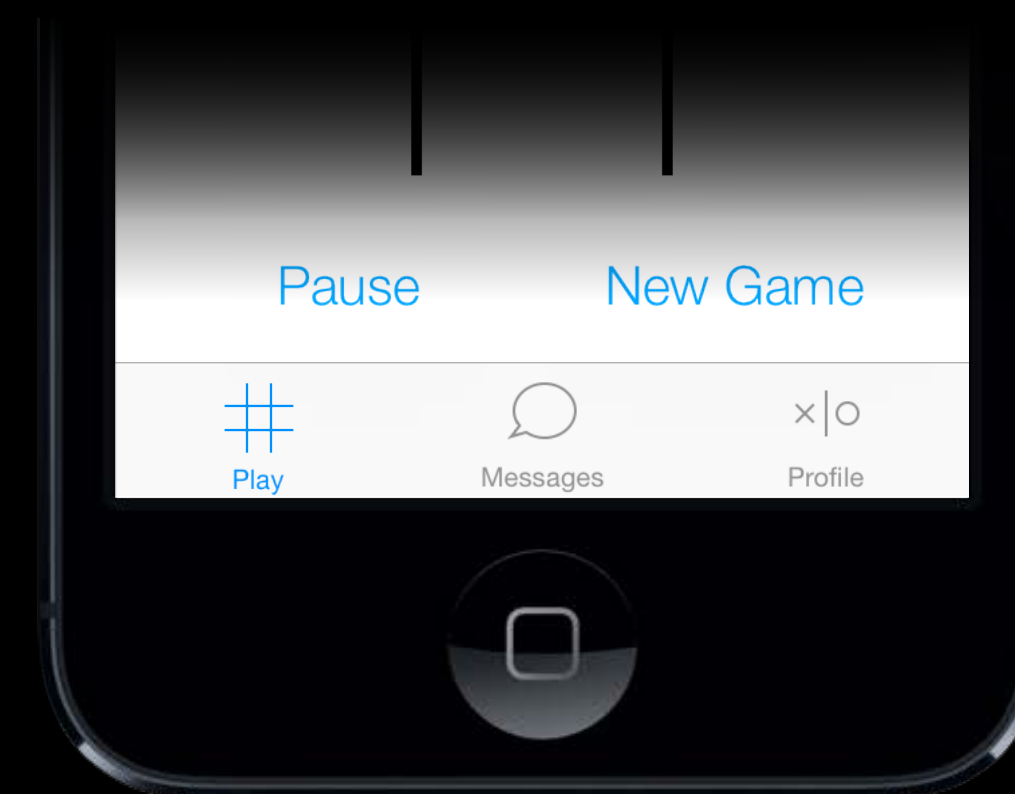
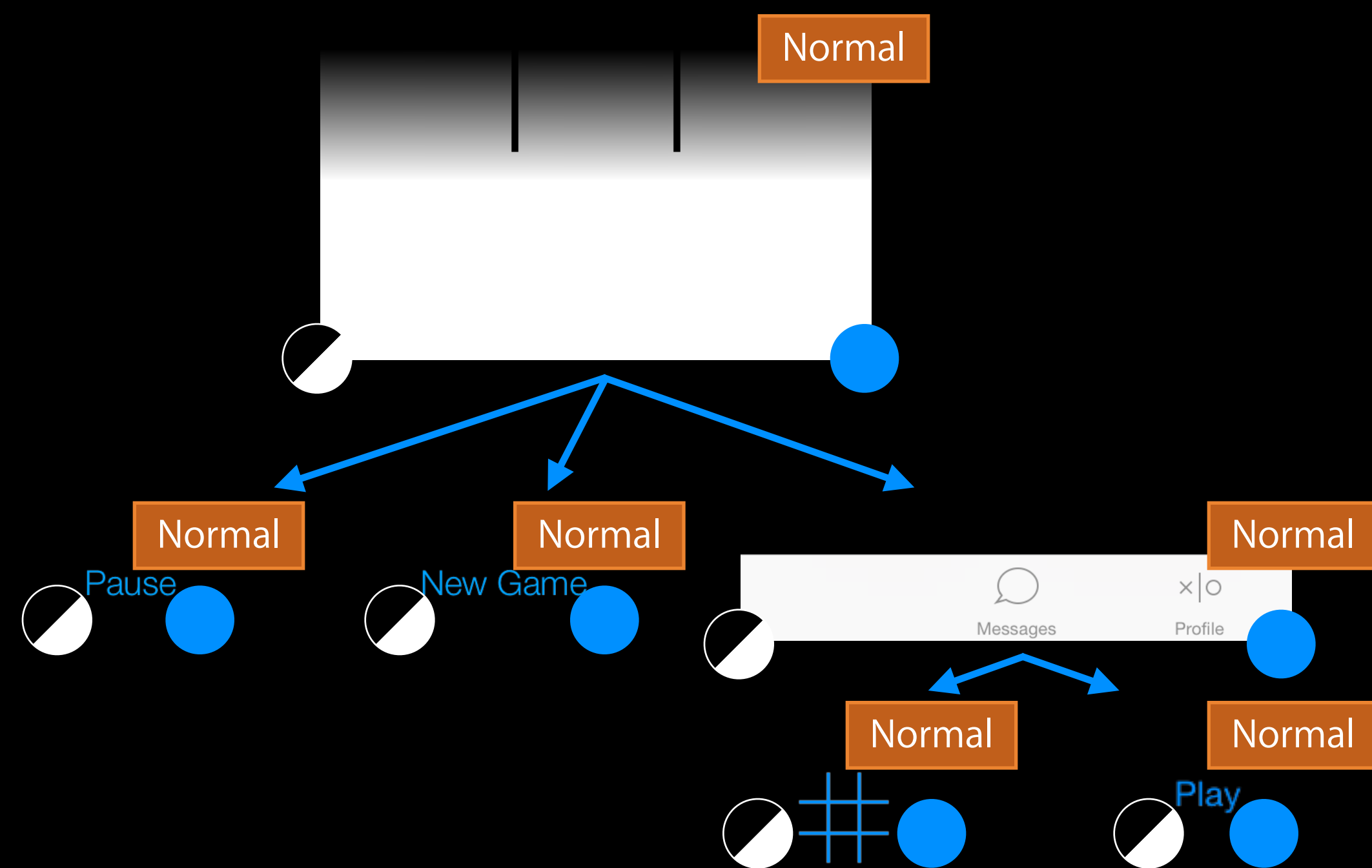
```
typedef NS_ENUM(NSInteger, UIViewTintAdjustmentMode) {  
    UIViewTintAdjustmentModeAutomatic,  
  
    UIViewTintAdjustmentModeNormal,  
    UIViewTintAdjustmentModeDimmed,  
};
```

Tint Adjustment Mode



Tint Adjustment Mode

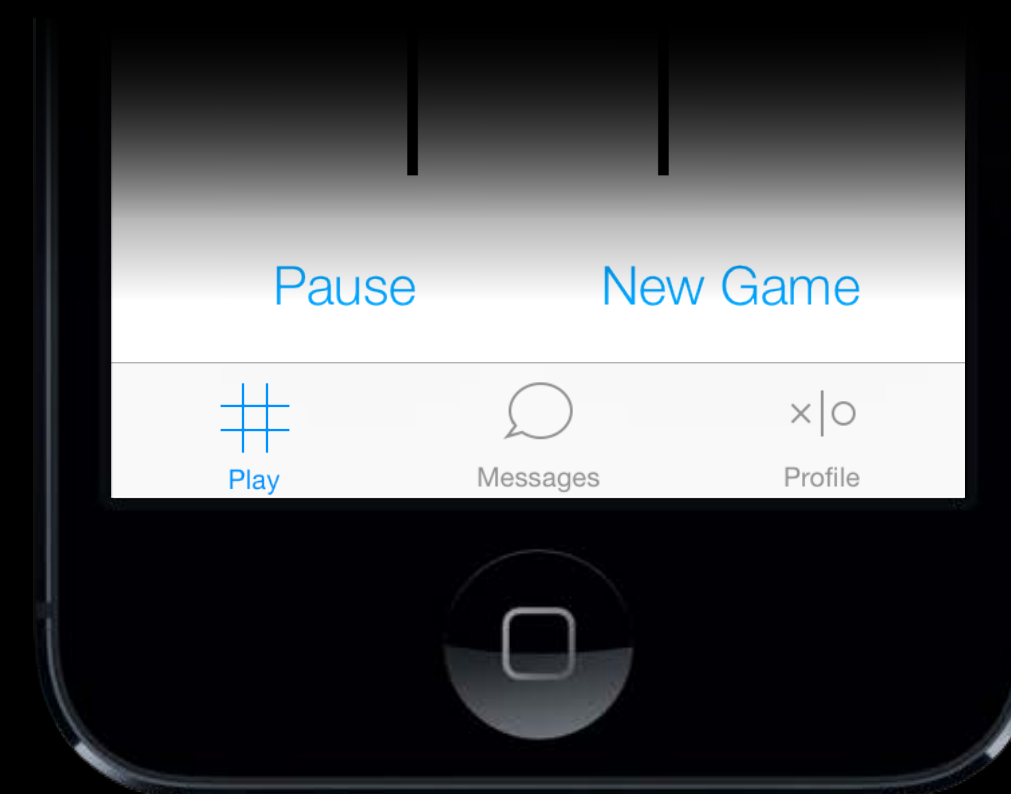
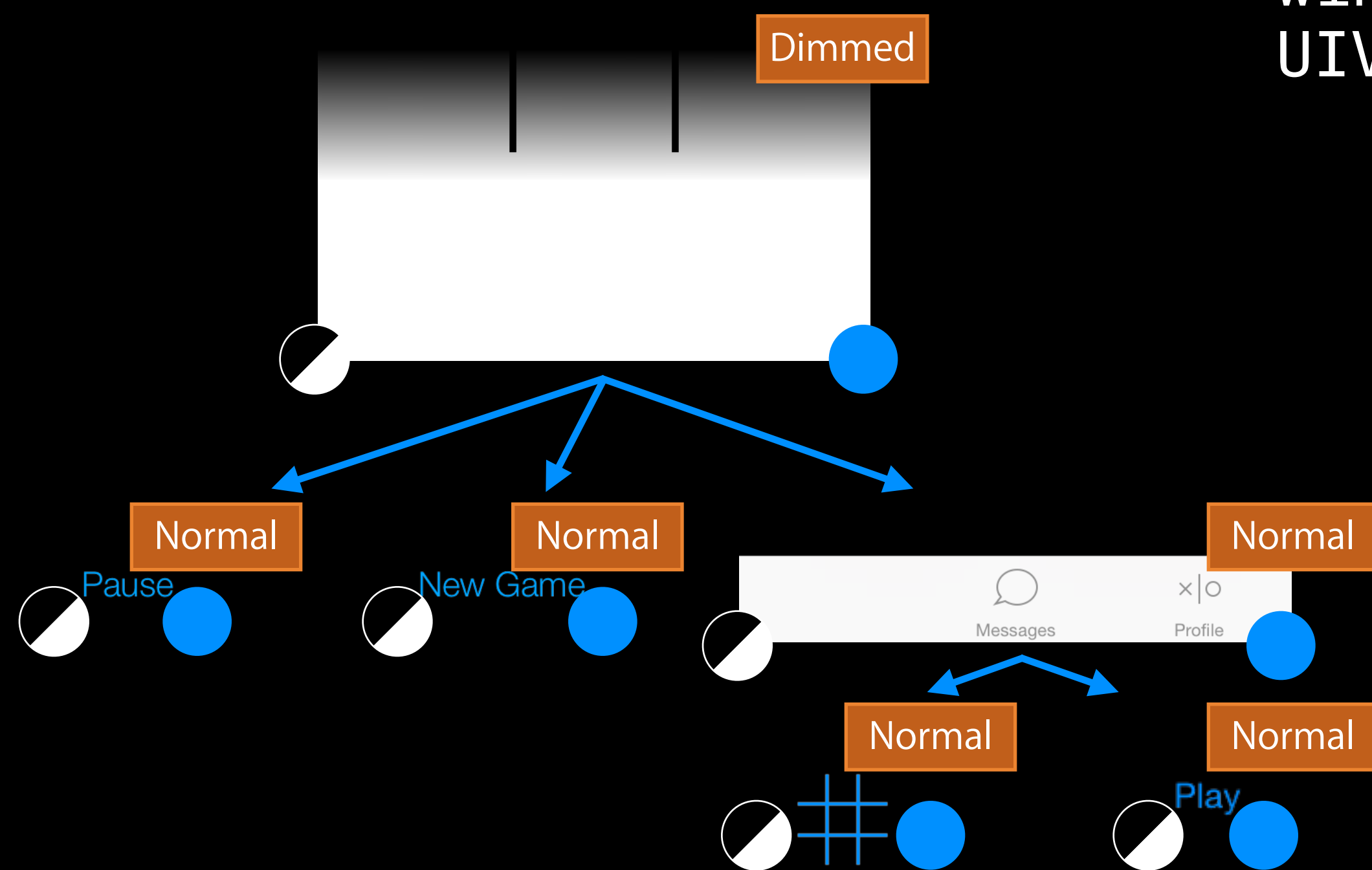
```
@property(nonatomic) UIViewTintAdjustmentMode tintAdjustmentMode;
```



Tint Adjustment Mode

```
@property(nonatomic) UIViewTintAdjustmentMode tintAdjustmentMode;
```

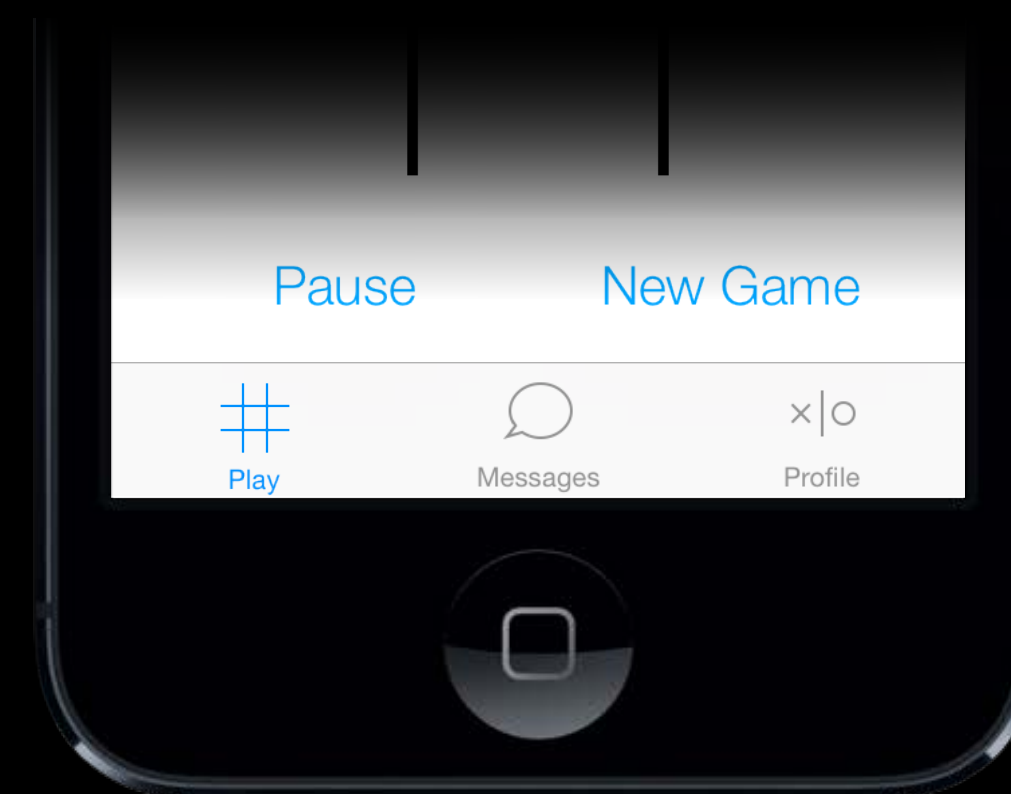
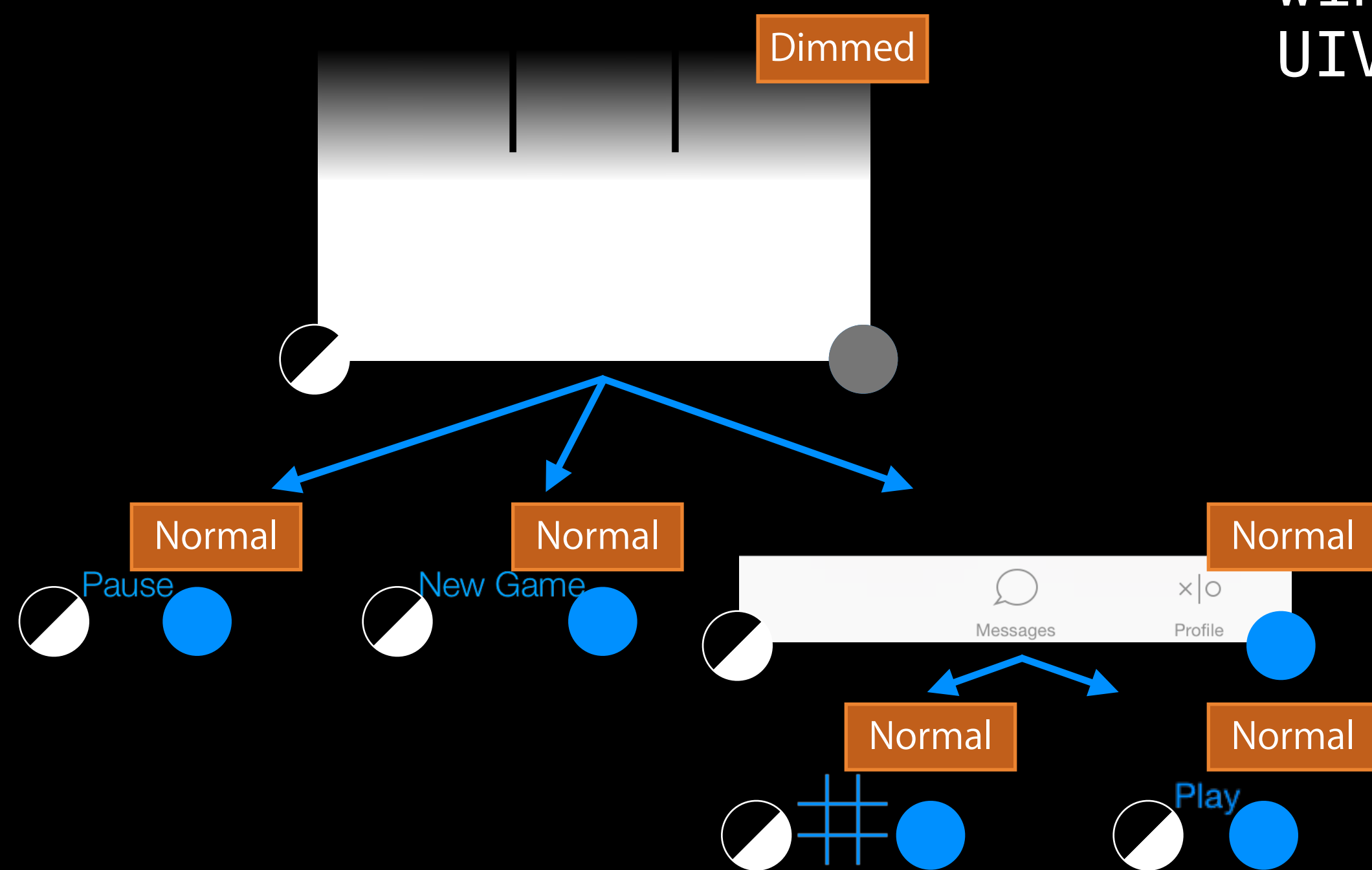
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



Tint Adjustment Mode

```
@property(nonatomic) UIViewTintAdjustmentMode tintAdjustmentMode;
```

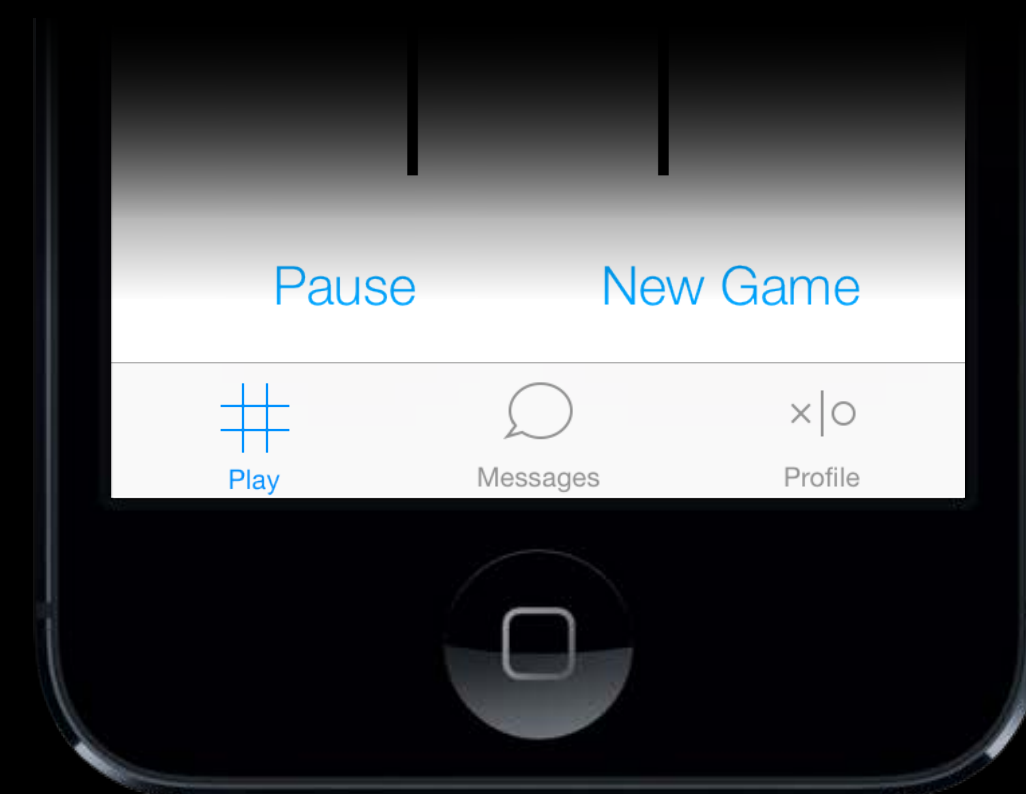
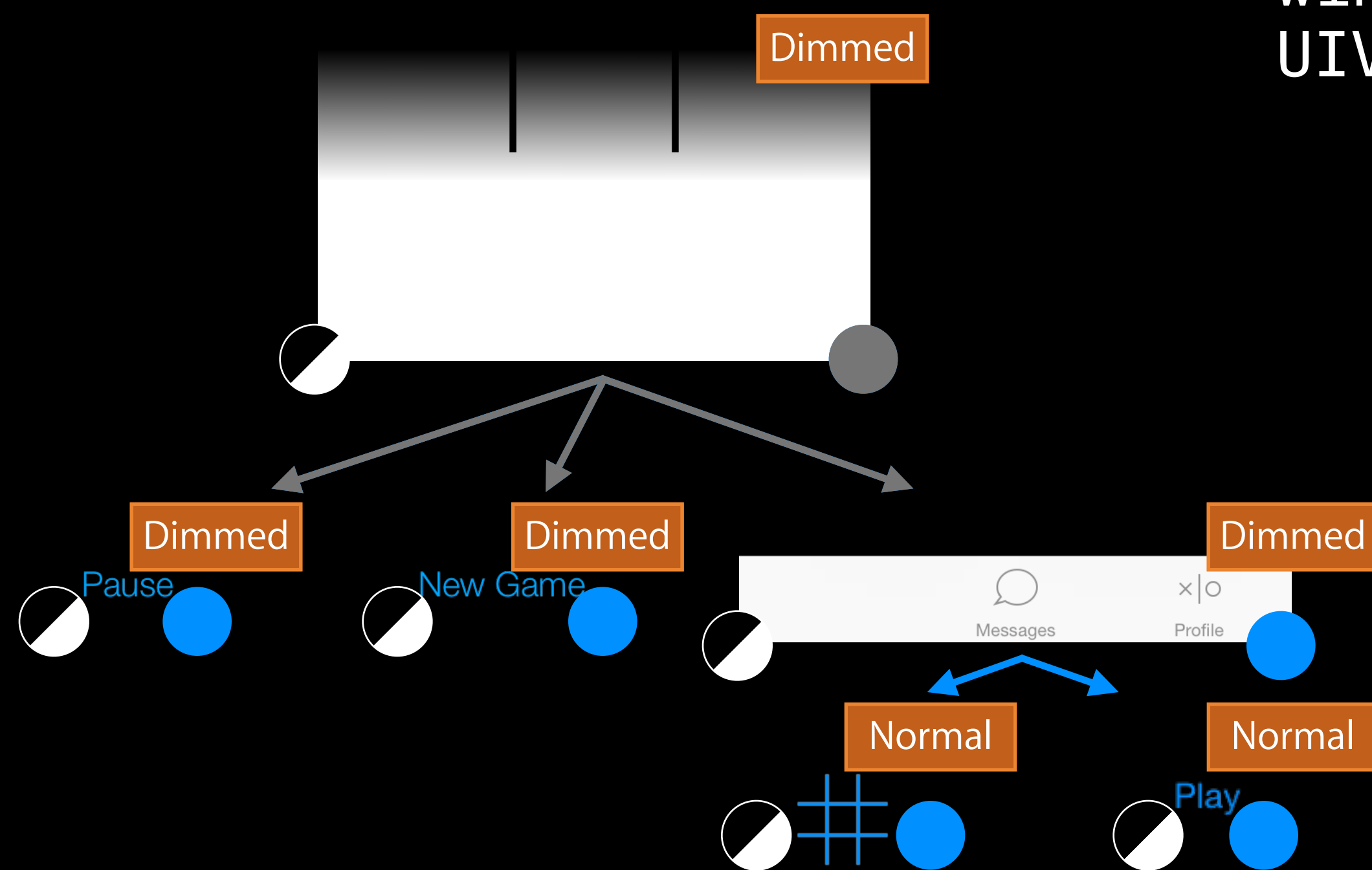
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



Tint Adjustment Mode

```
@property(nonatomic) UIViewTintAdjustmentMode tintAdjustmentMode;
```

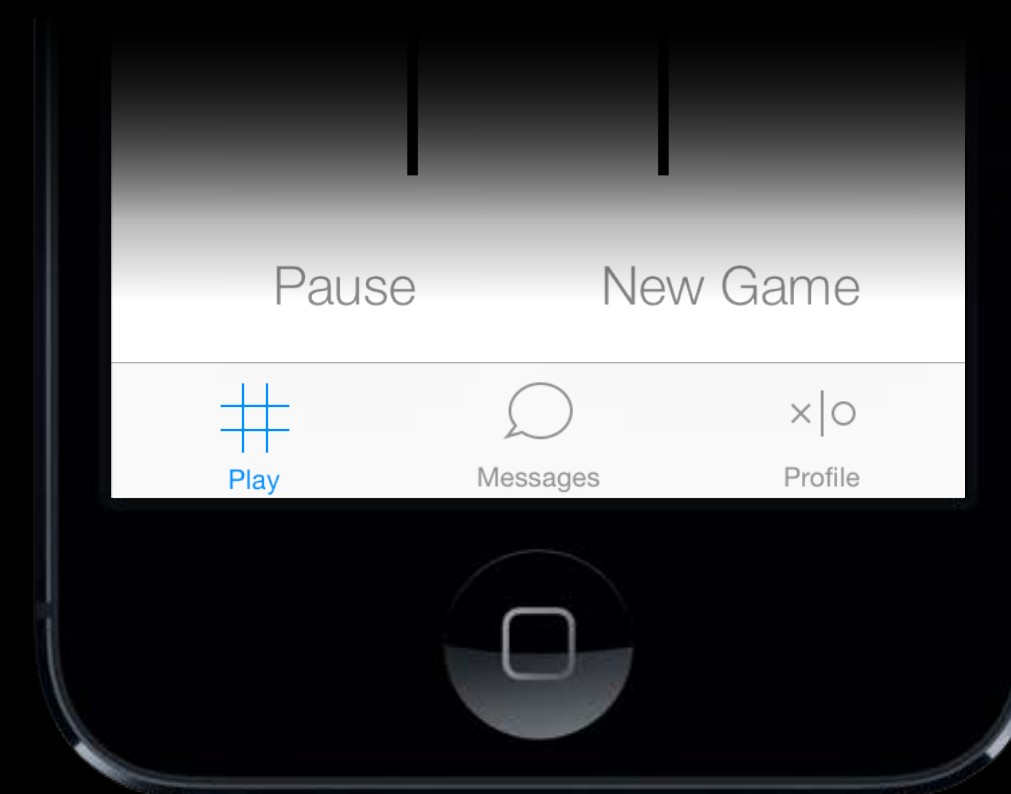
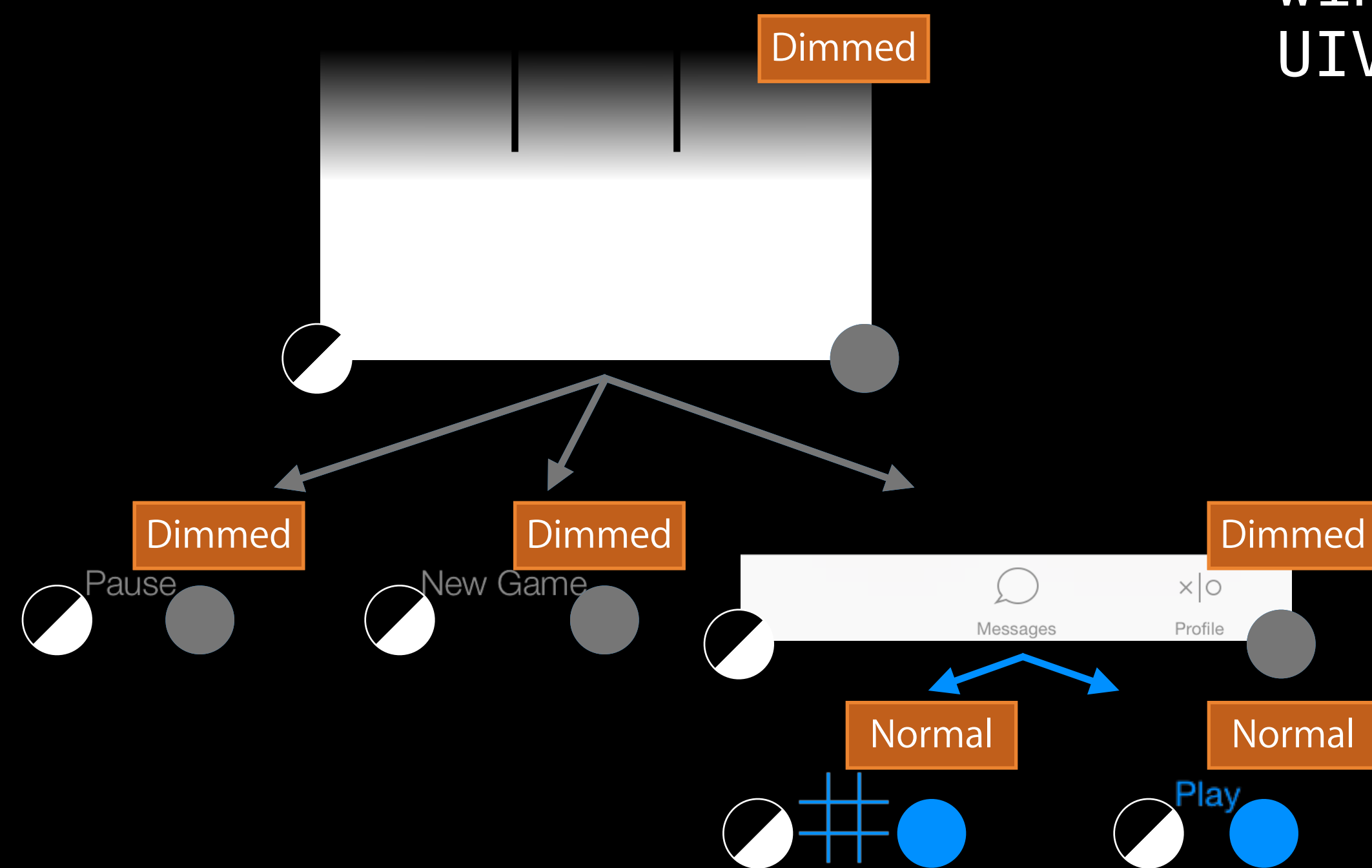
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



Tint Adjustment Mode

```
@property(nonatomic) UIViewTintAdjustmentMode tintAdjustmentMode;
```

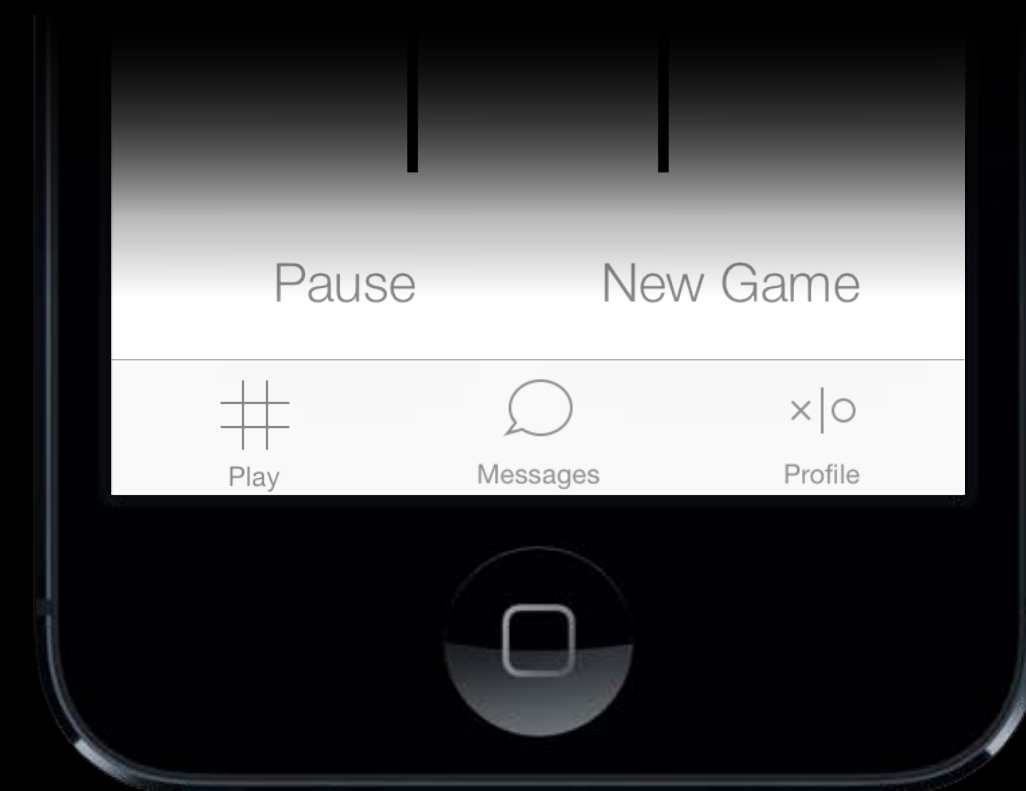
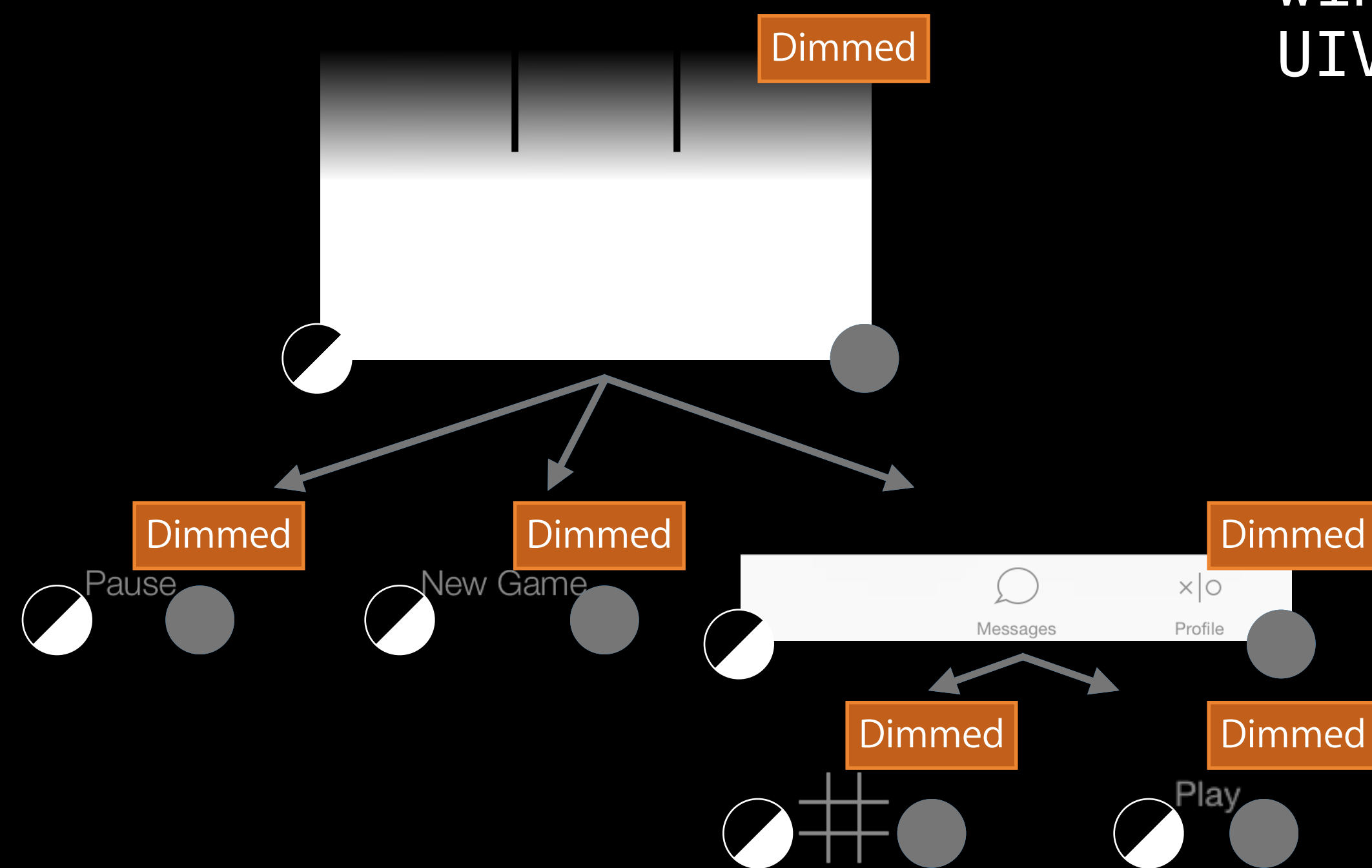
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



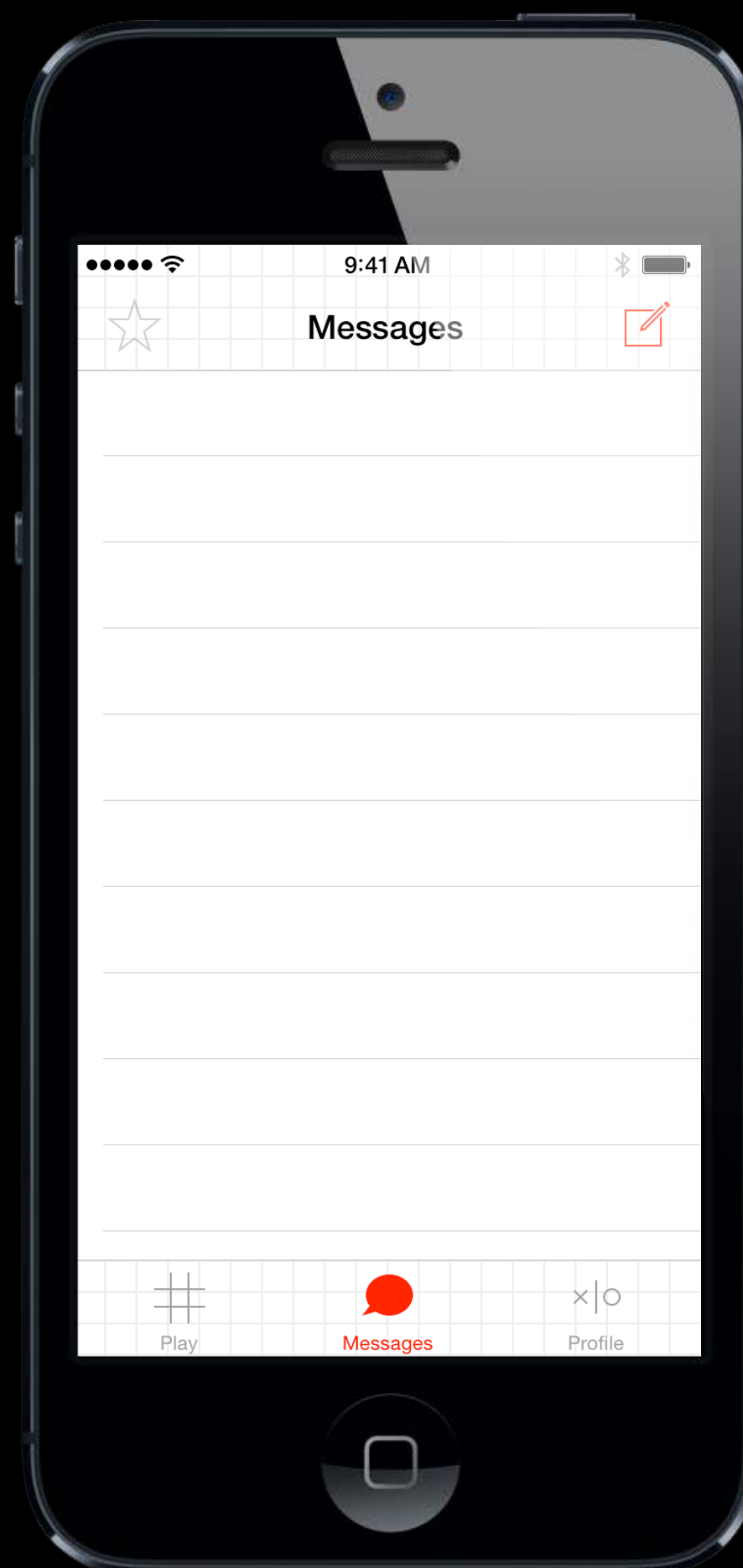
Tint Adjustment Mode

```
@property(nonatomic) UIViewTintAdjustmentMode tintAdjustmentMode;
```

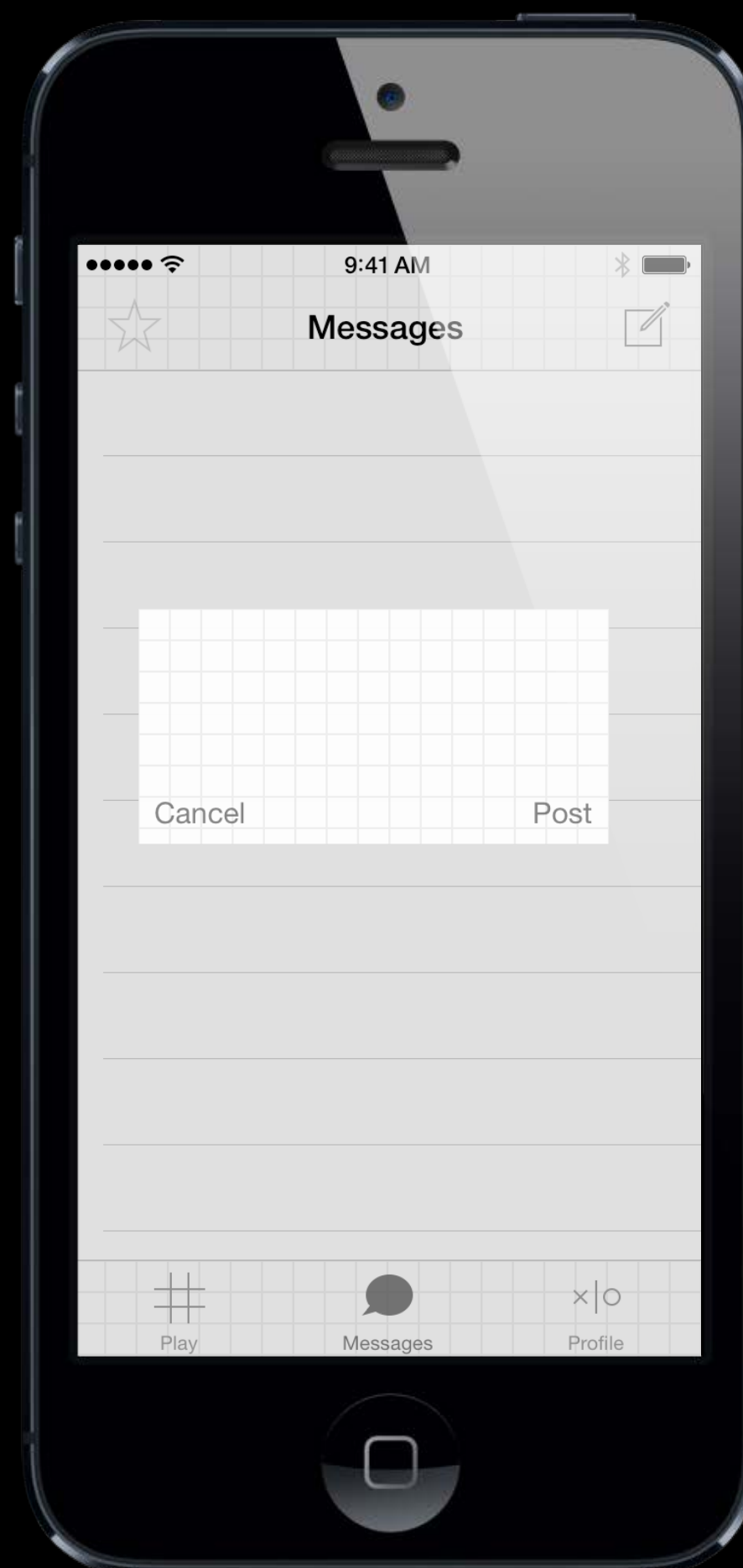
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



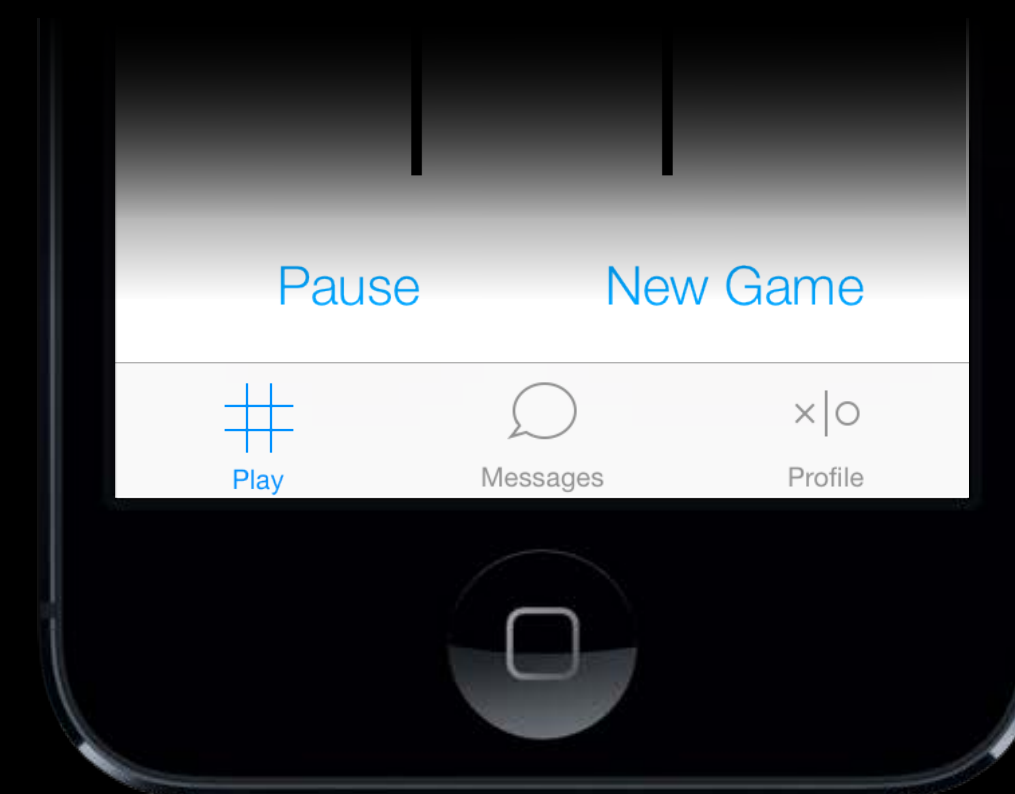
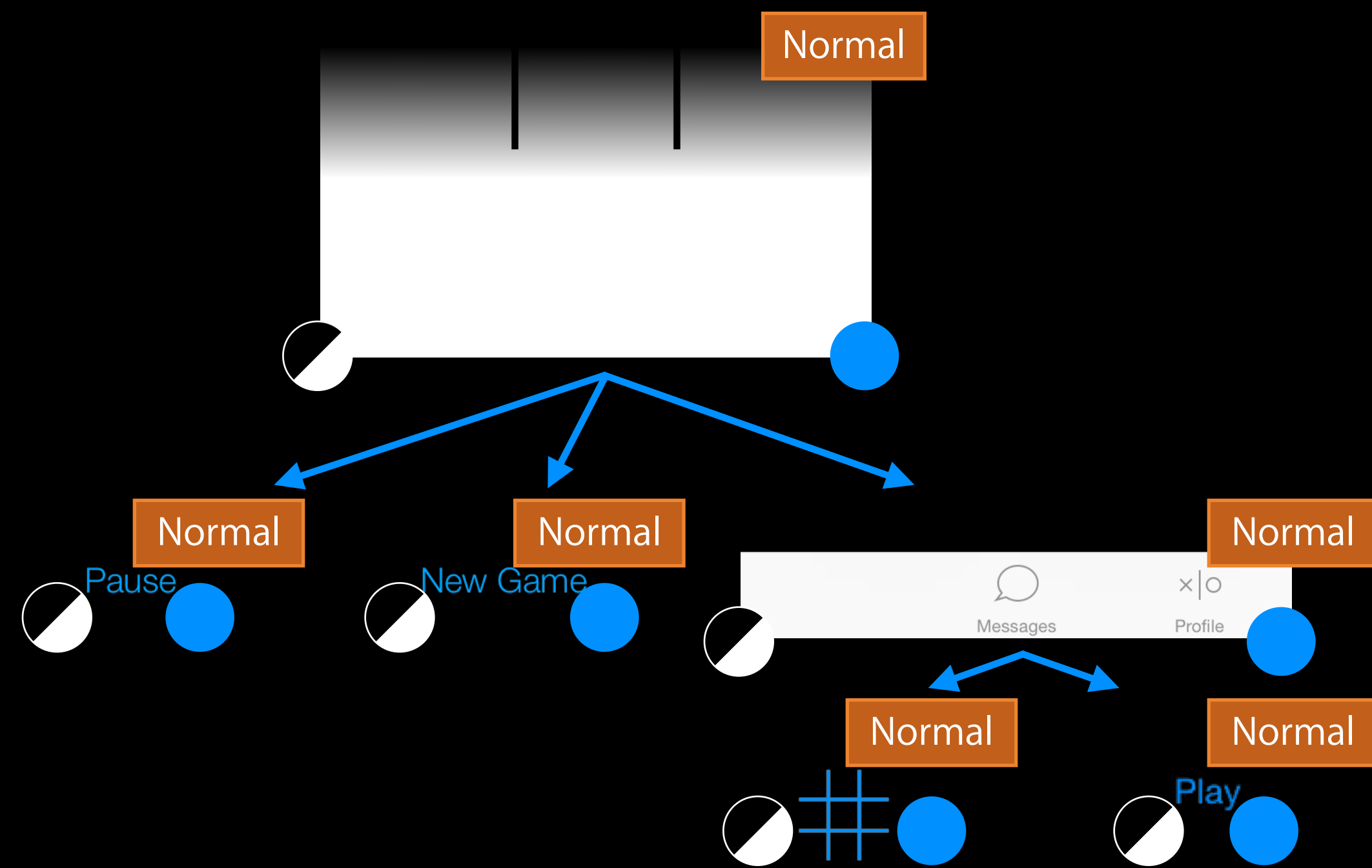
Tint Adjustment Mode



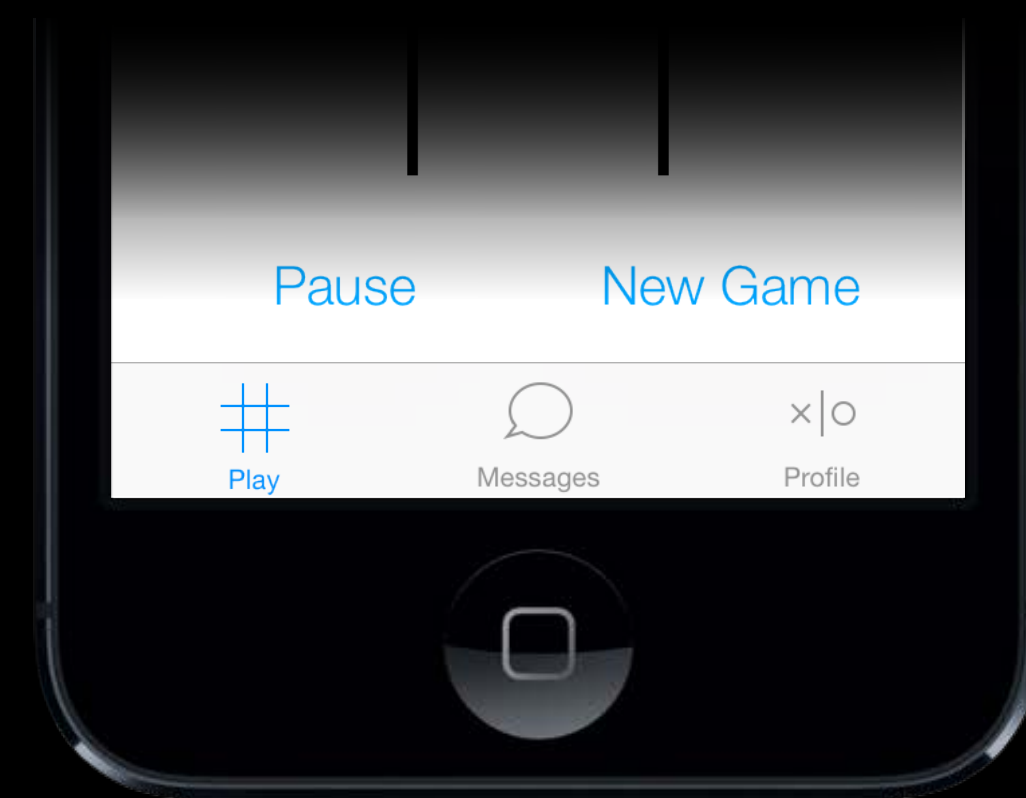
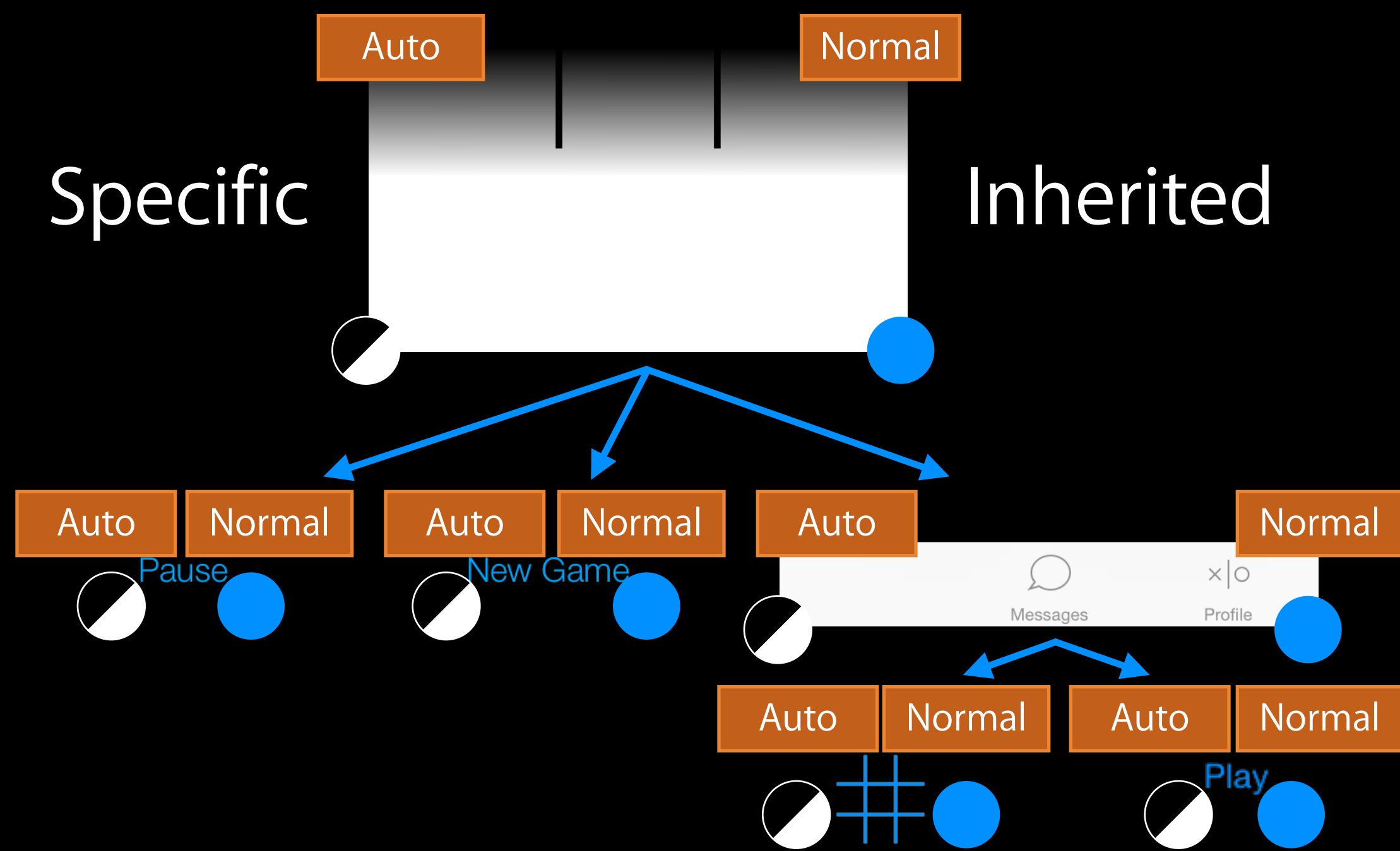
Tint Adjustment Mode



Tint Adjustment Mode

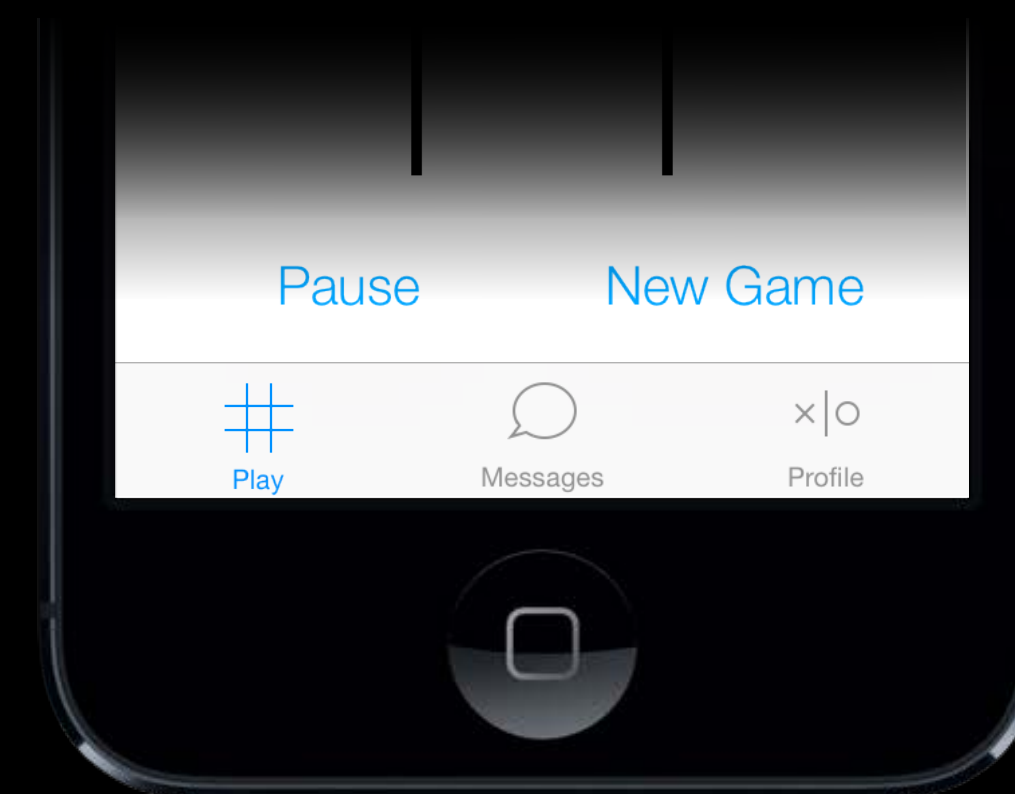
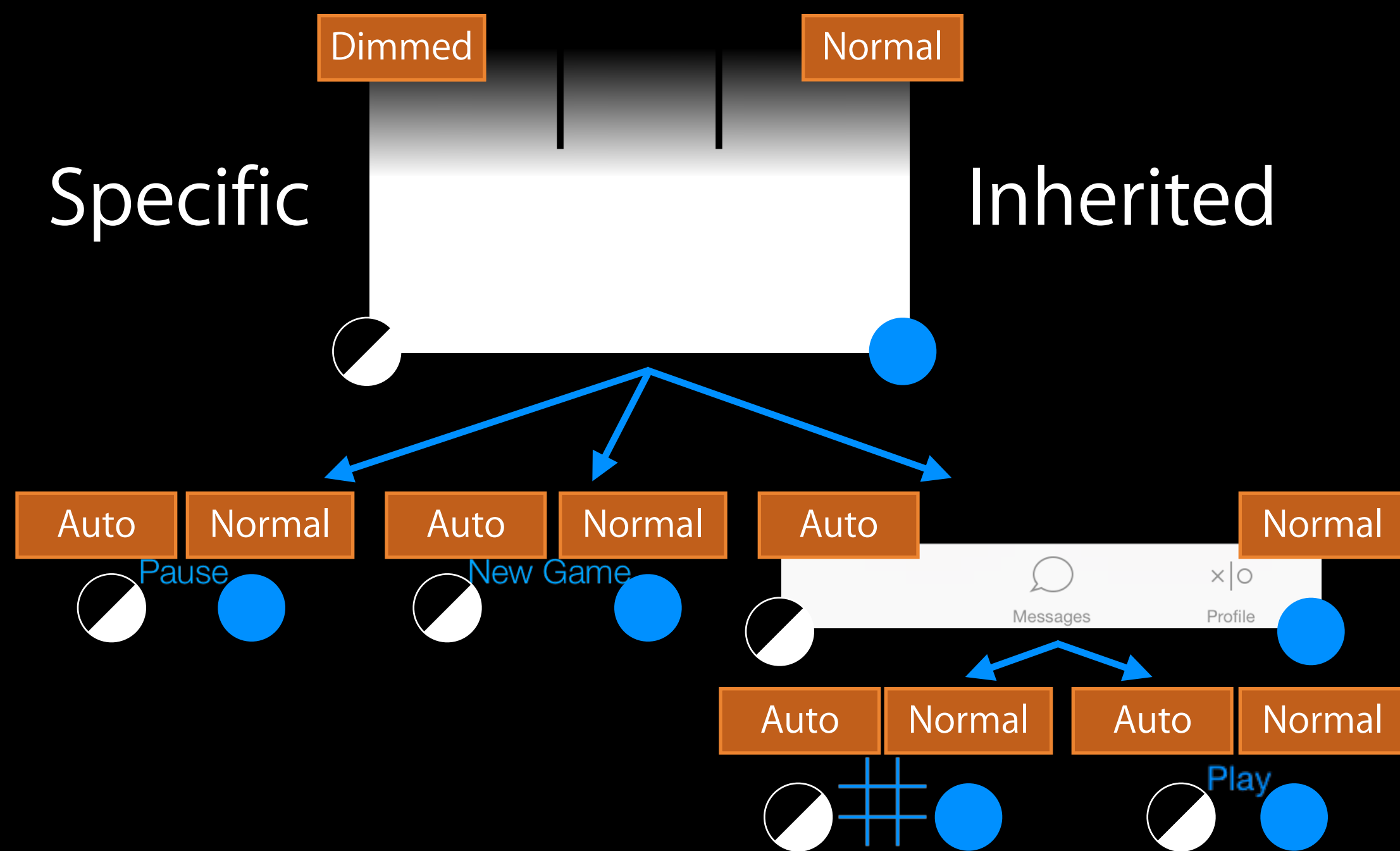


Tint Adjustment Mode



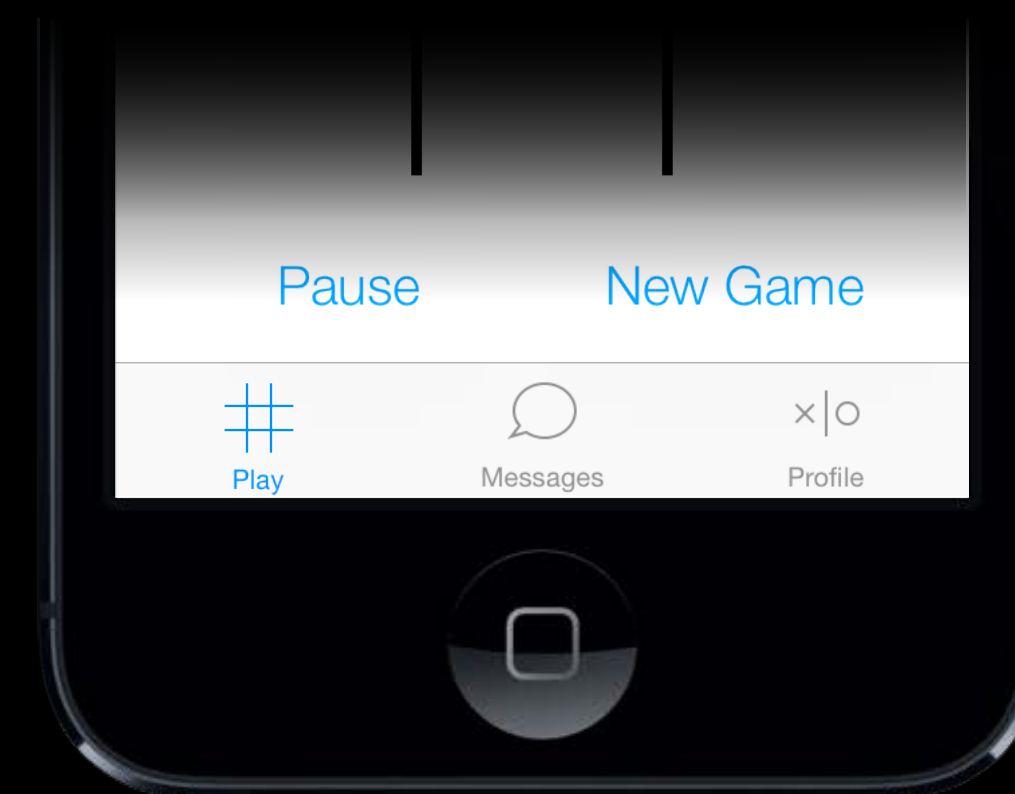
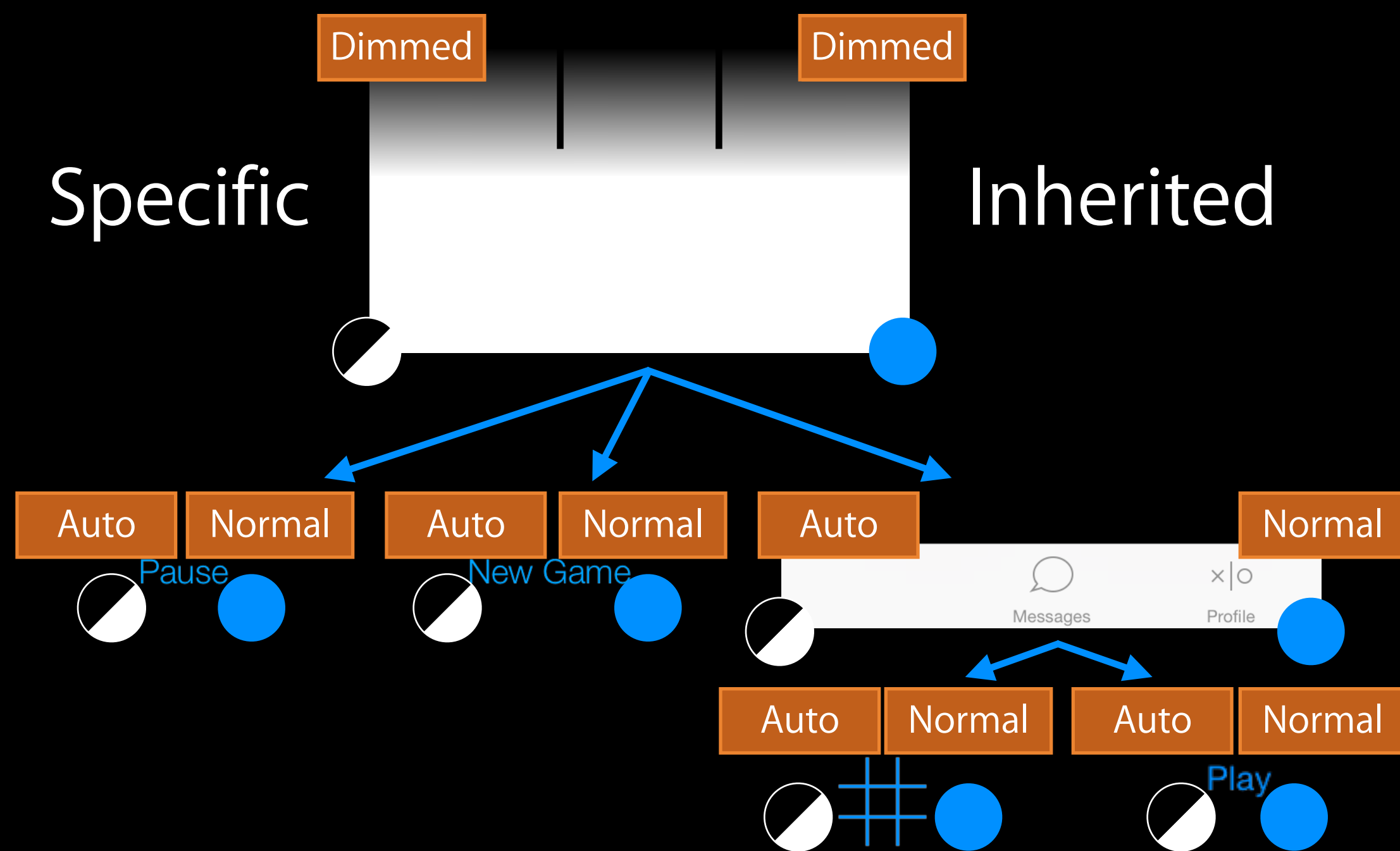
Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



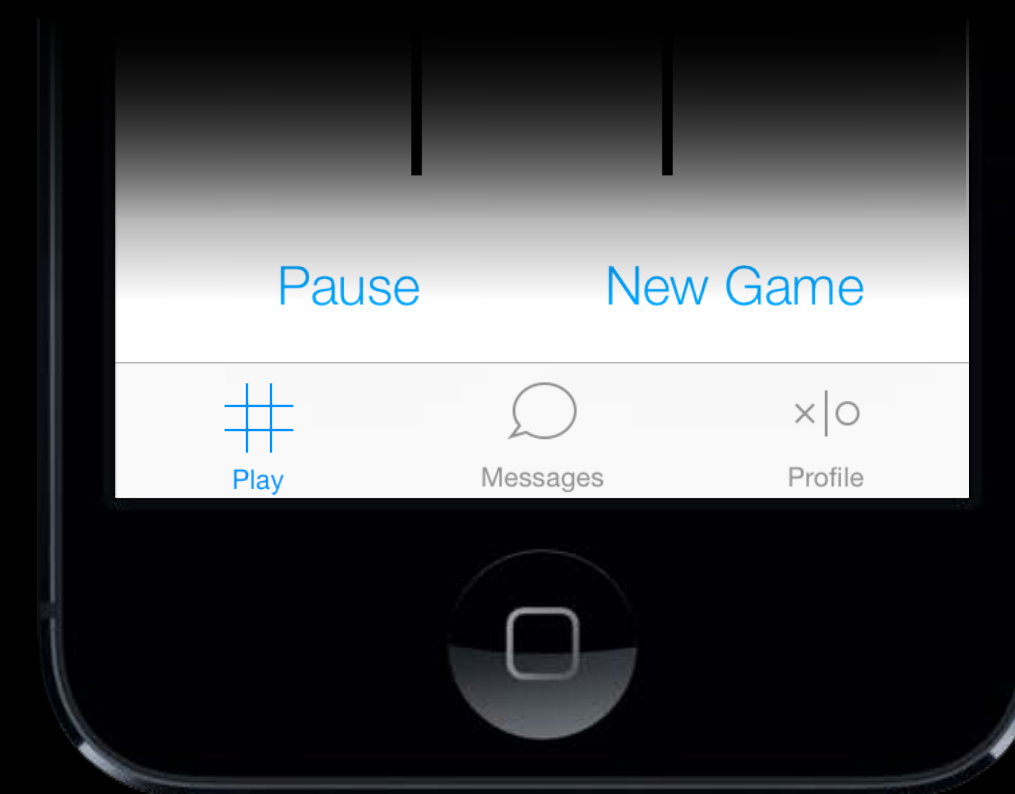
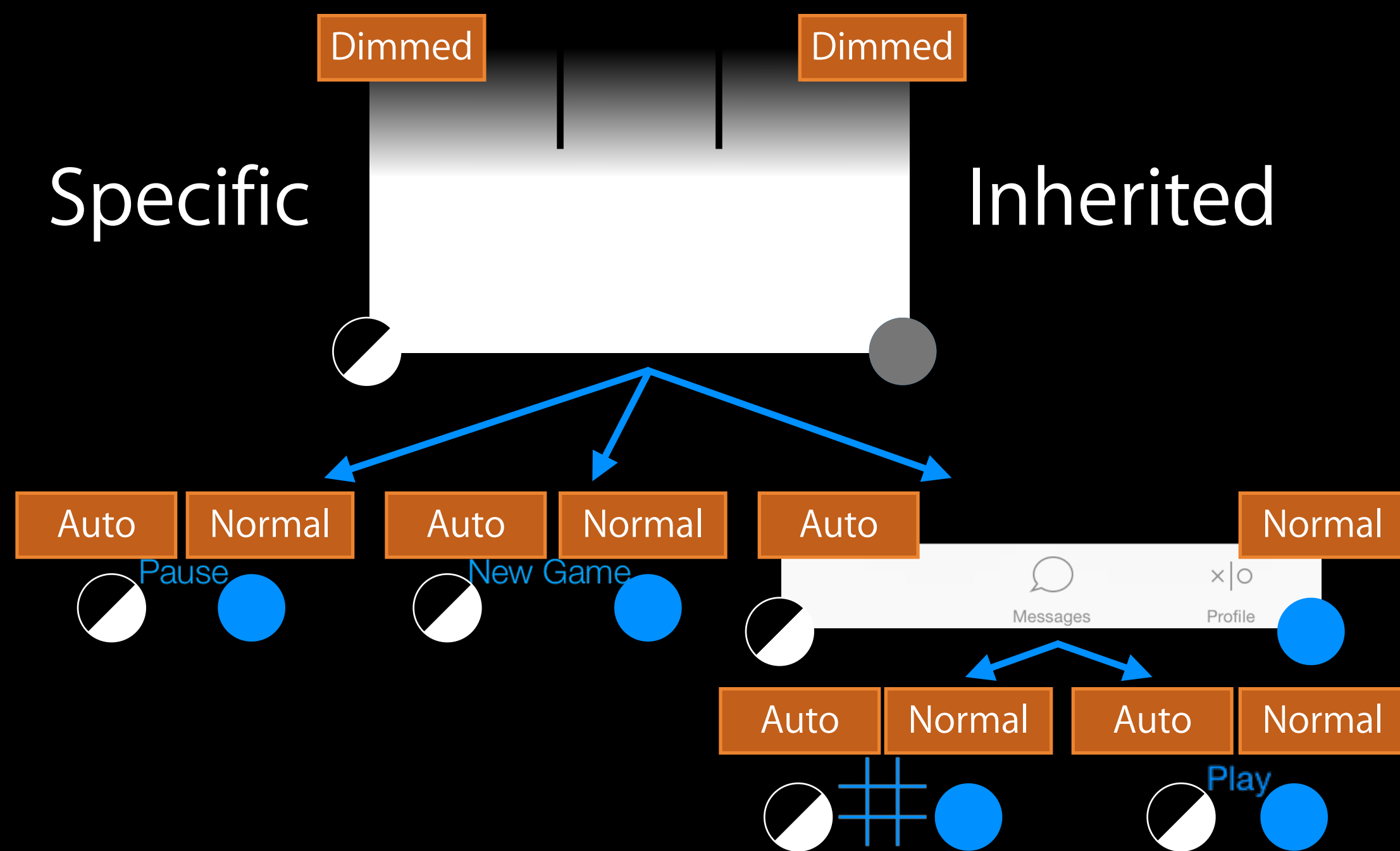
Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



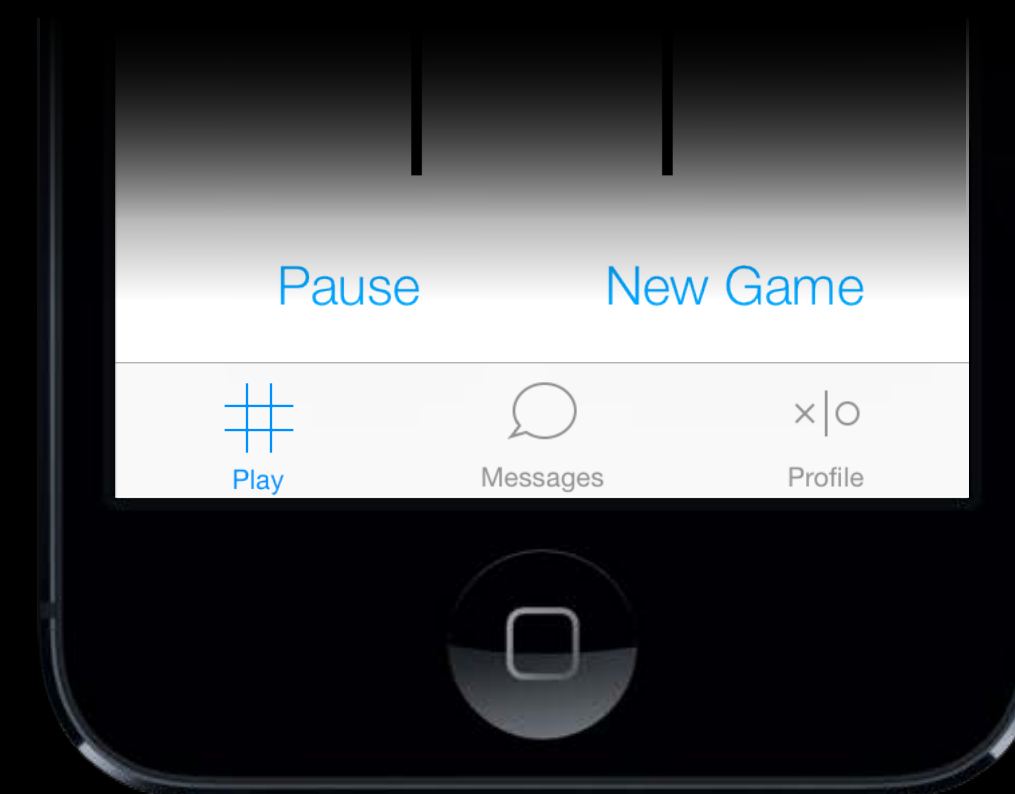
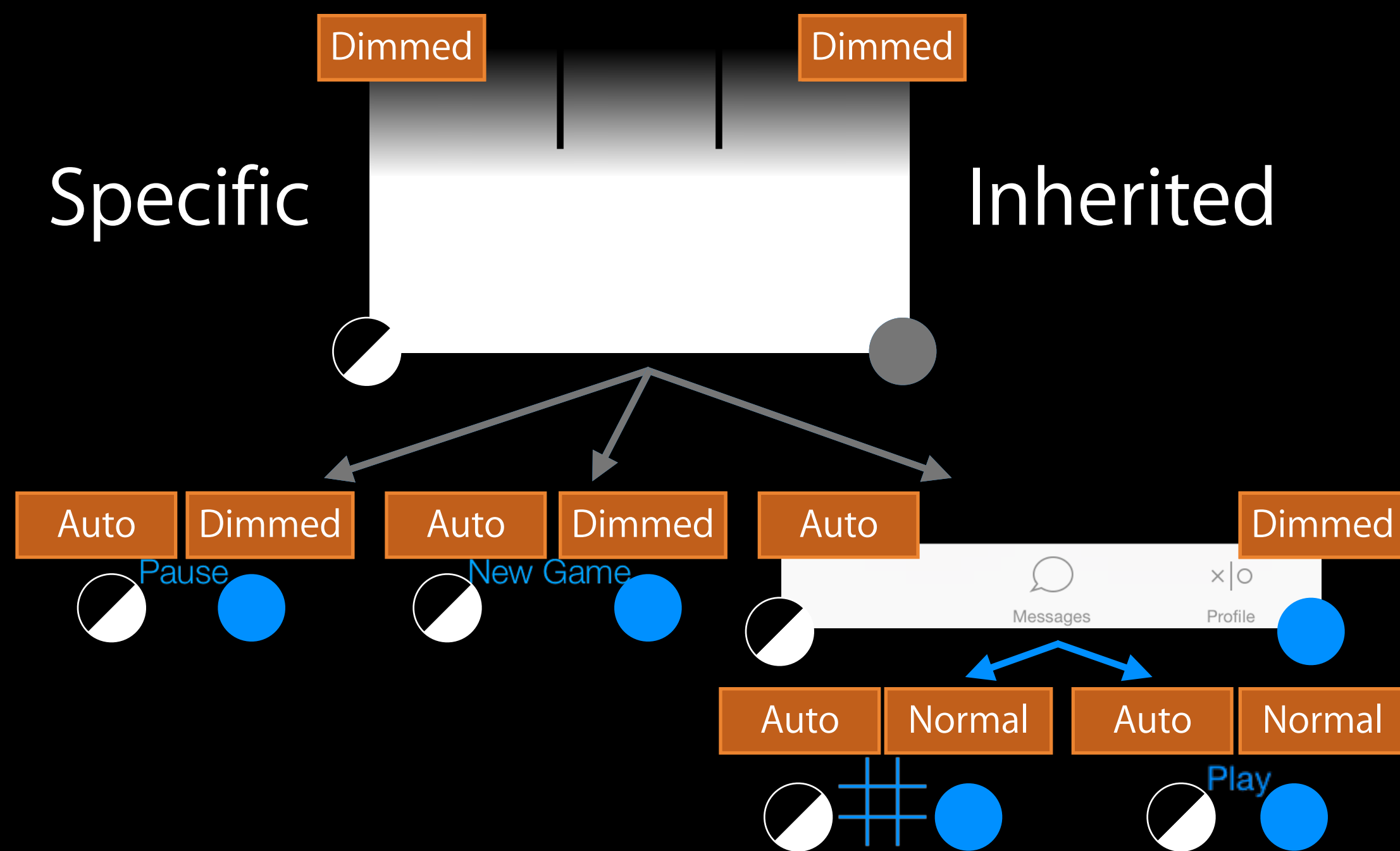
Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



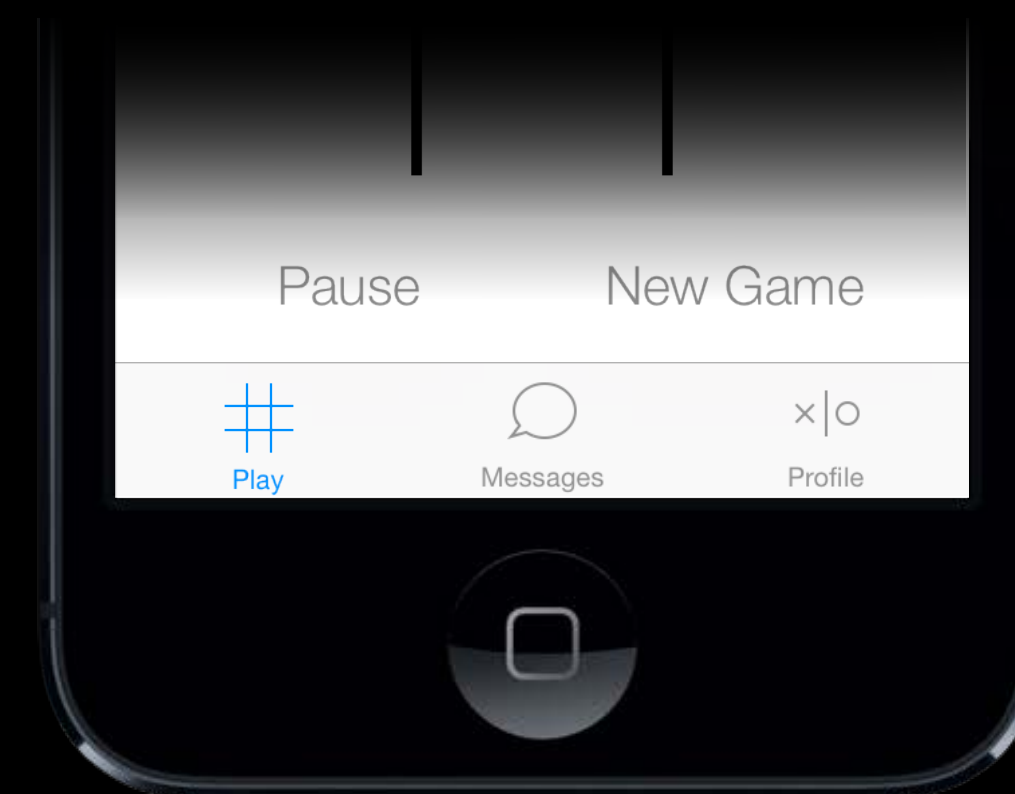
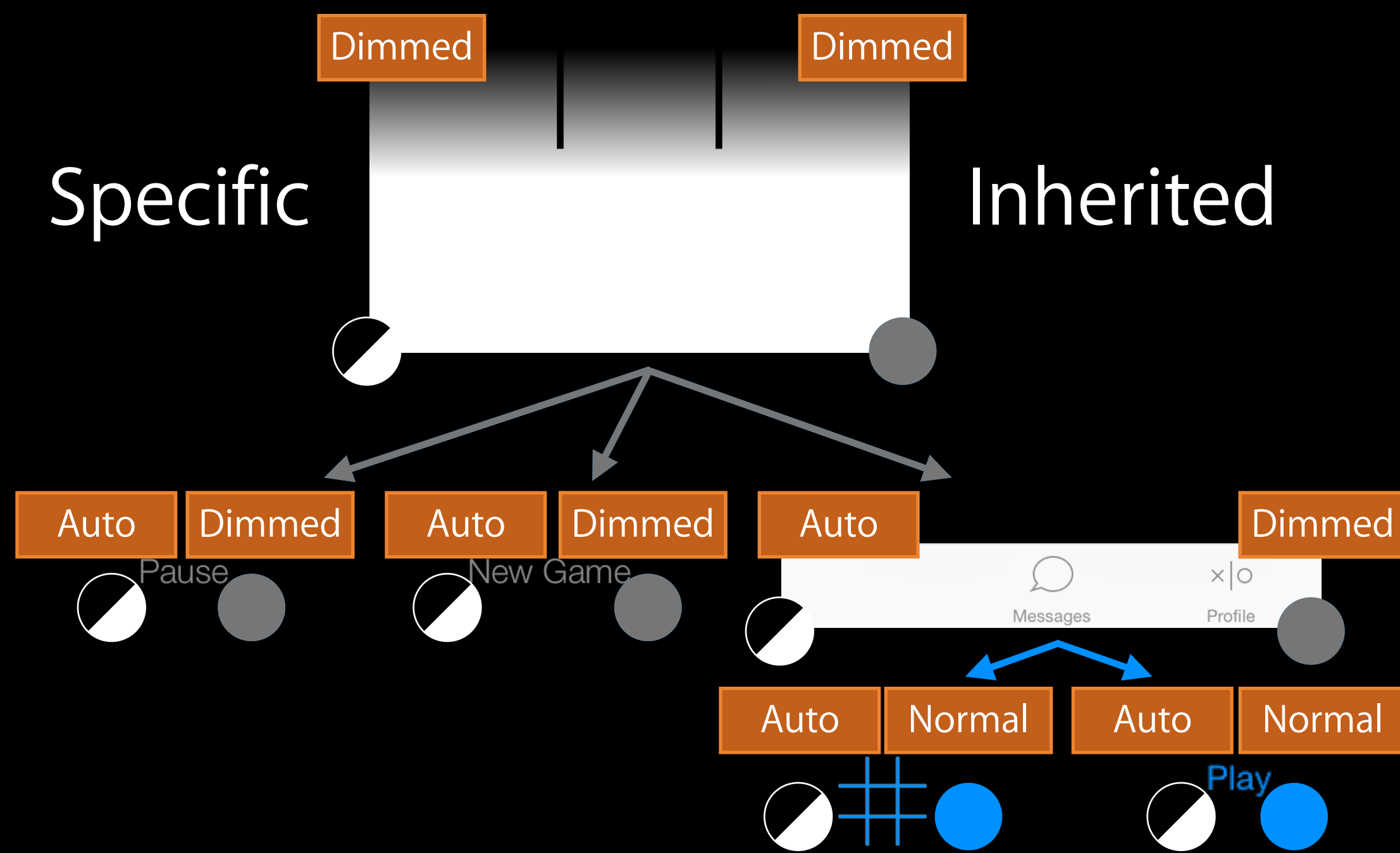
Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



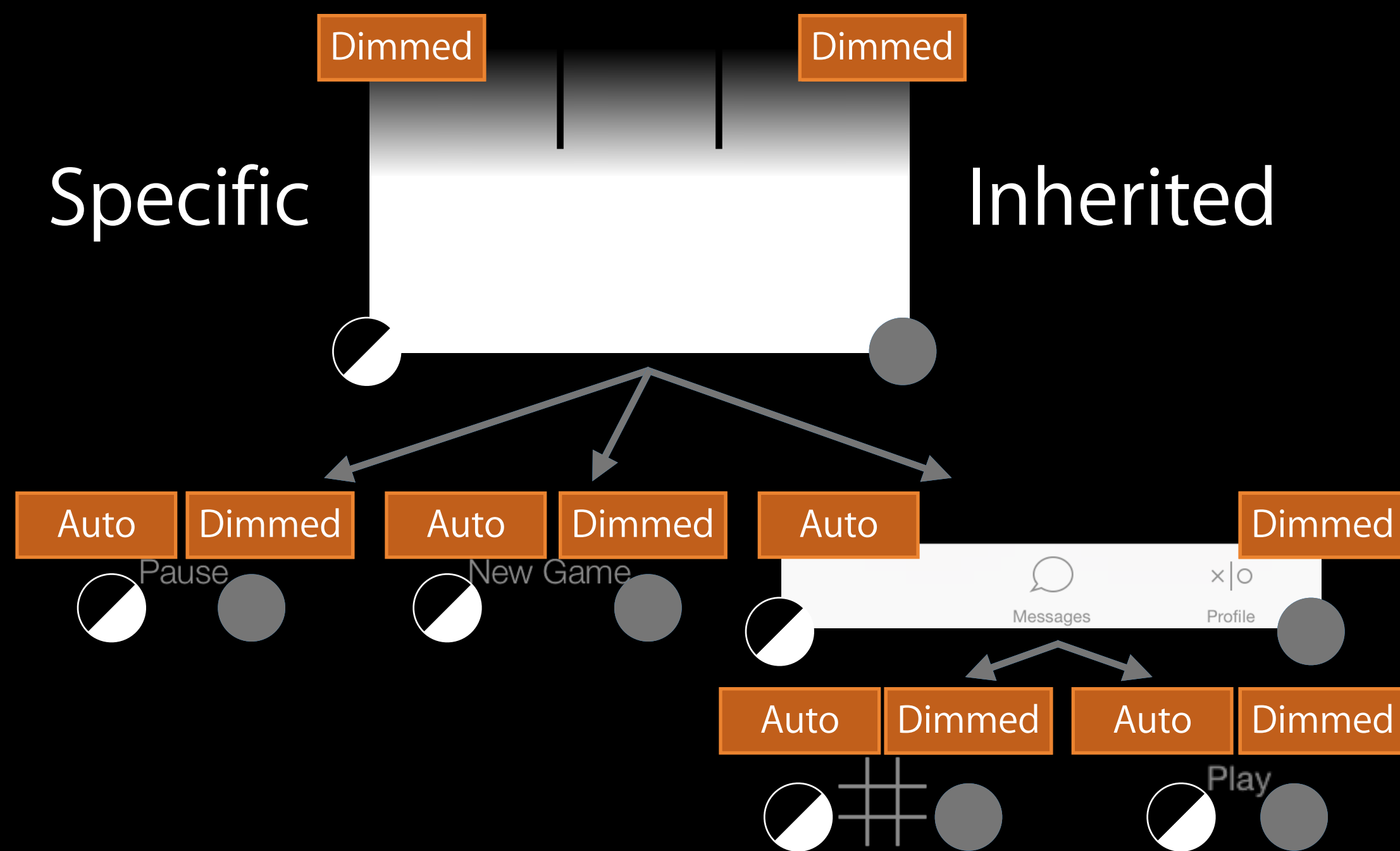
Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



Tint Adjustment Mode

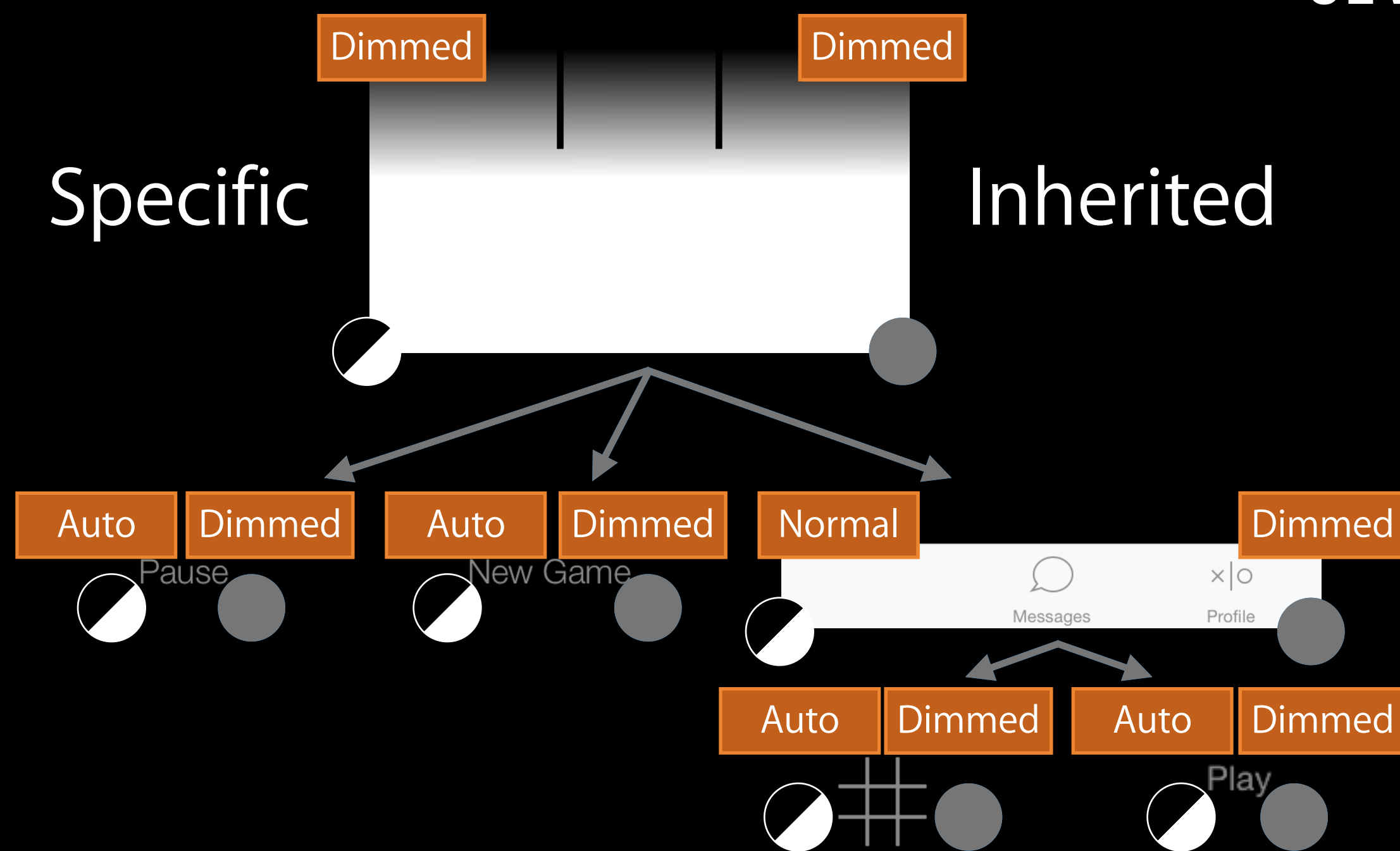
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



Tint Adjustment Mode

```
window.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeDimmed;
```

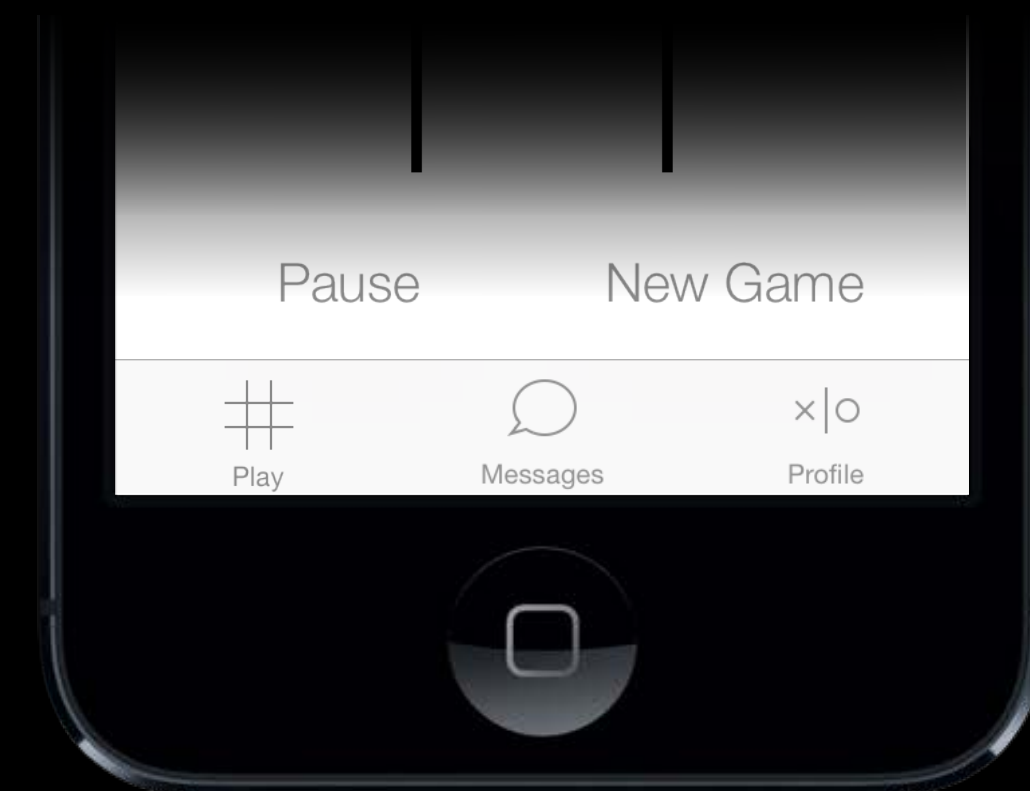
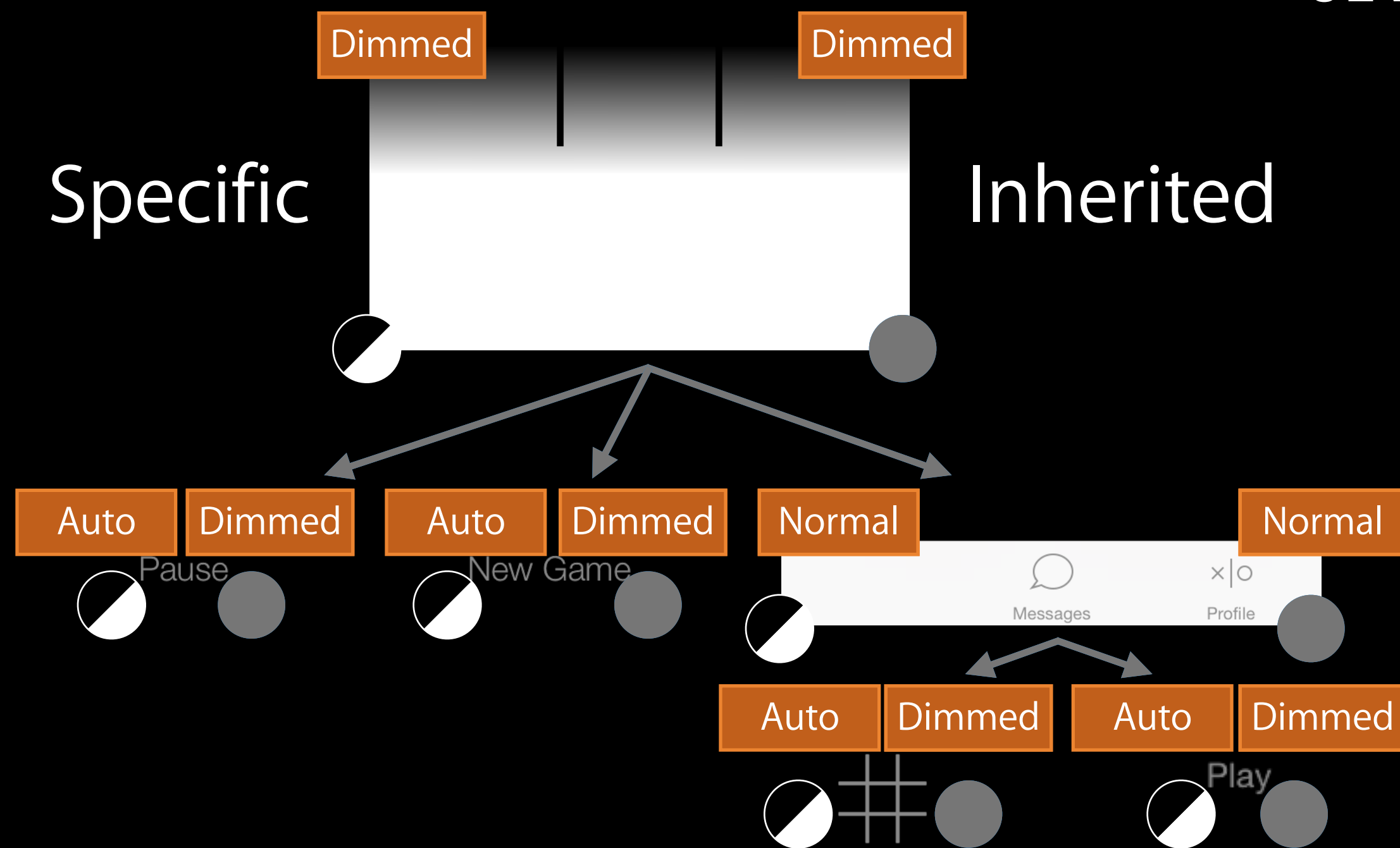
```
view.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeNormal;
```



Tint Adjustment Mode

```
window.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeDimmed;
```

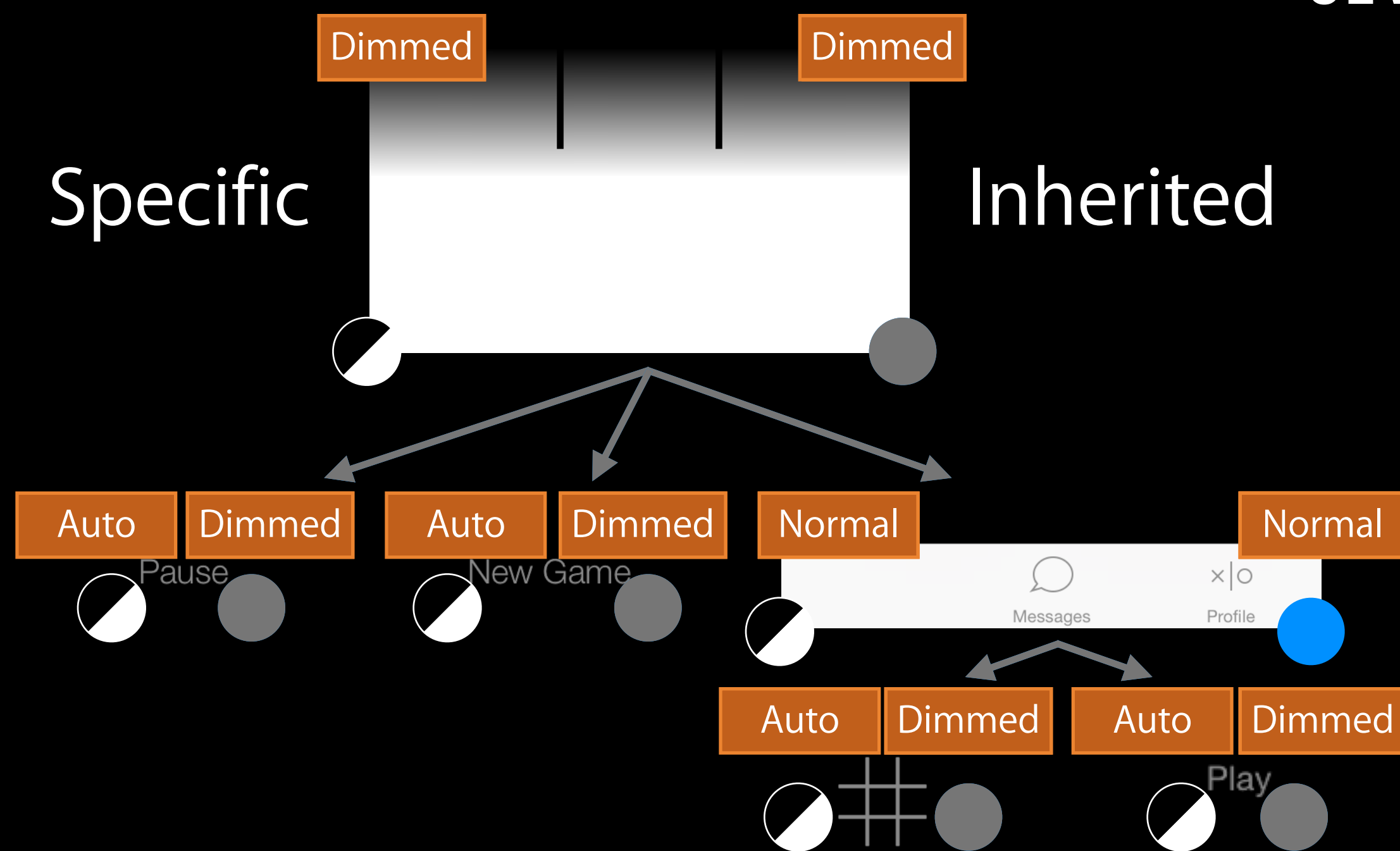
```
view.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeNormal;
```



Tint Adjustment Mode

```
window.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeDimmed;
```

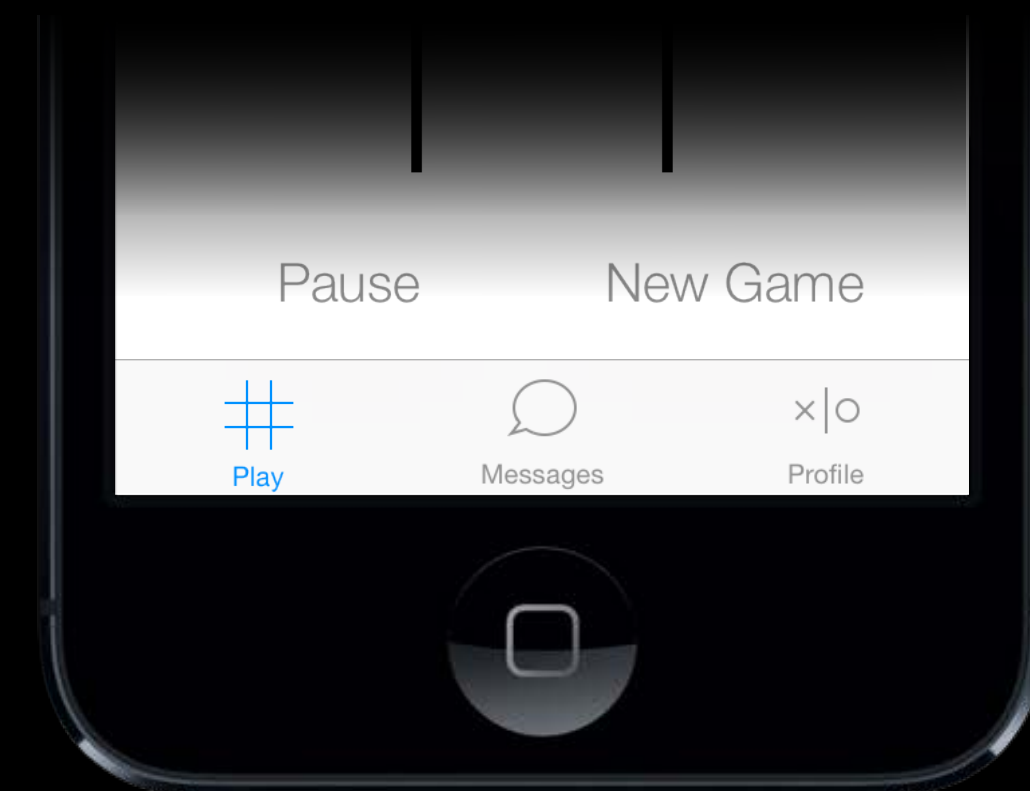
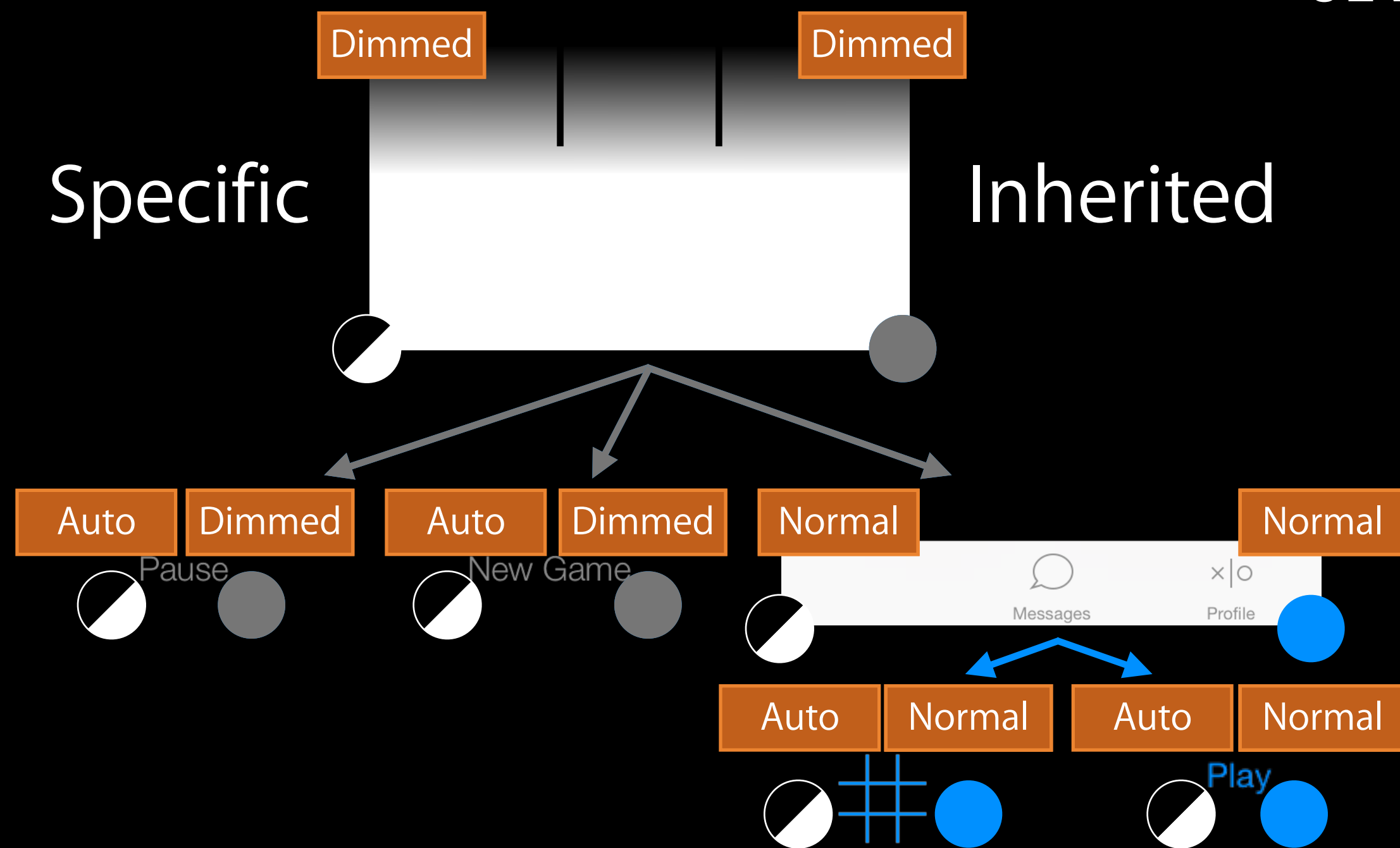
```
view.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeNormal;
```



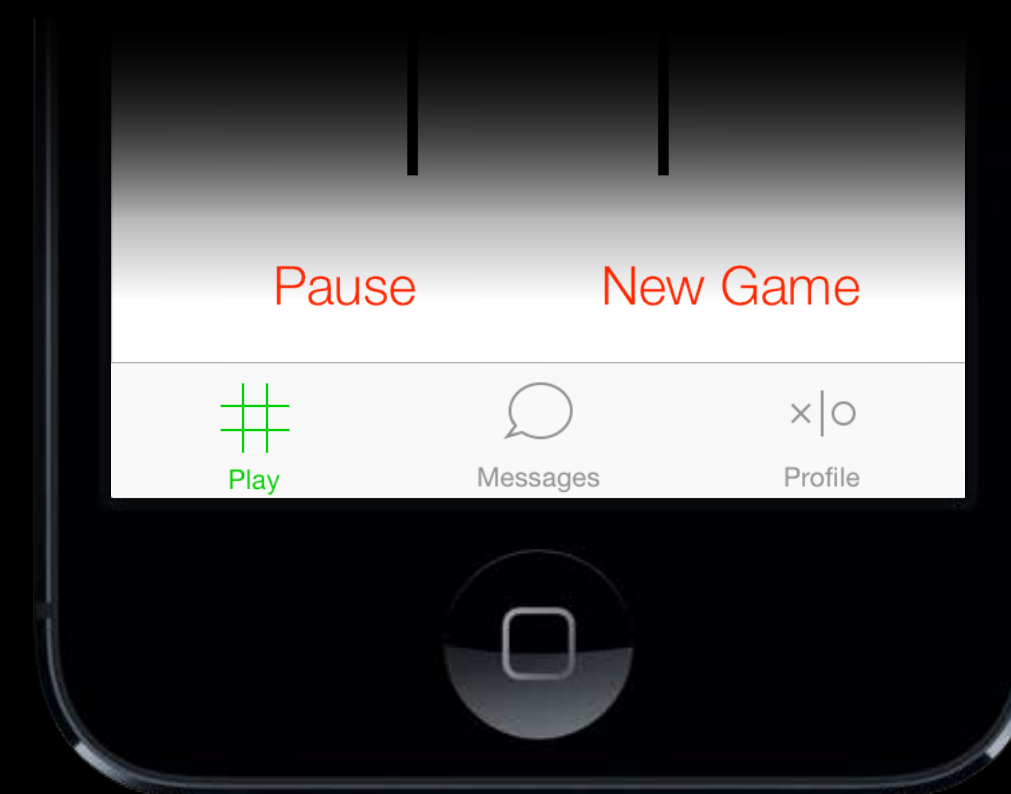
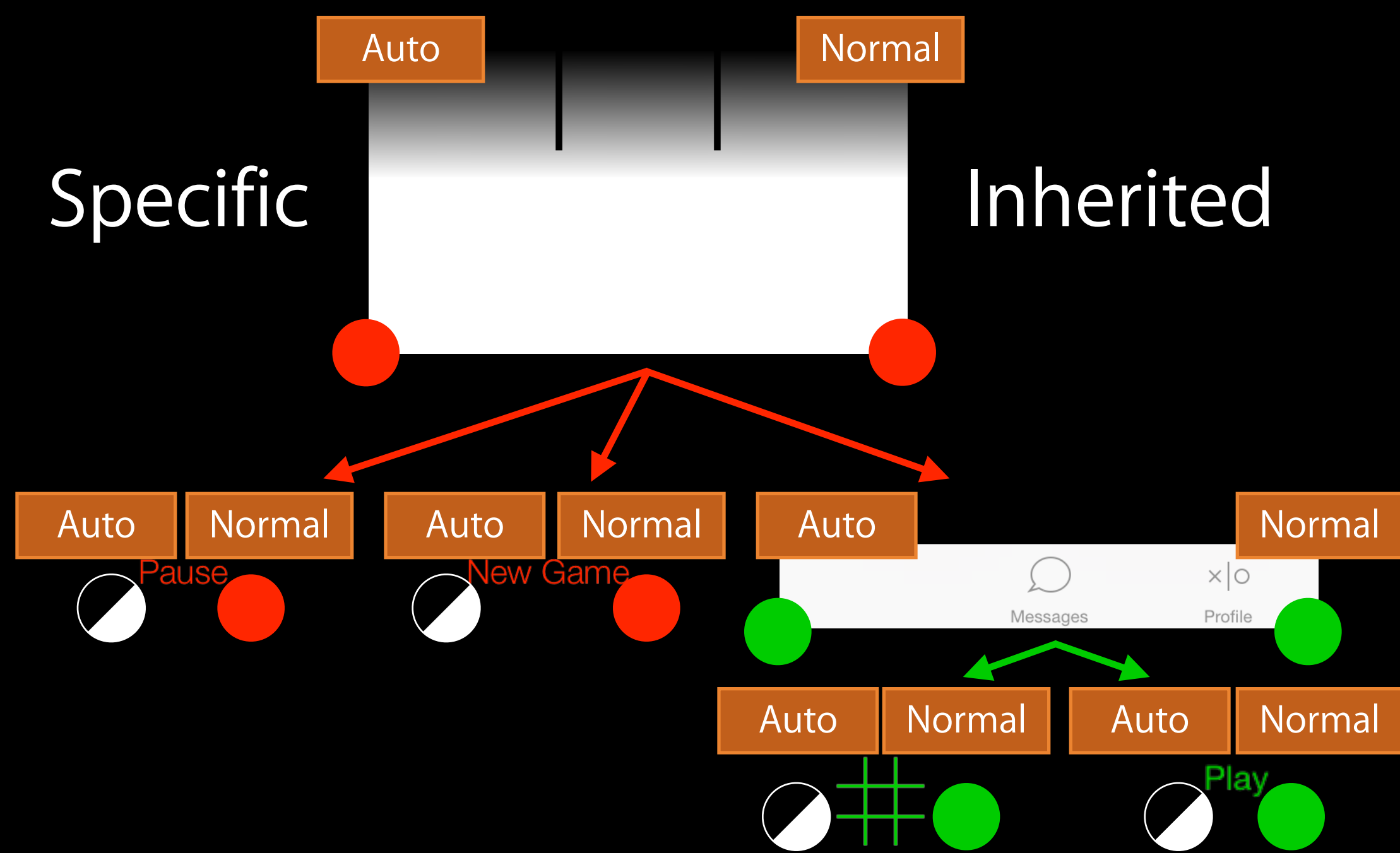
Tint Adjustment Mode

```
window.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeDimmed;
```

```
view.tintColorAdjustmentMode =  
UIViewTintColorAdjustmentModeNormal;
```

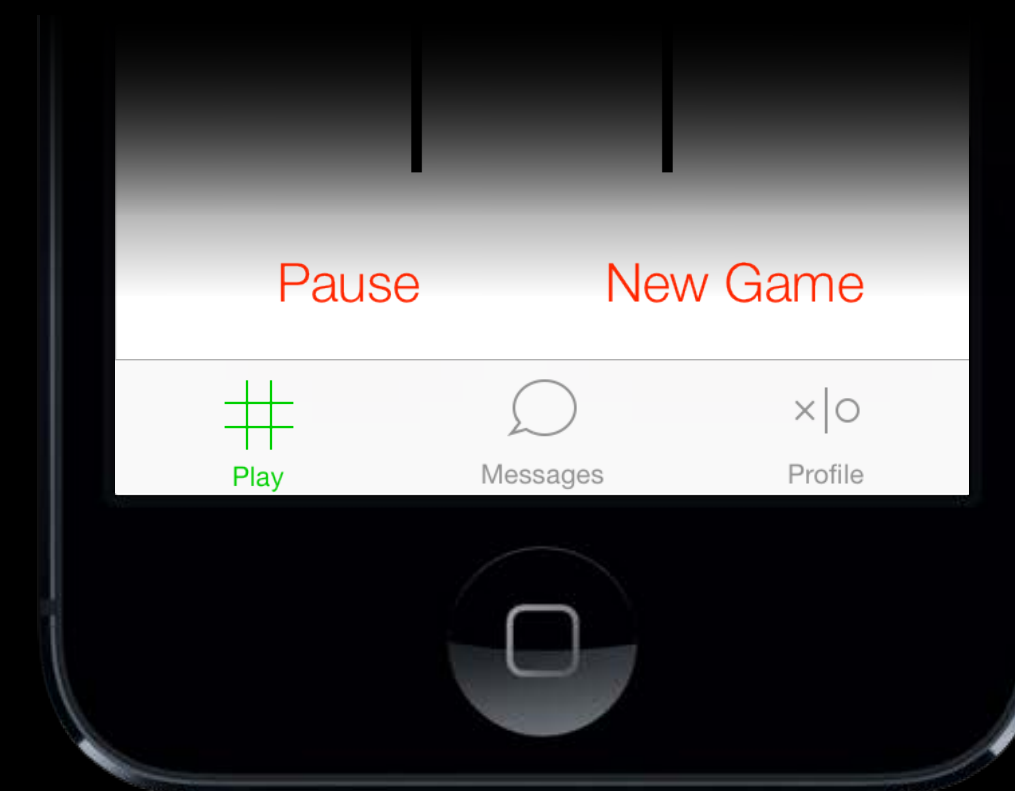
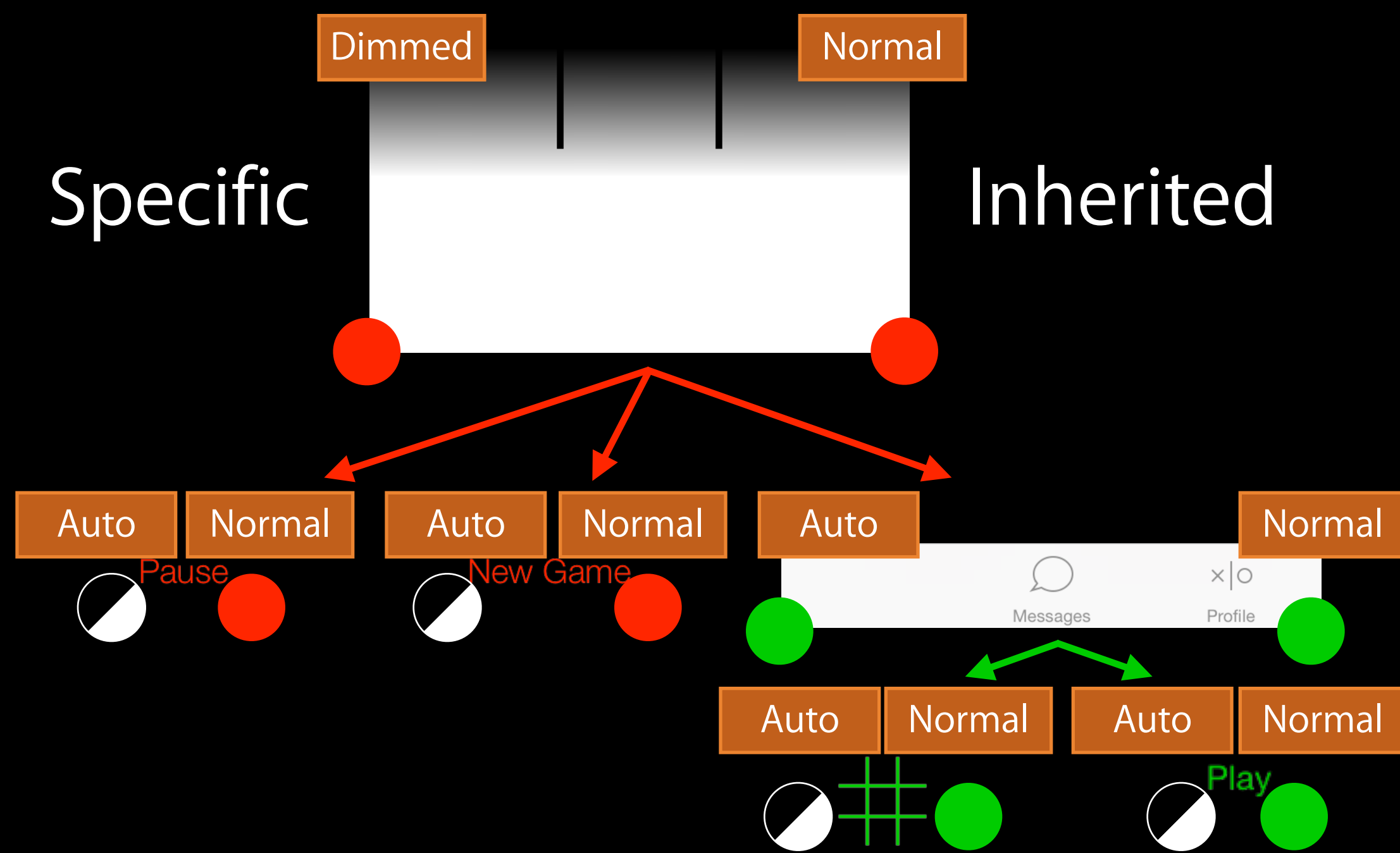


Tint Adjustment Mode



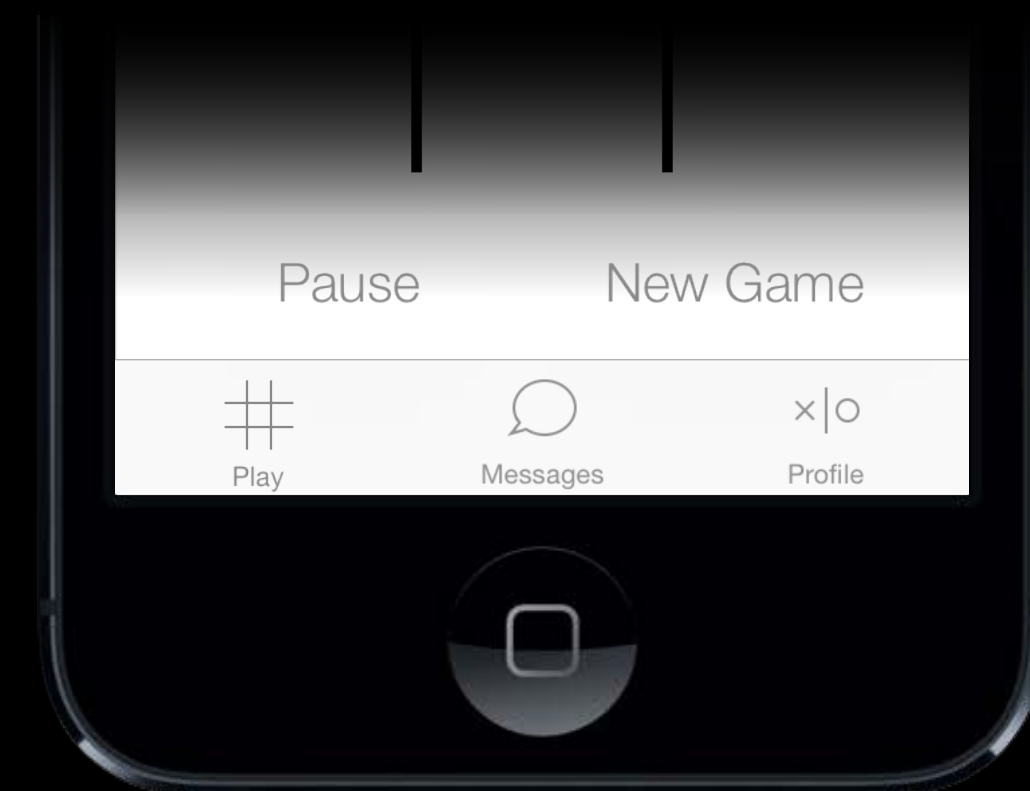
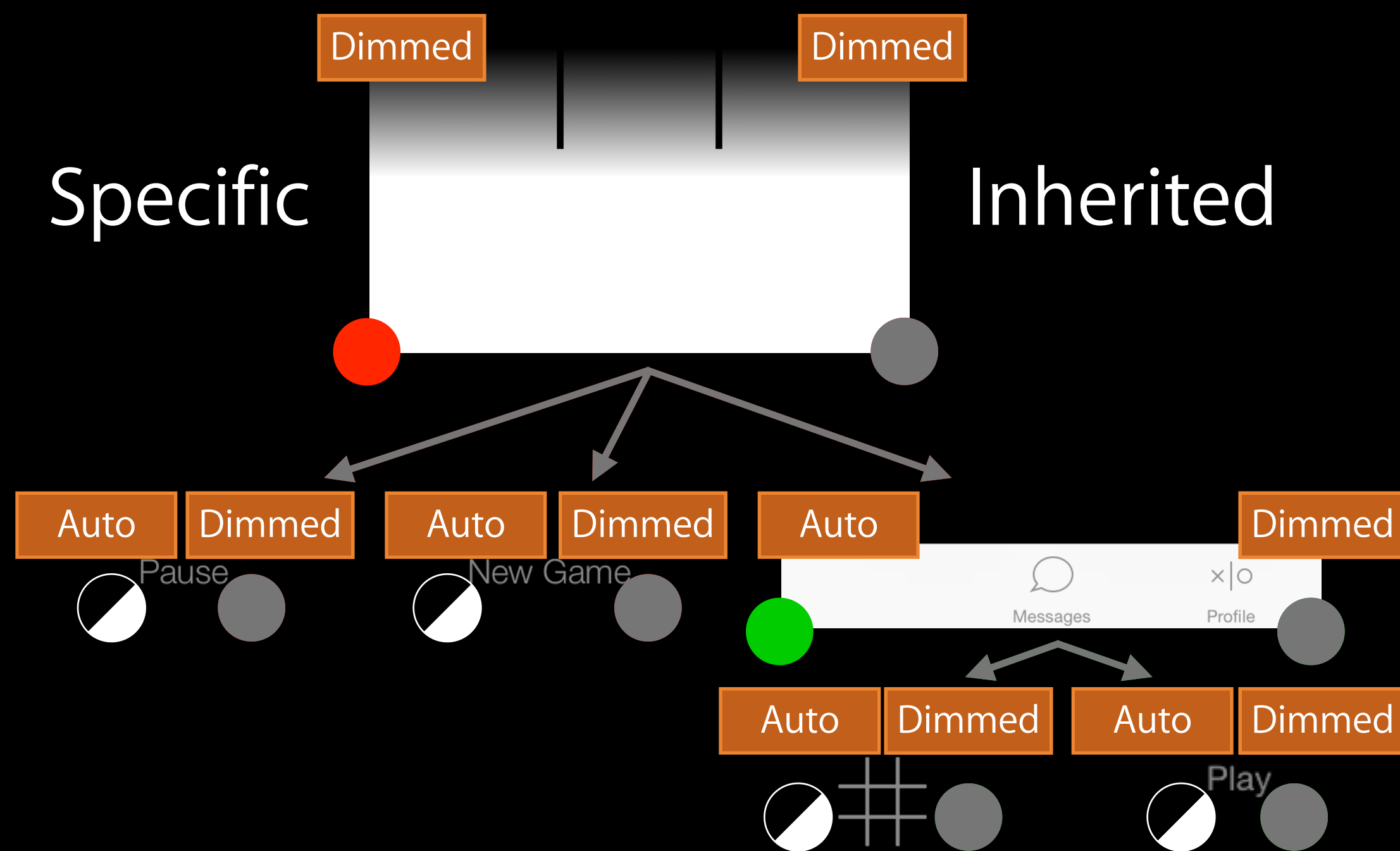
Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



Tint Adjustment Mode

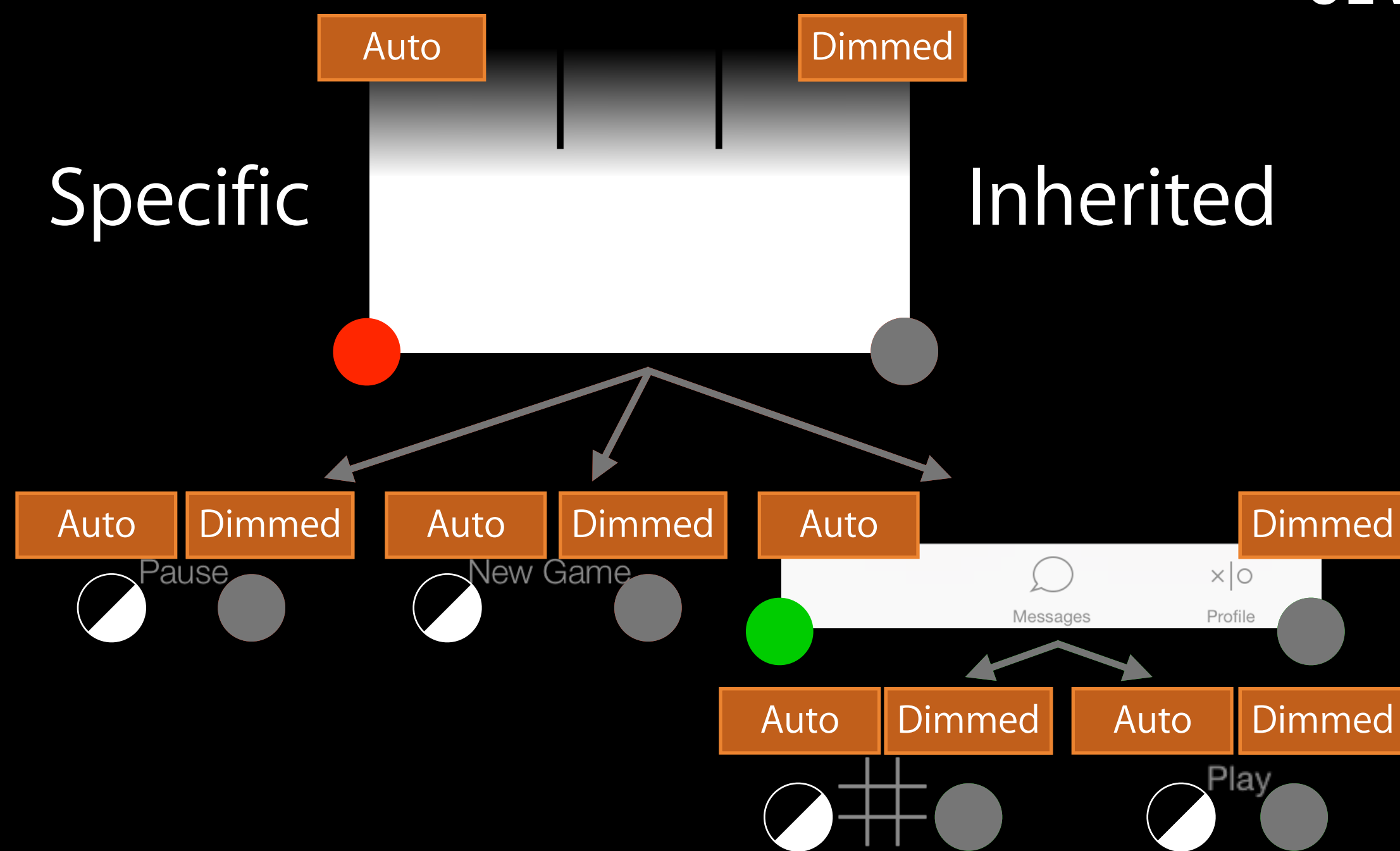
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```



Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```

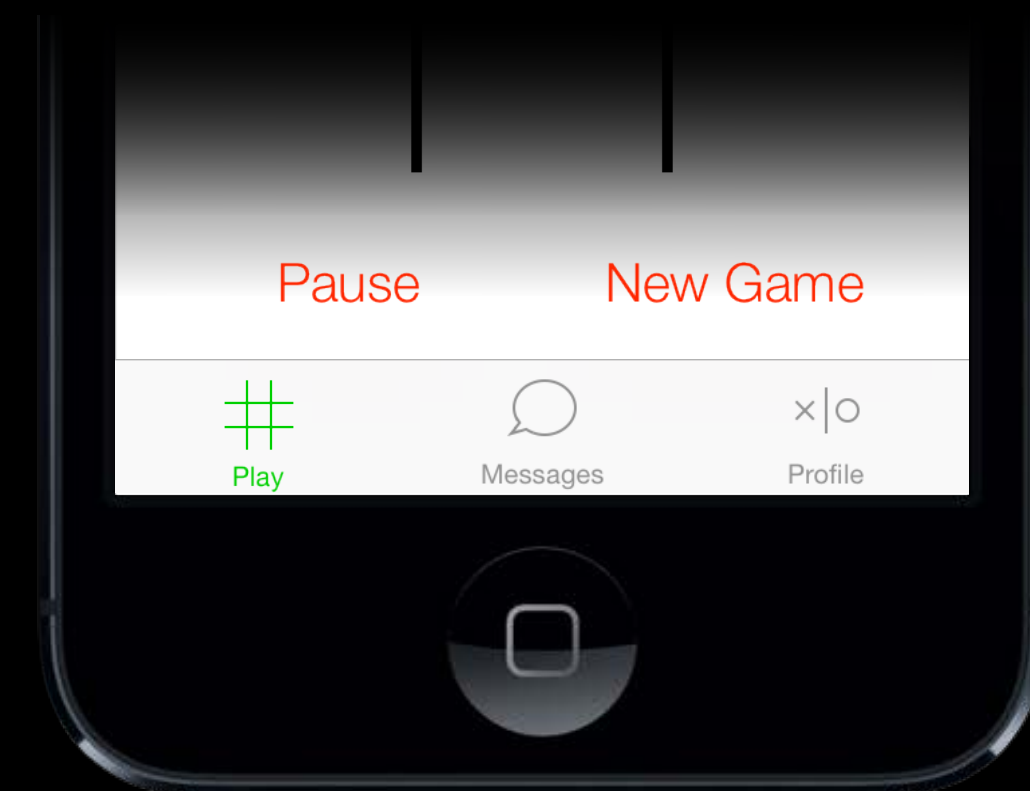
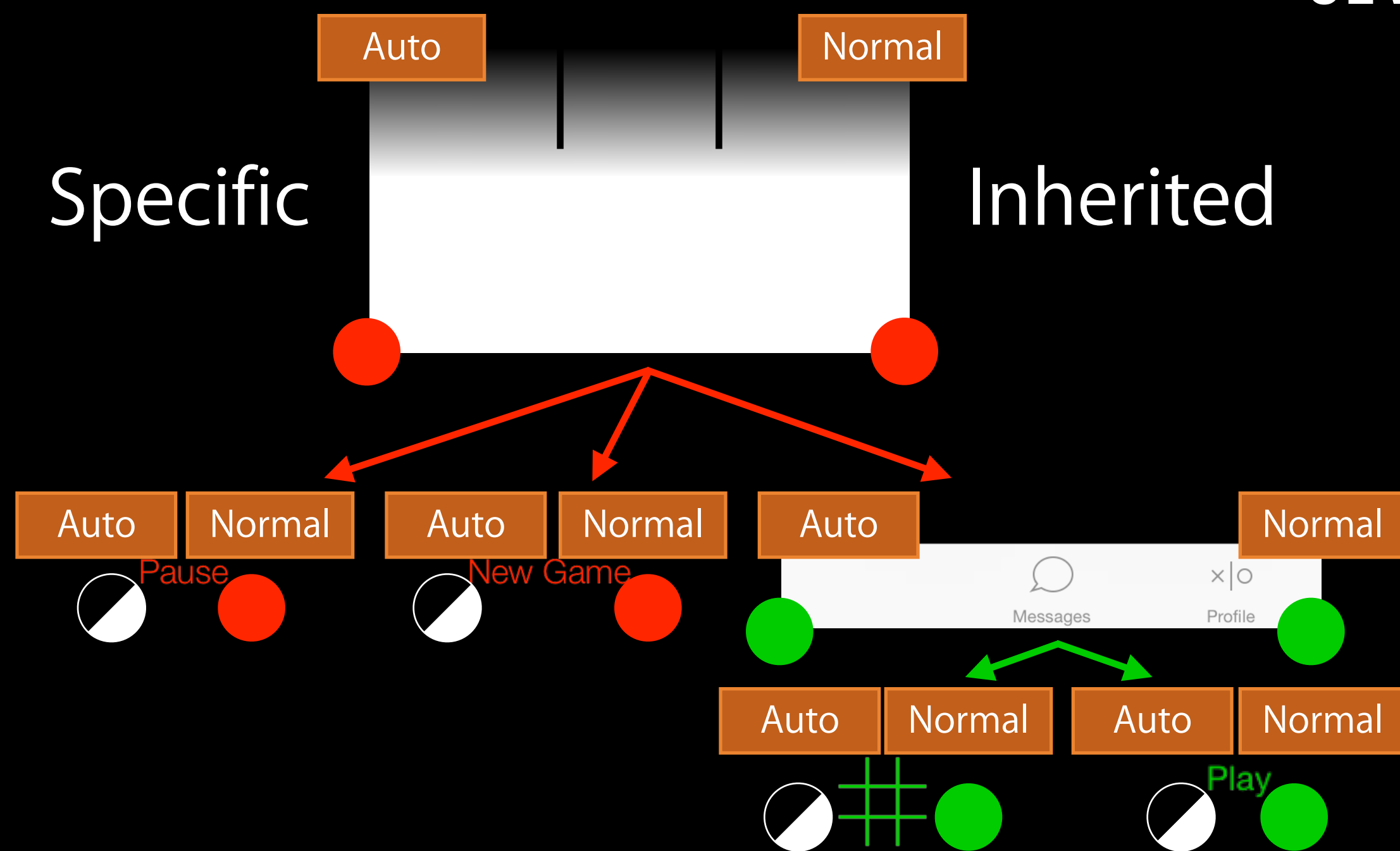
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeAutomatic;
```



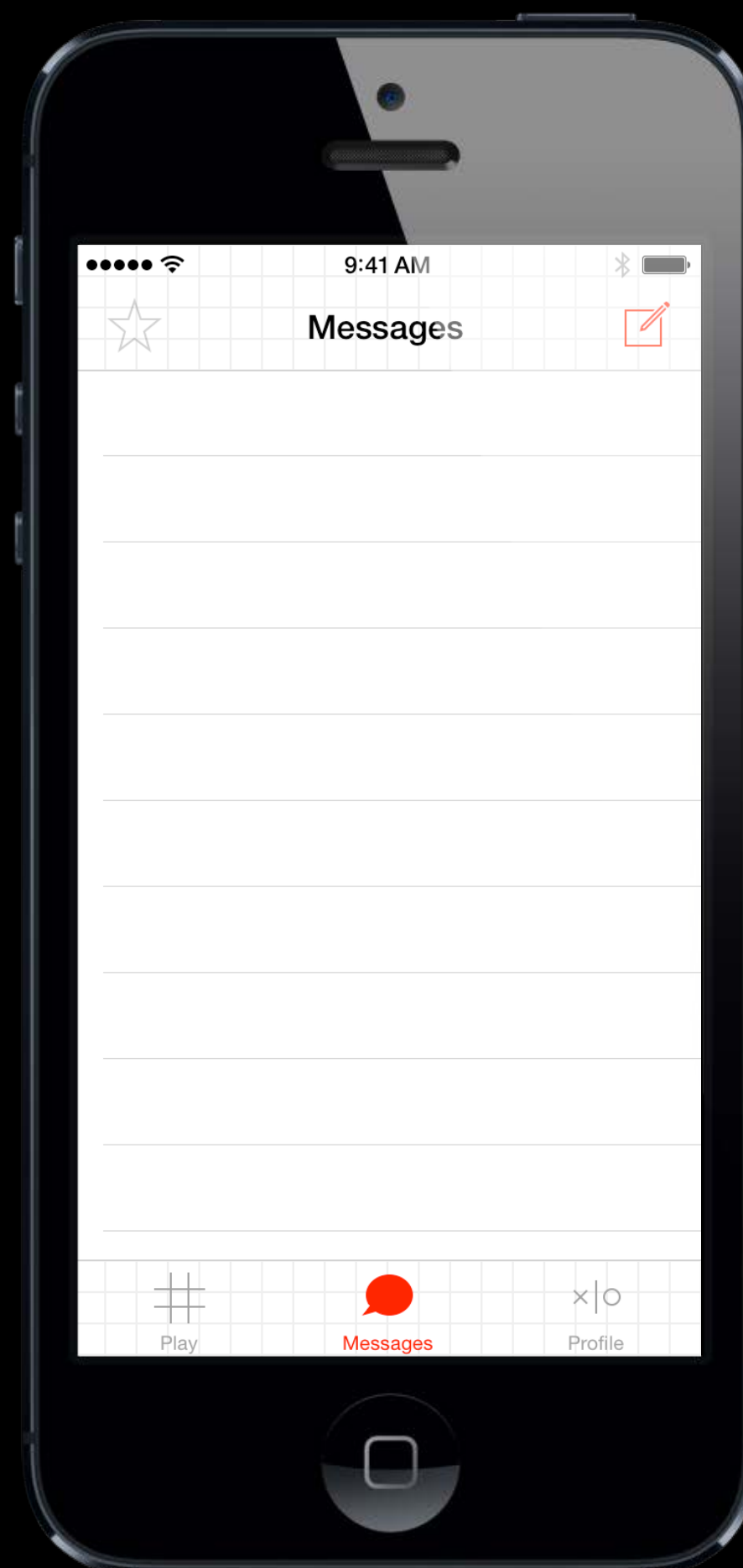
Tint Adjustment Mode

```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeDimmed;
```

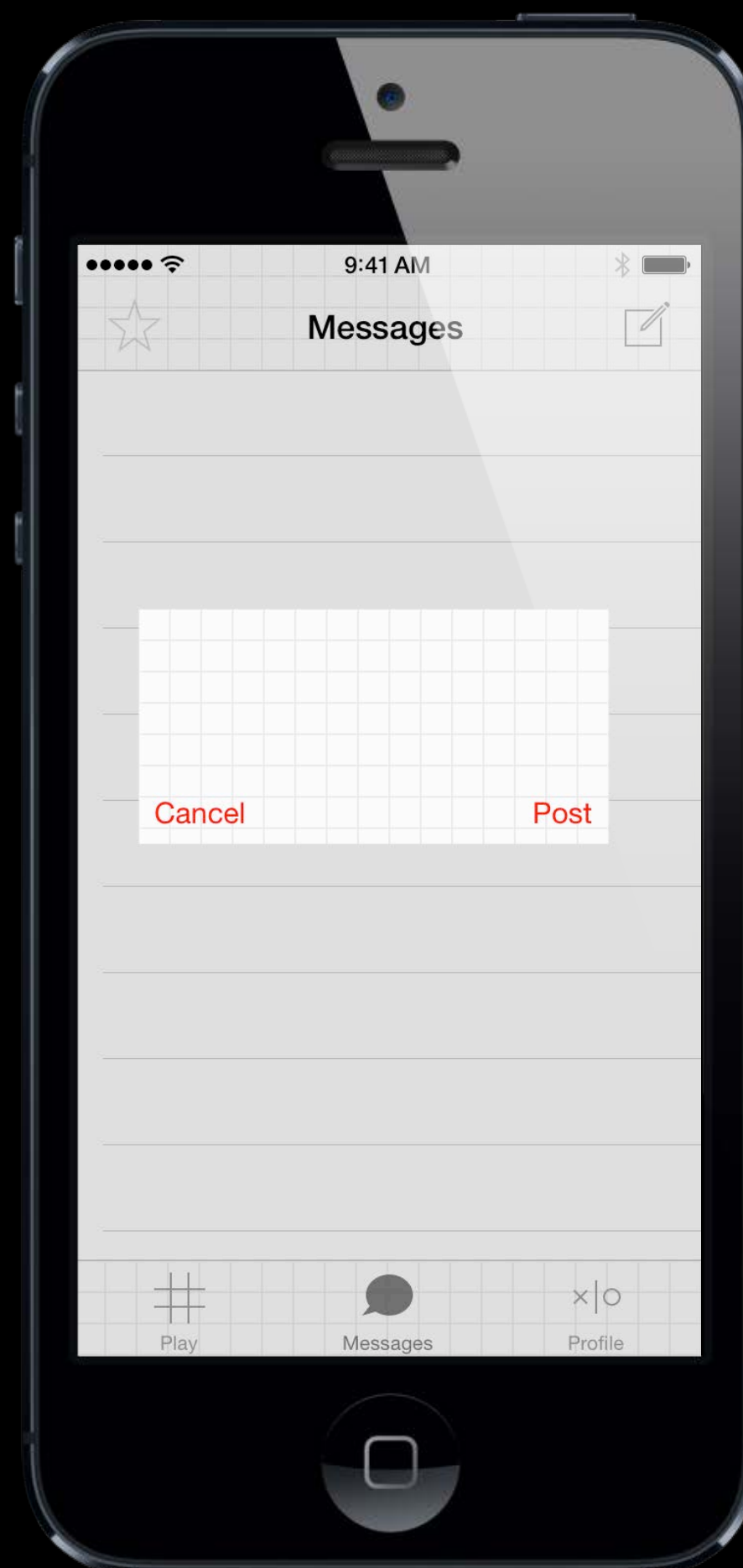
```
window.tintAdjustmentMode =  
UIViewTintAdjustmentModeAutomatic;
```



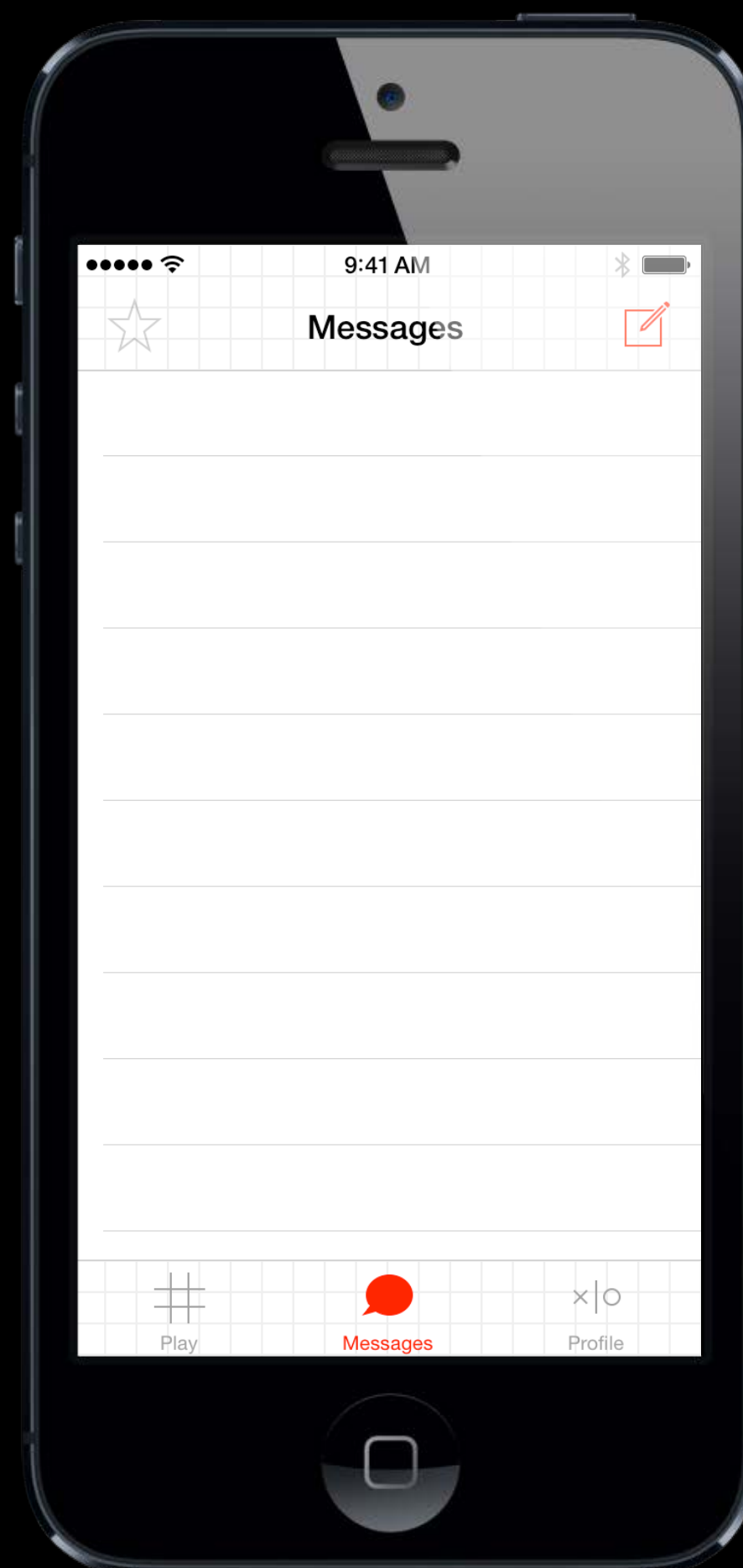
Tint Adjustment Mode



Tint Adjustment Mode



Tint Adjustment Mode





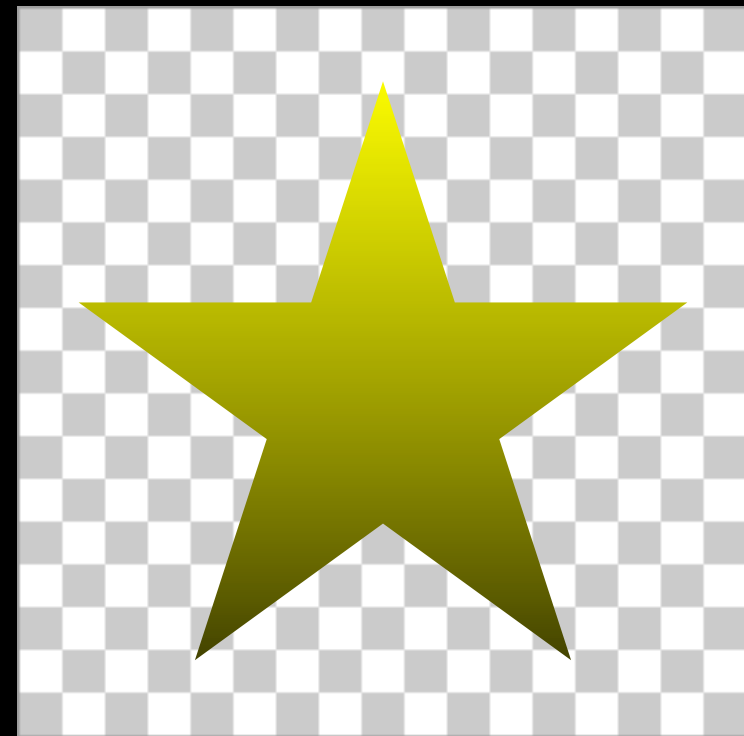
Messages



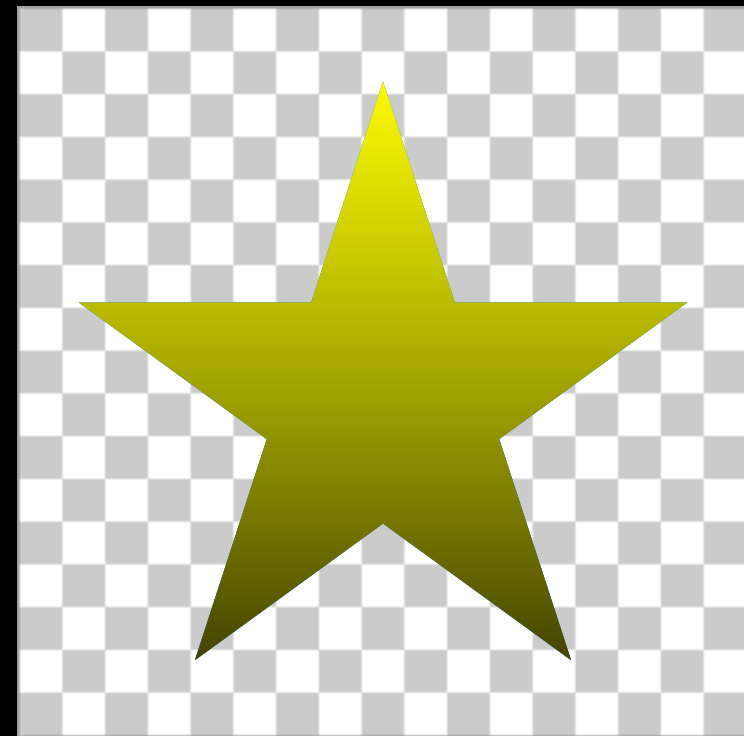
★ Messages ✎



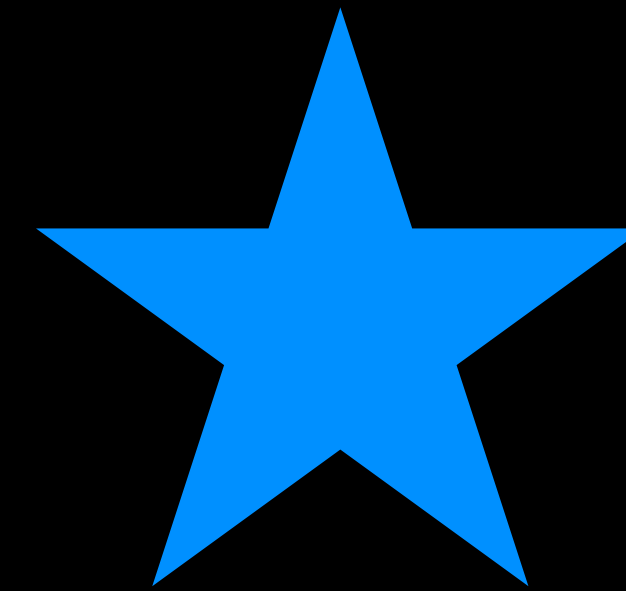
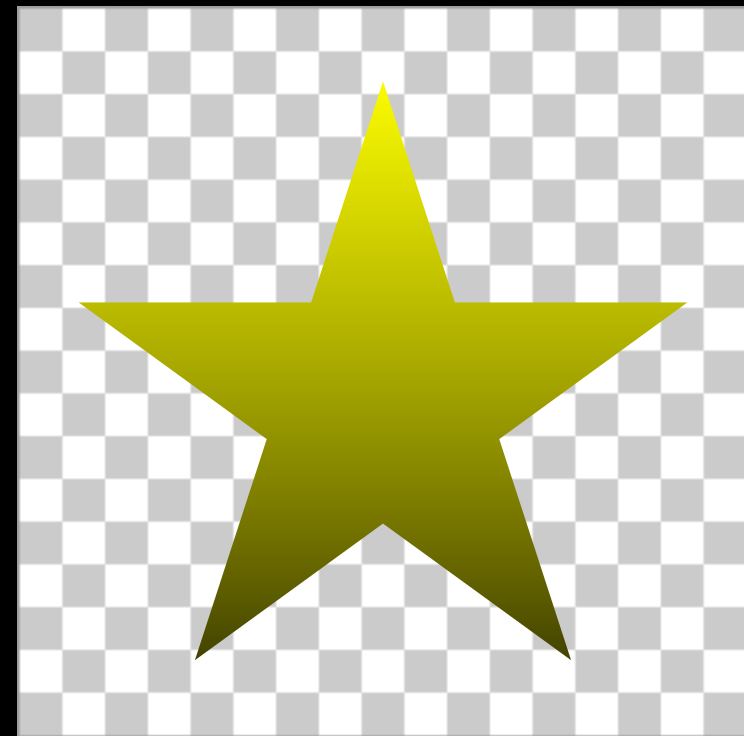
Template Images



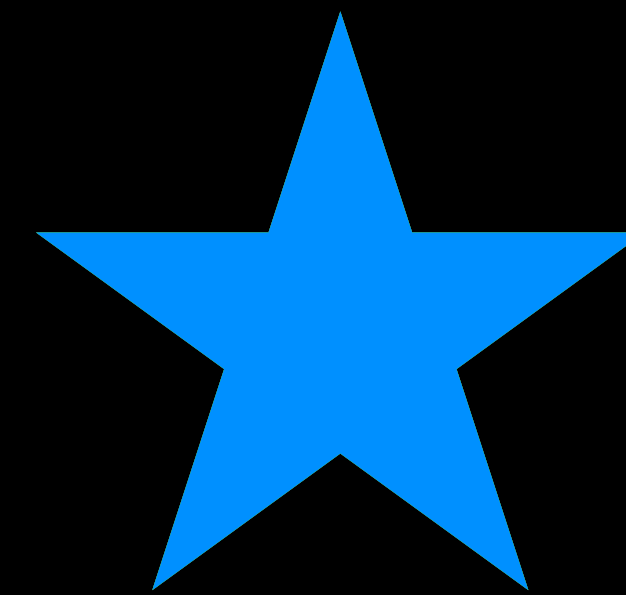
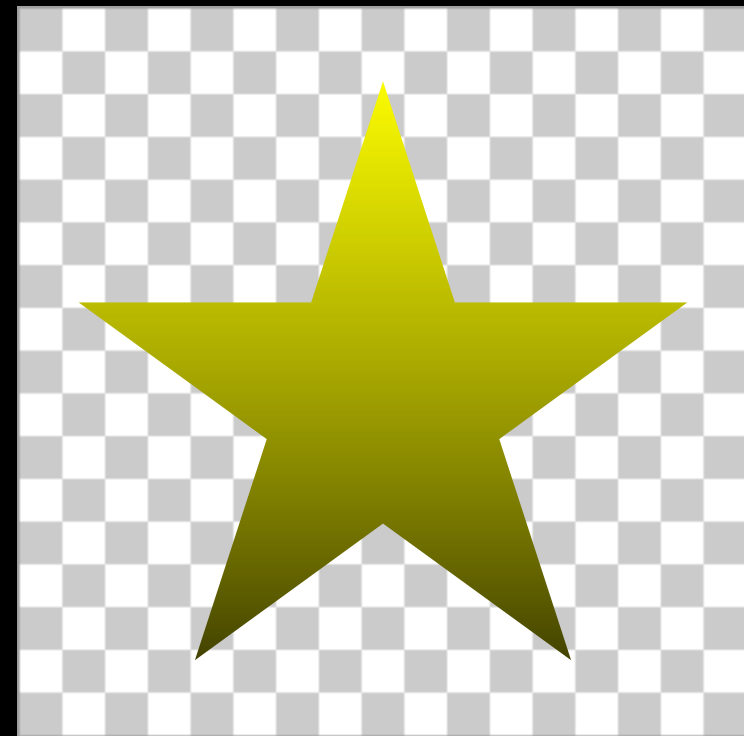
Template Images



Template Images

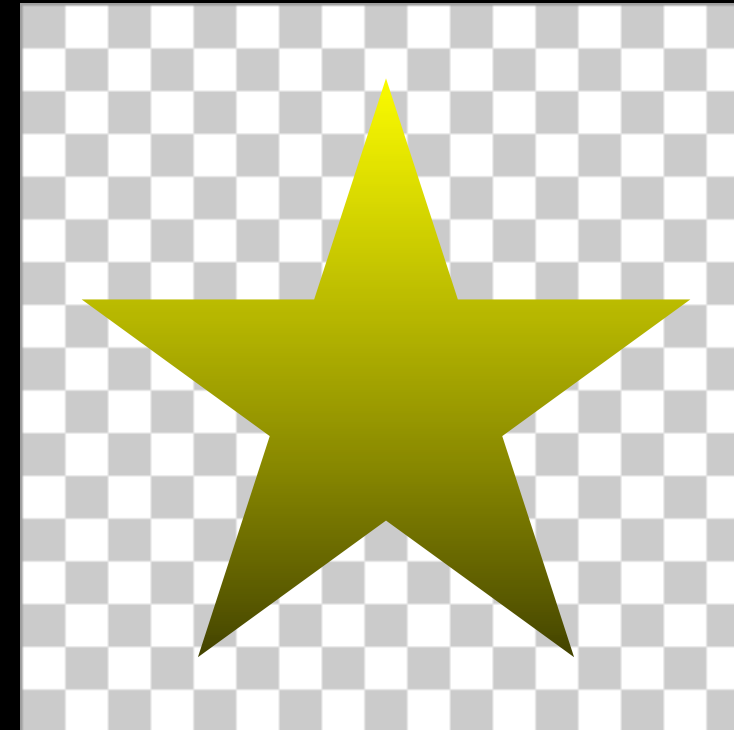


Template Images



Rendering Mode

UIImageRenderingMode



Rendering Mode

UIImageRenderingMode



Automatic

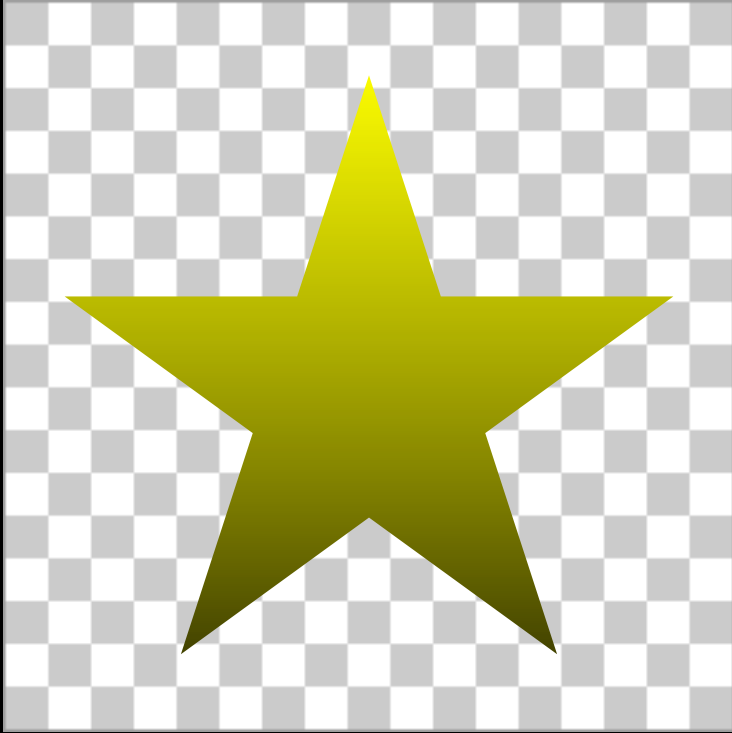
AlwaysOriginal

AlwaysTemplate

	Automatic	AlwaysOriginal	AlwaysTemplate
UIImageView			
UIBarButtonItem			

Rendering Mode

UIImageRenderingMode



Automatic

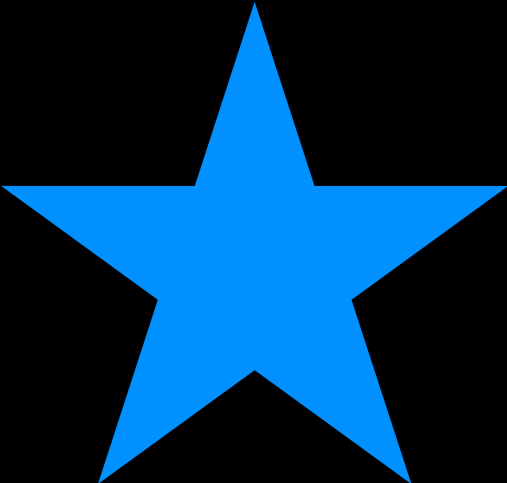
AlwaysOriginal

AlwaysTemplate

UIImageView

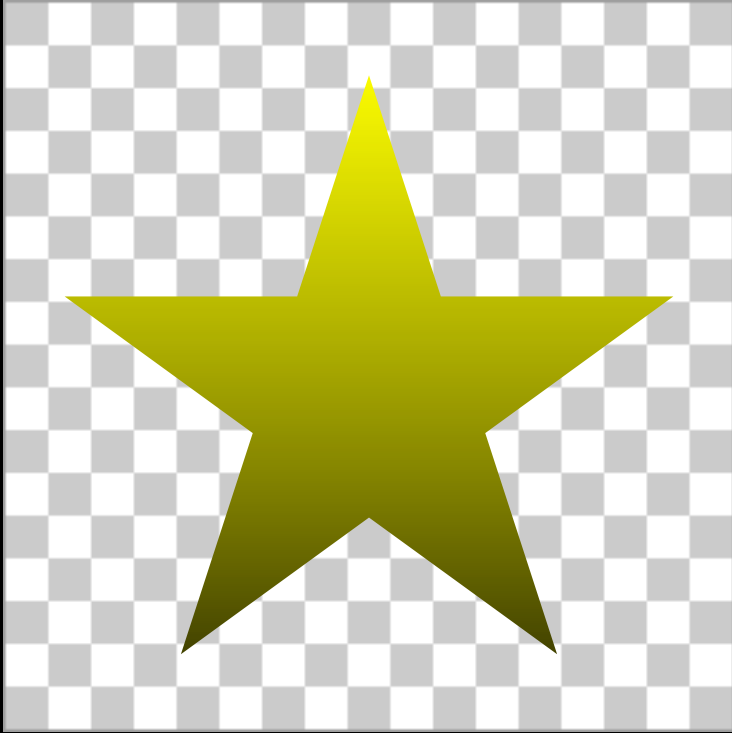


UIBarButtonItem



Rendering Mode

UIImageRenderingMode



Automatic

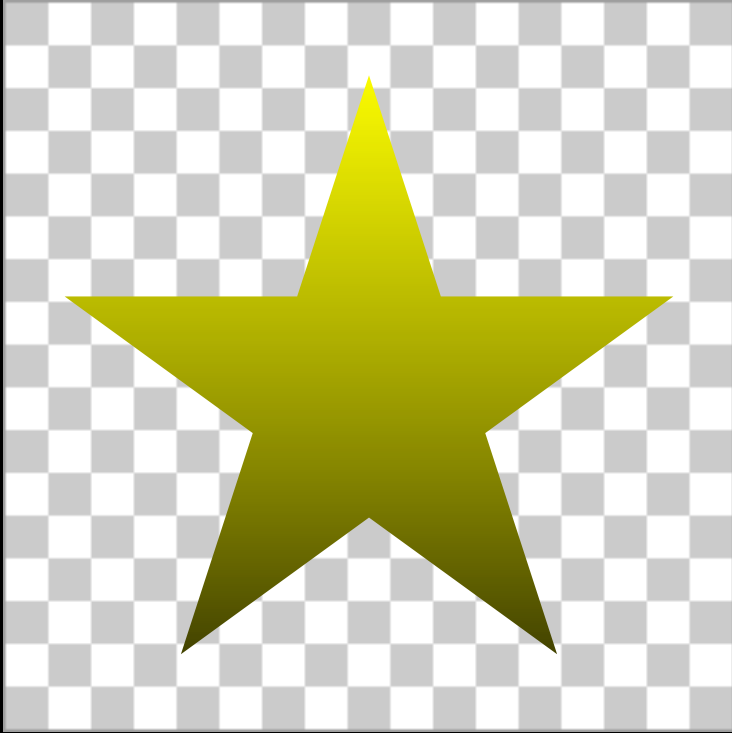
AlwaysOriginal

AlwaysTemplate

	Automatic	AlwaysOriginal	AlwaysTemplate
UIImageView			
UIBarButtonItem			

Rendering Mode

UIImageRenderingMode



Automatic

AlwaysOriginal

AlwaysTemplate

	Automatic	AlwaysOriginal	AlwaysTemplate
UIImageView			
UIBarButtonItem			

Rendering Mode

`UIImageRenderingModeAutomatic`



```
image = [UIImage imageNamed:@"favorite"];
```

Rendering Mode

`UIImageRenderingModeAutomatic`



```
image = [UIImage imageNamed:@"favorite"];
```

```
item = [[UIBarButtonItem alloc] initWithImage:image ...];
```

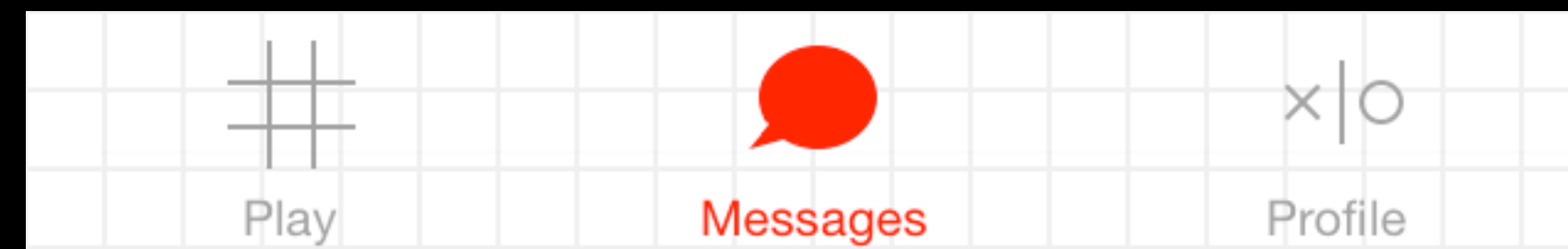

Rendering Mode

UIImageRenderingModeAlwaysOriginal

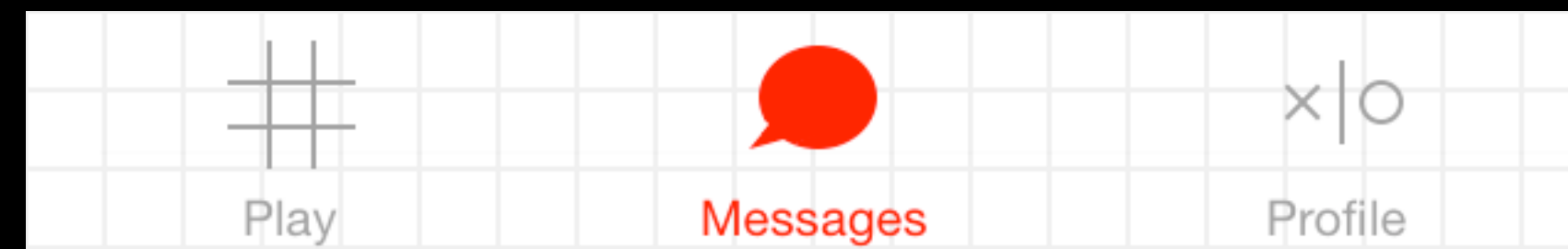


```
image = [UIImage imageNamed:@"favorite"];  
image = [image imageWithRenderingMode:UIImageRenderingModeAlwaysOriginal];  
  
item = [[UIBarButtonItem alloc] initWithImage:image ...];
```

Rendering Mode

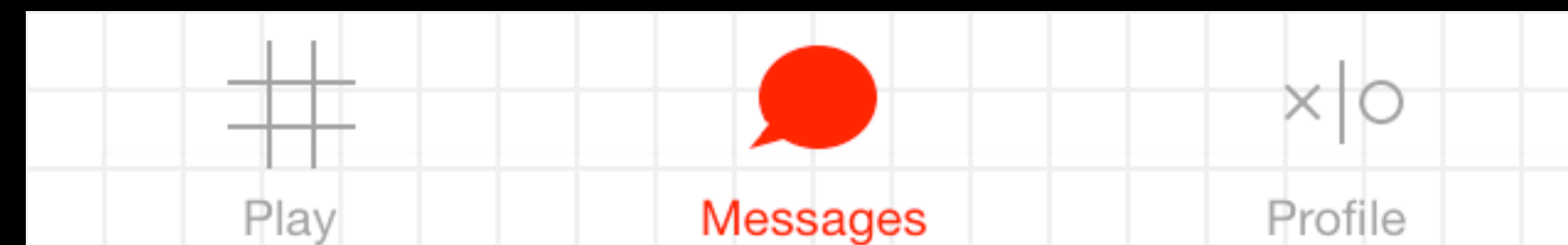


Rendering Mode



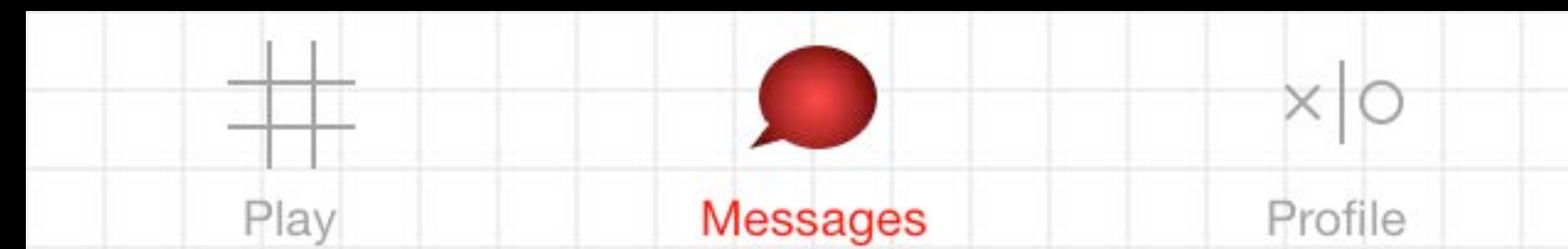
– (void)setFinishedSelectedImage:(UIImage *)selectedImage
withFinishedUnselectedImage:(UIImage *)unselectedImage;

Rendering Mode



~~– (void)setFinishedSelectedImage:(UIImage *)selectedImage
withFinishedUnselectedImage:(UIImage *)unselectedImage;~~

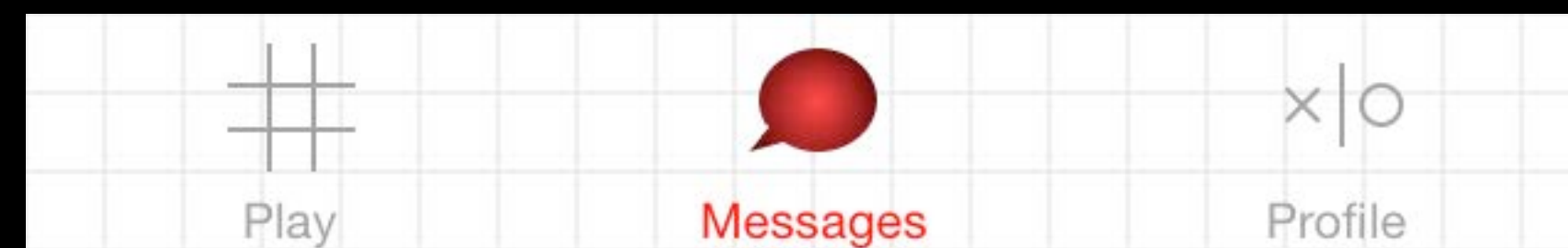
Rendering Mode



~~– (void)setFinishedSelectedImage:(UIImage *)selectedImage
withFinishedUnselectedImage:(UIImage *)unselectedImage;~~

UIImageRenderingModeAlwaysOriginal

Rendering Mode



~~– (void)setFinishedSelectedImage:(UIImage *)selectedImage
withFinishedUnselectedImage:(UIImage *)unselectedImage;~~

UIImageRenderingModeAlwaysOriginal

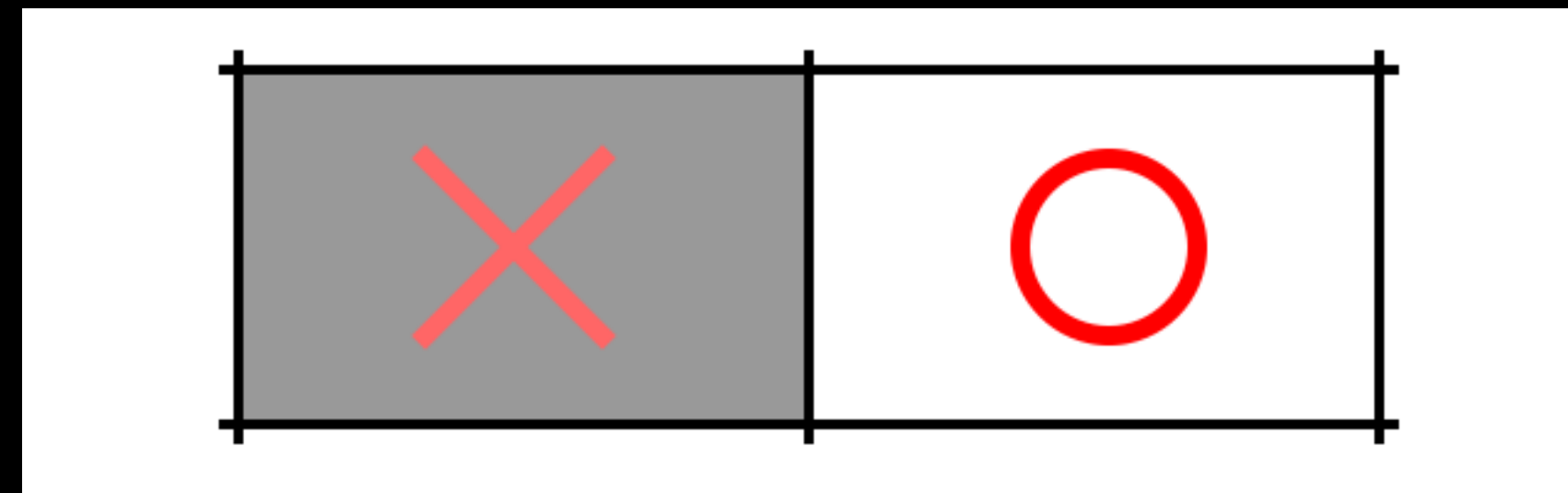
```
@property(nonatomic, retain) UIImage *image;  
@property(nonatomic, retain) UIImage *selectedImage;
```

Rendering Mode



```
image = [UIImage imageNamed:@"x"];
```

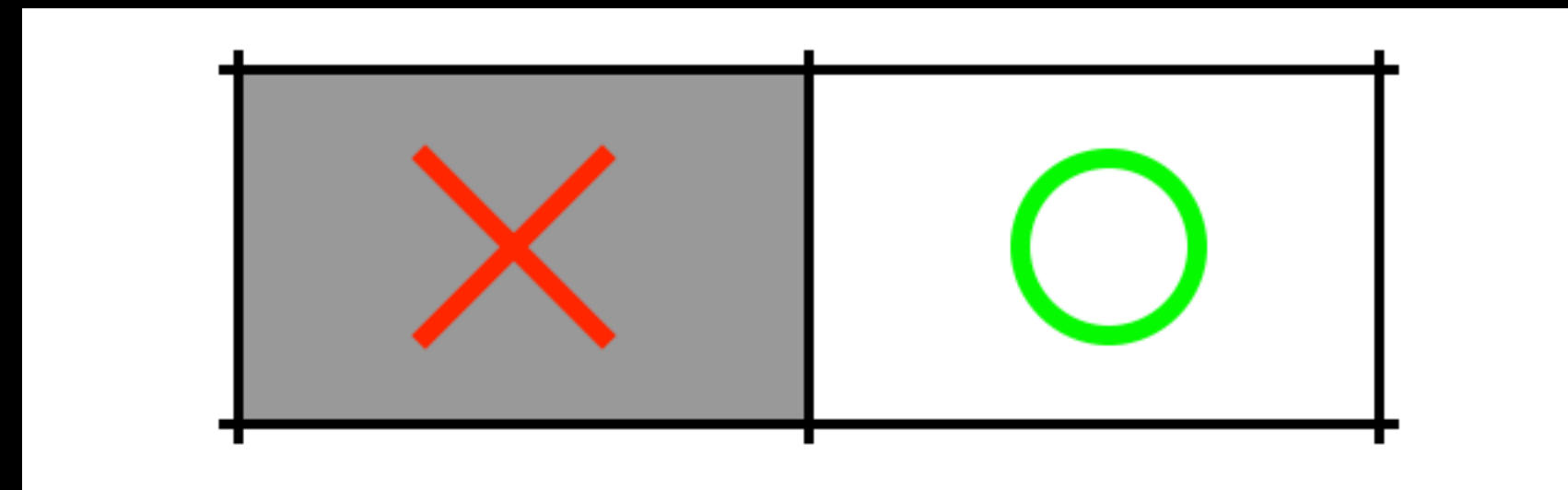
Rendering Mode



```
backgroundImage = [UIImage imageNamed:@"segmentedBackground"];
```

```
image = [UIImage imageNamed:@"x"];
```


Rendering Mode

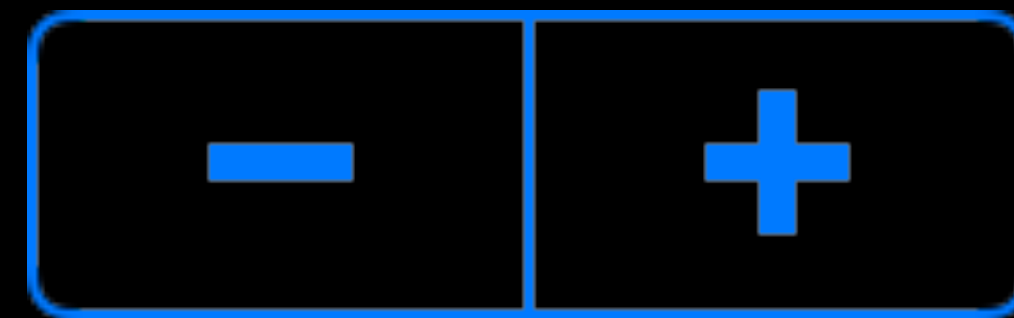


```
backgroundImage = [UIImage imageNamed:@"segmentedBackground"];
```

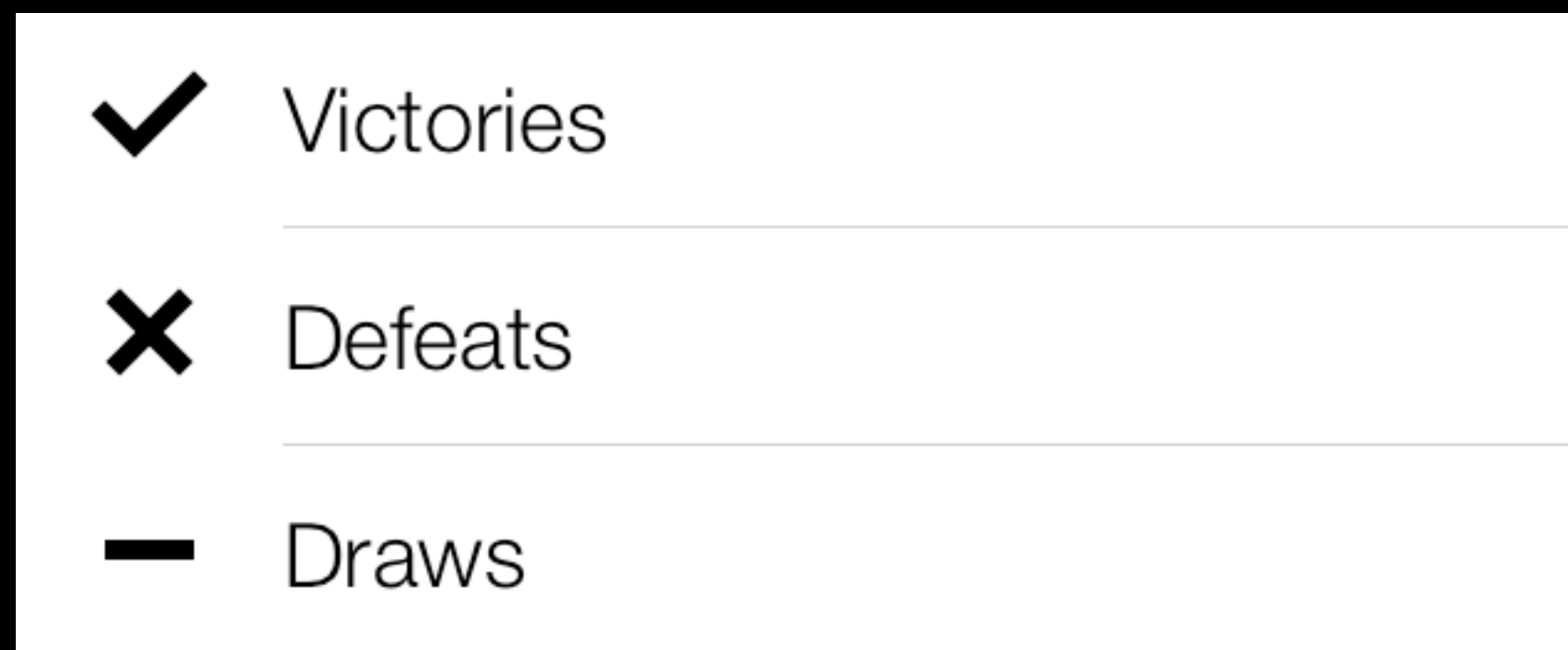
```
image = [UIImage imageNamed:@"x"];
```

```
image = [image imageWithRenderingMode:UIImageRenderingModeAlwaysOriginal];
```

Rendering Mode



Rendering Mode



```
image = [UIImage imageNamed:@"victory"];
```

```
cell.imageView.image = image;
```

Rendering Mode

✓ Victories

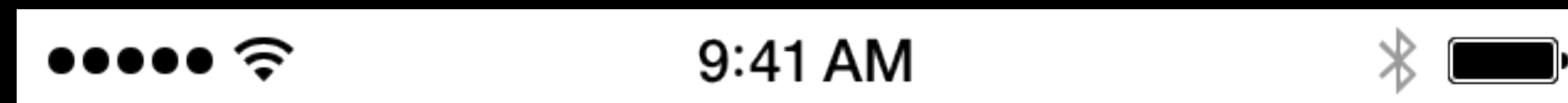
✗ Defeats

— Draws

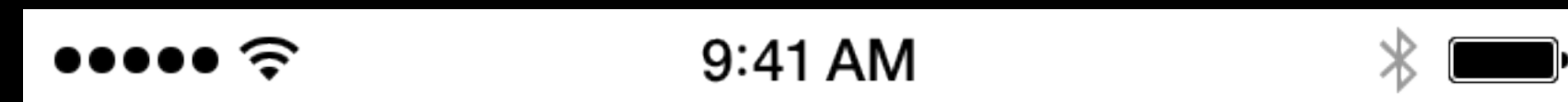
```
image = [UIImage imageNamed:@"victory"];  
image = [image imageWithRenderingMode:UIImageRenderingModeAlwaysTemplate];
```

```
cell.imageView.image = image;
```

View Controller Based Status Bar

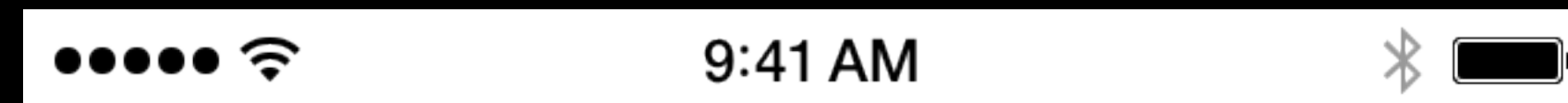


View Controller Based Status Bar



- (UIStatusBarStyle)preferredStatusBarStyle;
- (BOOL)prefersStatusBarHidden;

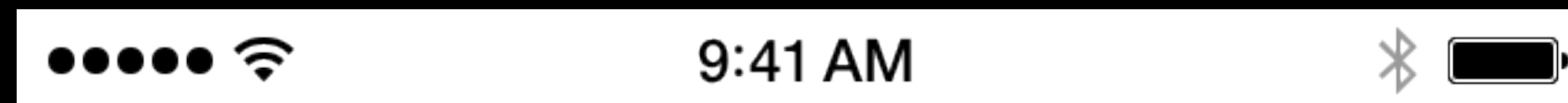
View Controller Based Status Bar



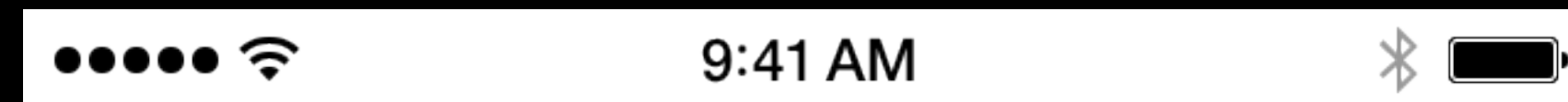
- (UIStatusBarStyle)preferredStatusBarStyle;
- (BOOL)prefersStatusBarHidden;

```
[self setNeedsStatusBarAppearanceUpdate];
```

View Controller Based Status Bar

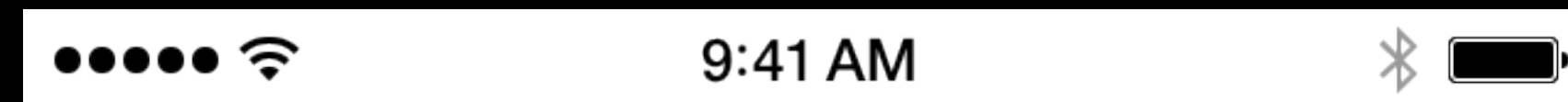


View Controller Based Status Bar



- (UIViewController *)childViewControllerForStatusBarStyle;
- (UIViewController *)childViewControllerForStatusBarHidden;

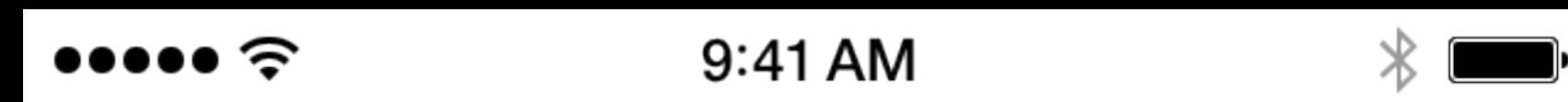
View Controller Based Status Bar



- (UIViewController *)childViewControllerForStatusBarStyle;
- (UIViewController *)childViewControllerForStatusBarHidden;

```
[self setNeedsStatusBarAppearanceUpdate];
```

View Controller Based Status Bar

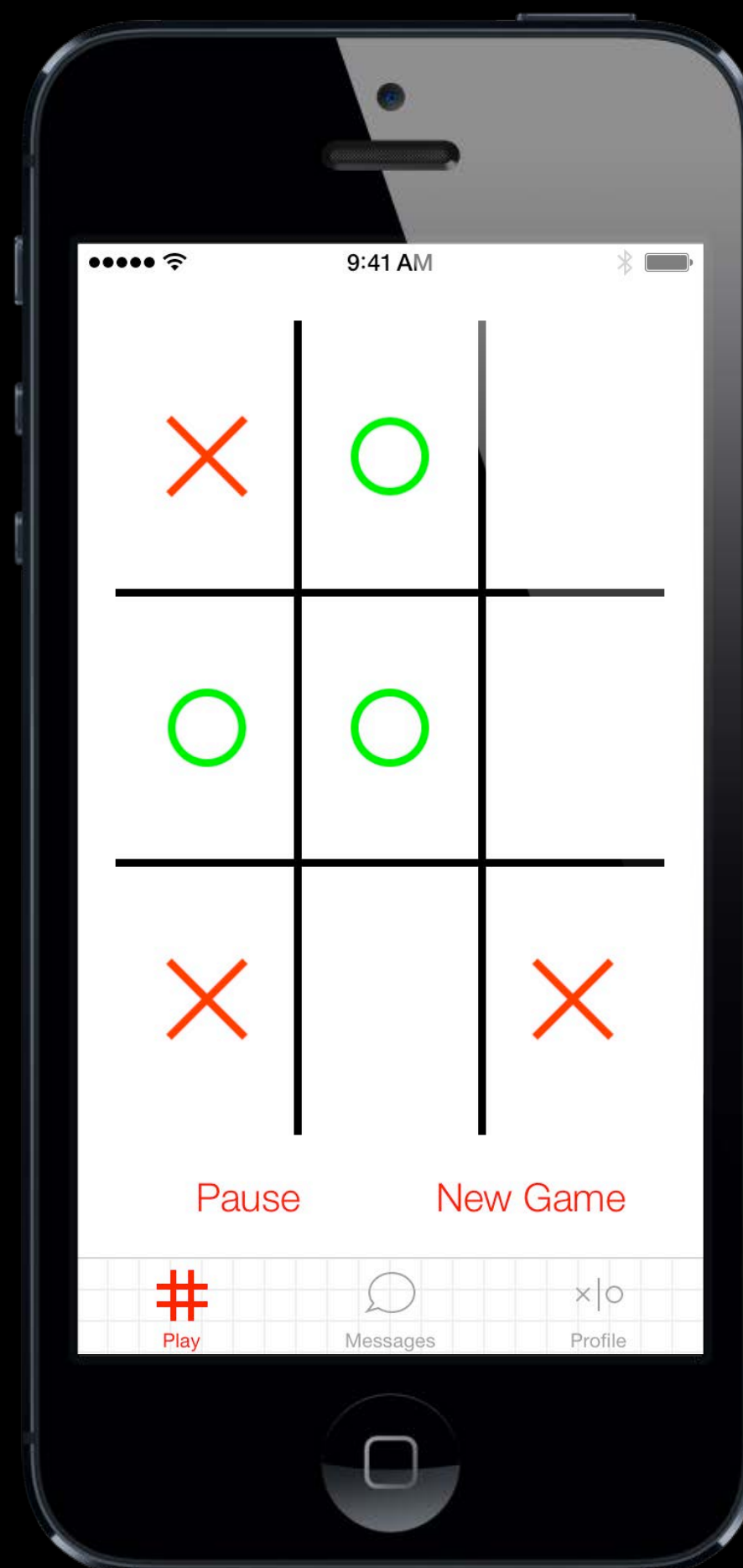


- (UIViewController *)childViewControllerForStatusBarStyle;
- (UIViewController *)childViewControllerForStatusBarHidden;

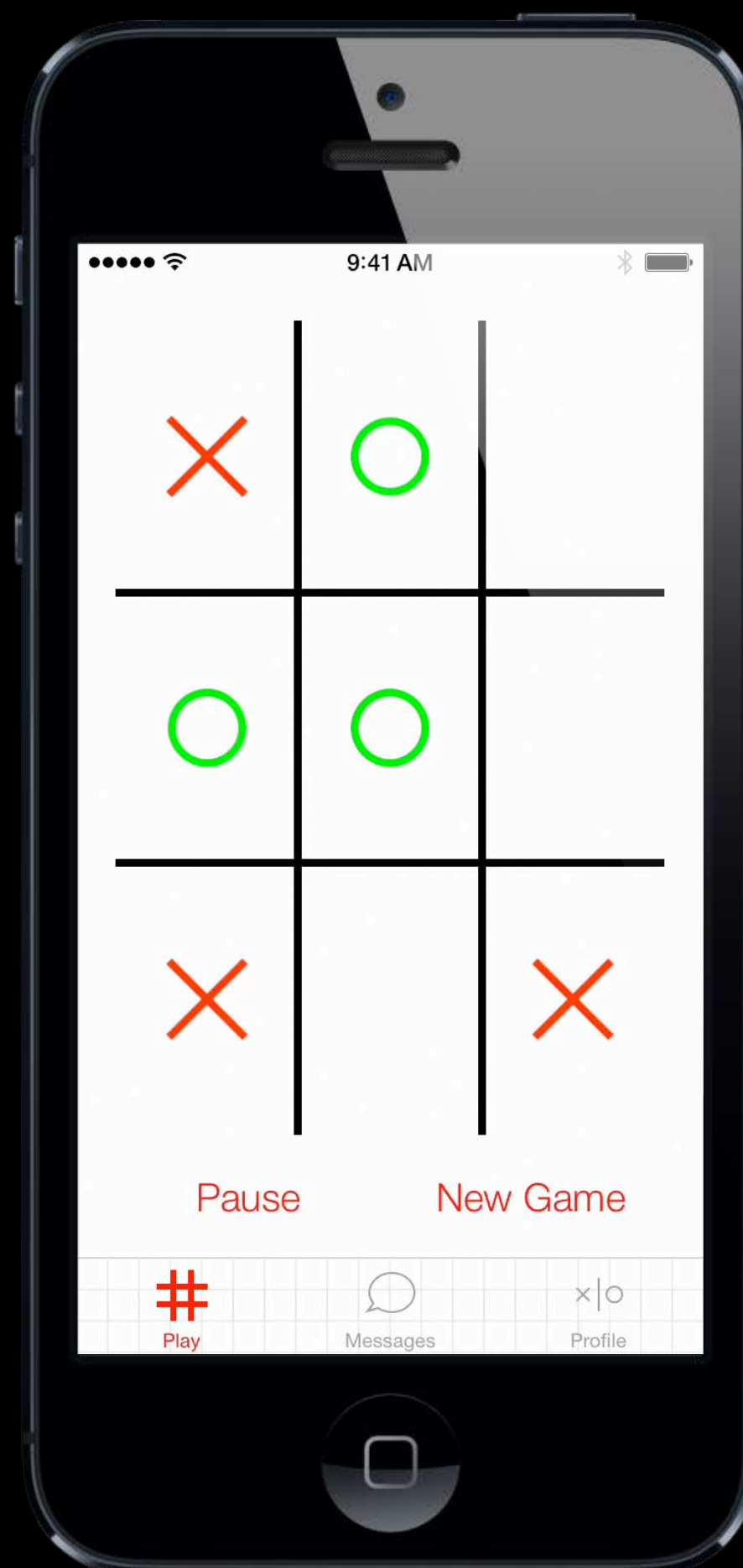
```
[self setNeedsStatusBarAppearanceUpdate];
```

UIViewControllerBasedStatusBarAppearance	Boolean	YES
--	---------	-----

View Controller Based Status Bar



View Controller Based Status Bar



View Controller Based Status Bar

View Controller Based Status Bar

```
- (UIStatusBarStyle)preferredStatusBarStyle
{
    return ([self isOver] ? UIStatusBarStyleLightContent :
UIStatusBarStyleDefault);
}
```

View Controller Based Status Bar

```
- (UIStatusBarStyle)preferredStatusBarStyle  
{  
    return ([self isOver] ? UIStatusBarStyleLightContent :  
UIStatusBarStyleDefault);  
}
```

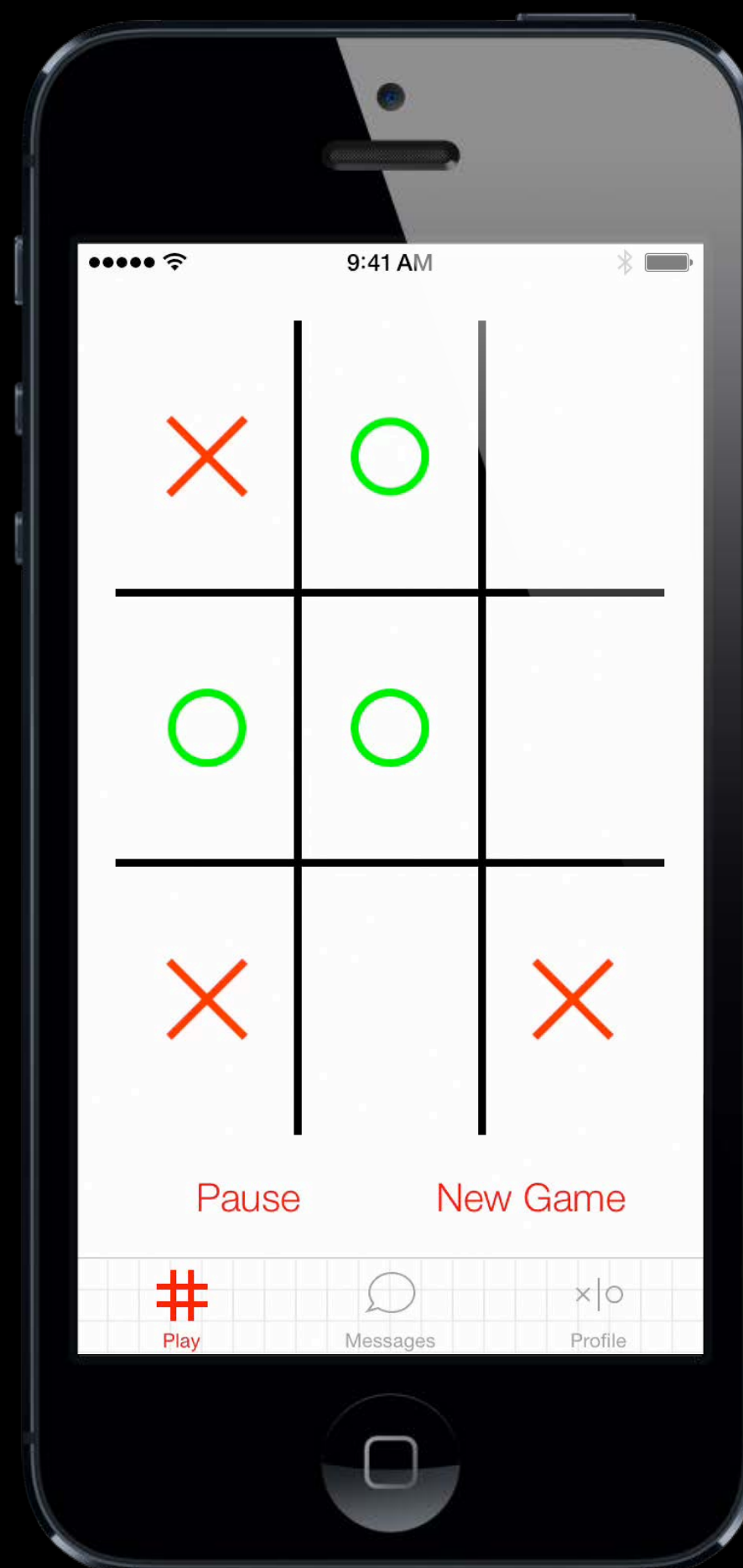
```
[self setNeedsStatusBarAppearanceUpdate];
```


View Controller Based Status Bar

```
- (UIStatusBarStyle)preferredStatusBarStyle  
{  
    return ([self isOver] ? UIStatusBarStyleLightContent :  
UIStatusBarStyleDefault);  
}
```

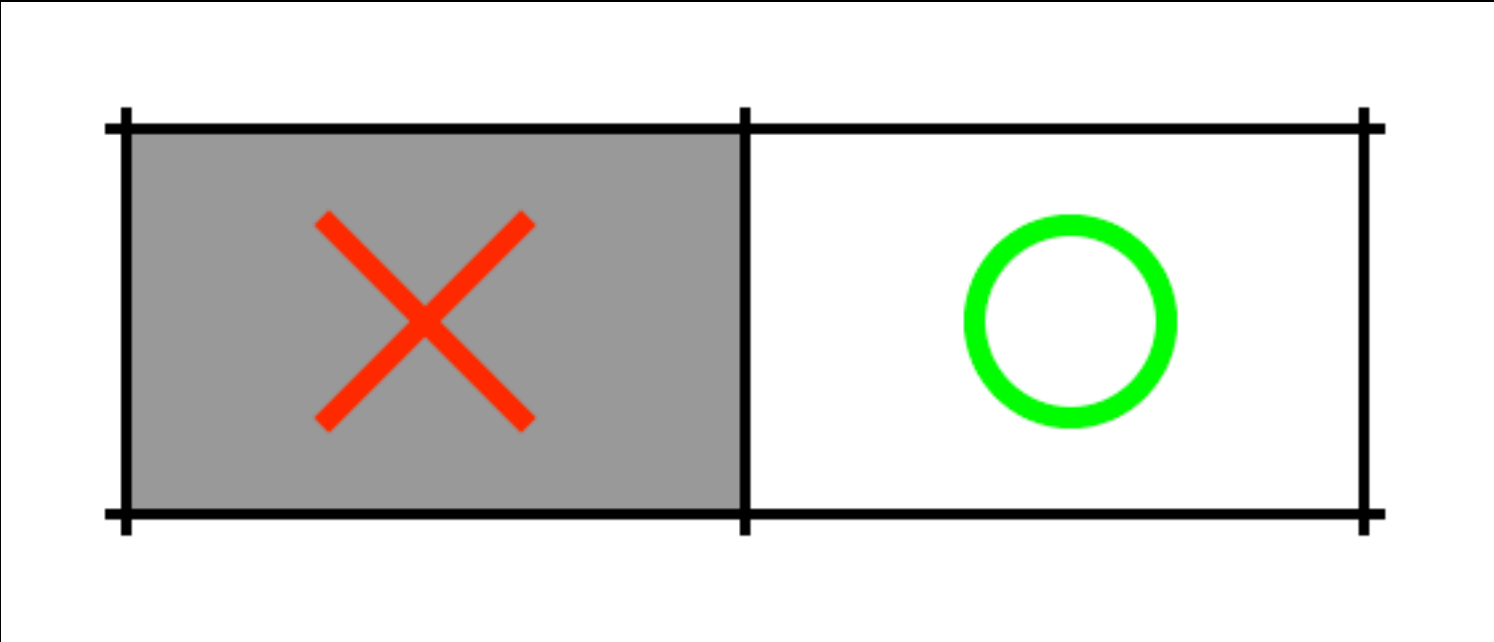
```
[UIView animateWithDuration:0.5 animations:^(  
    // Update necessary state  
    [self updateBackgroundColor];  
    [self setNeedsStatusBarAppearanceUpdate];  
)];
```

View Controller Based Status Bar

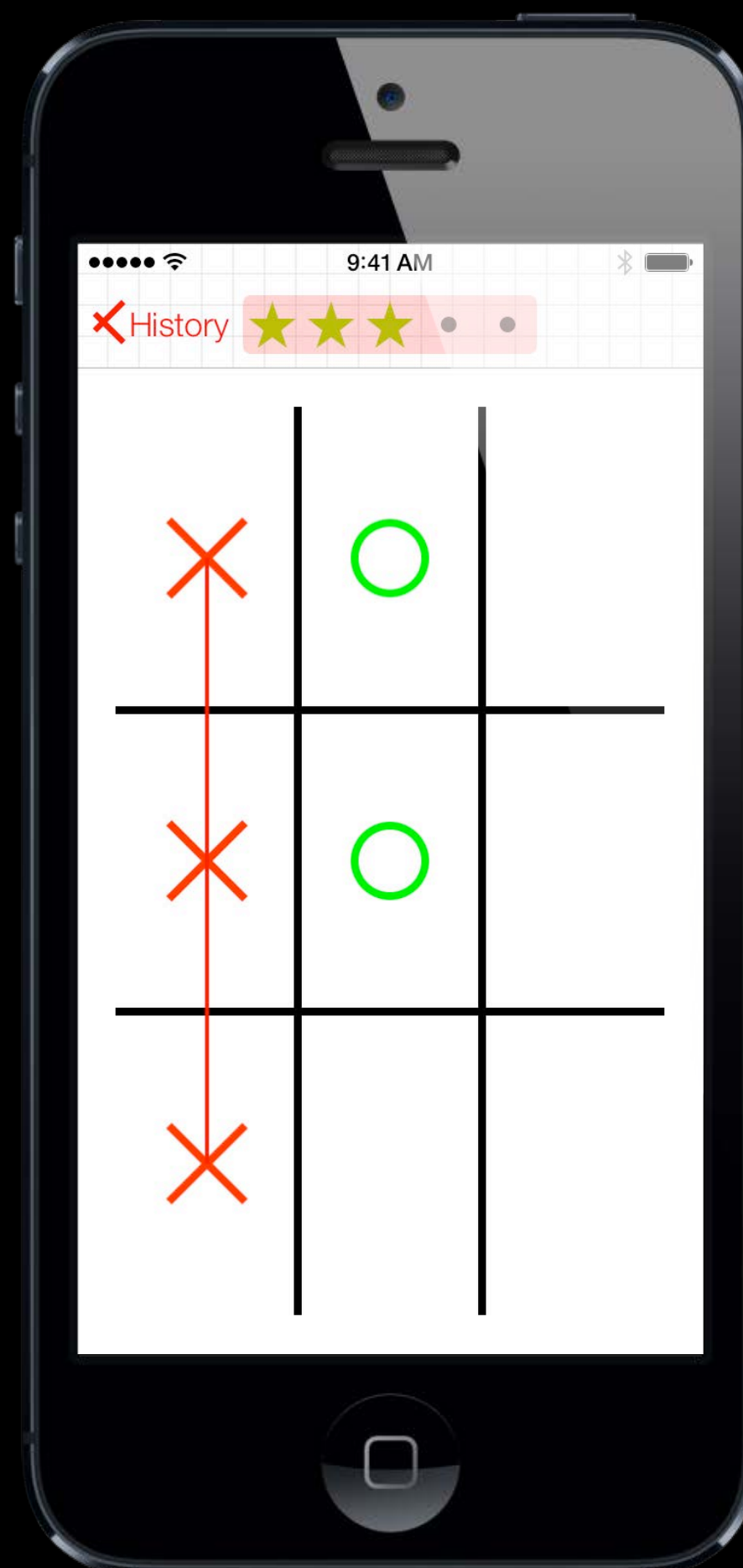


Making Custom Controls



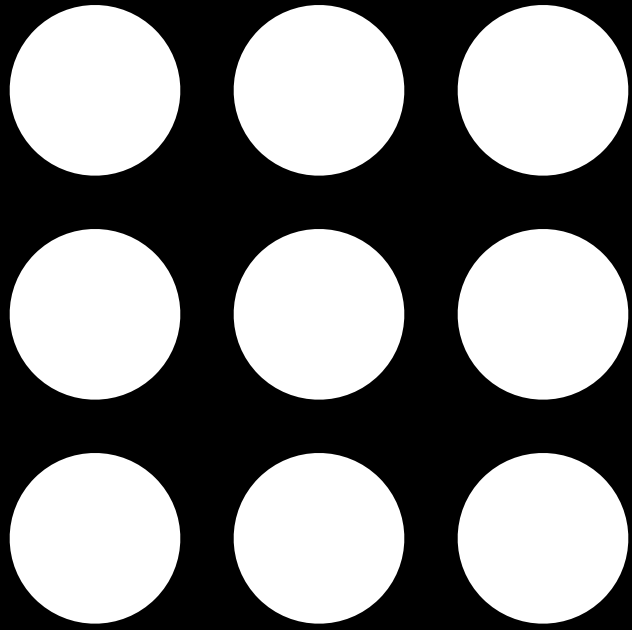


Rating Control



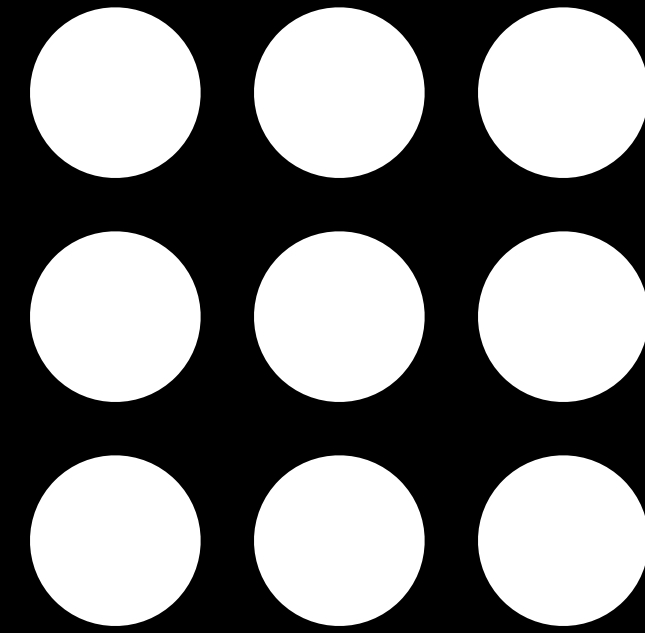
Rating Control





keypad

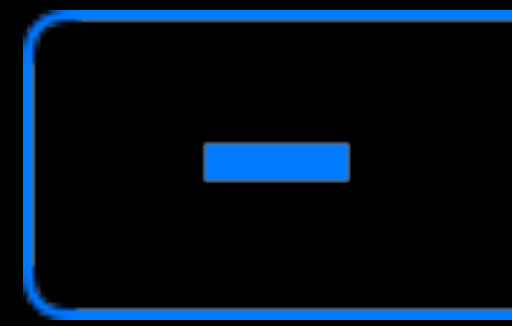
UIImageView



UILabel

keypad





UIButton



UIImageView



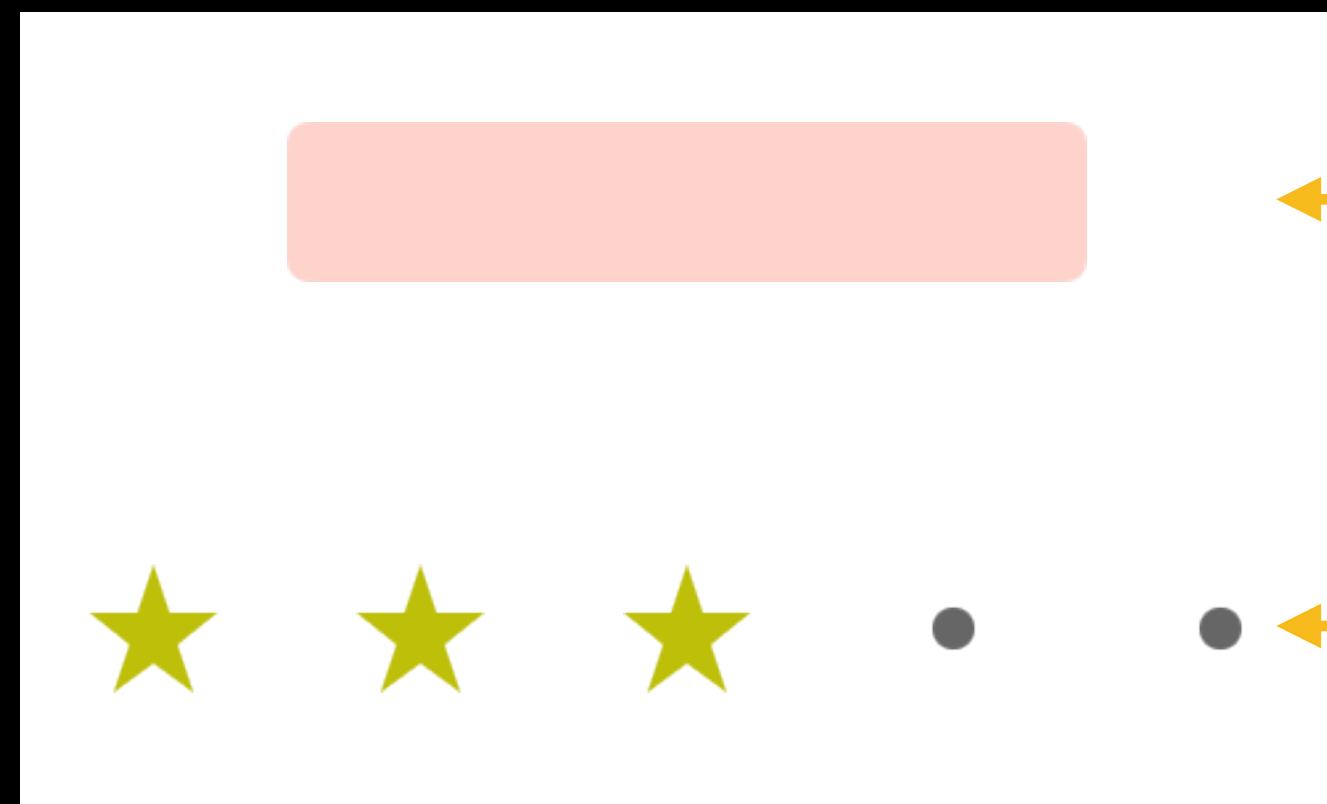
UIButton







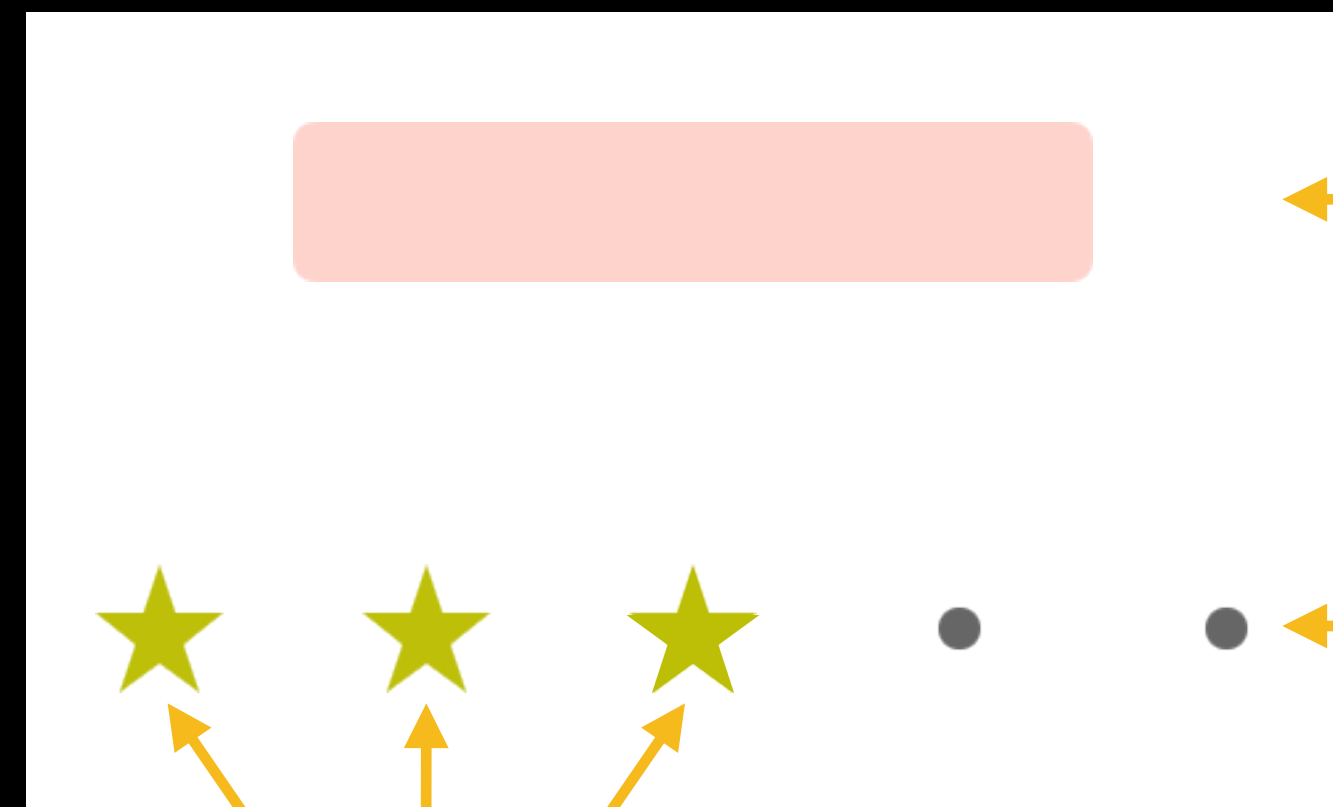
UIImageView



UIImageView



UIButton



UIImageView

UIButton

```
button.selected = YES;
```


Customizing UIButton



`UIButtonTypeCustom`

Customizing UIButton

- (CGRect)backgroundRectForBounds: (CGRect)bounds;
- (CGRect)titleRectForContentRect: (CGRect)contentRect;
- (CGRect)imageRectForContentRect: (CGRect)contentRect;



UIButtonTypeCustom

Dynamic Images



Dynamic Images

```
UIGraphicsBeginImageContextWithOptions(size, NO, 0.0);  
// Drawing  
UIImage *image = UIGraphicsGetImageFromCurrentImageContext();  
UIGraphicsEndImageContext();
```



Dynamic Images

```
UIGraphicsBeginImageContextWithOptions(size, NO, 0.0);  
// Drawing  
UIImage *image = UIGraphicsGetImageFromCurrentImageContext();  
UIGraphicsEndImageContext();  
imageView.image = image;
```



Dynamic Images

```
image = [image imageWithRenderingMode:UIImageRenderingModeAlwaysTemplate];
```

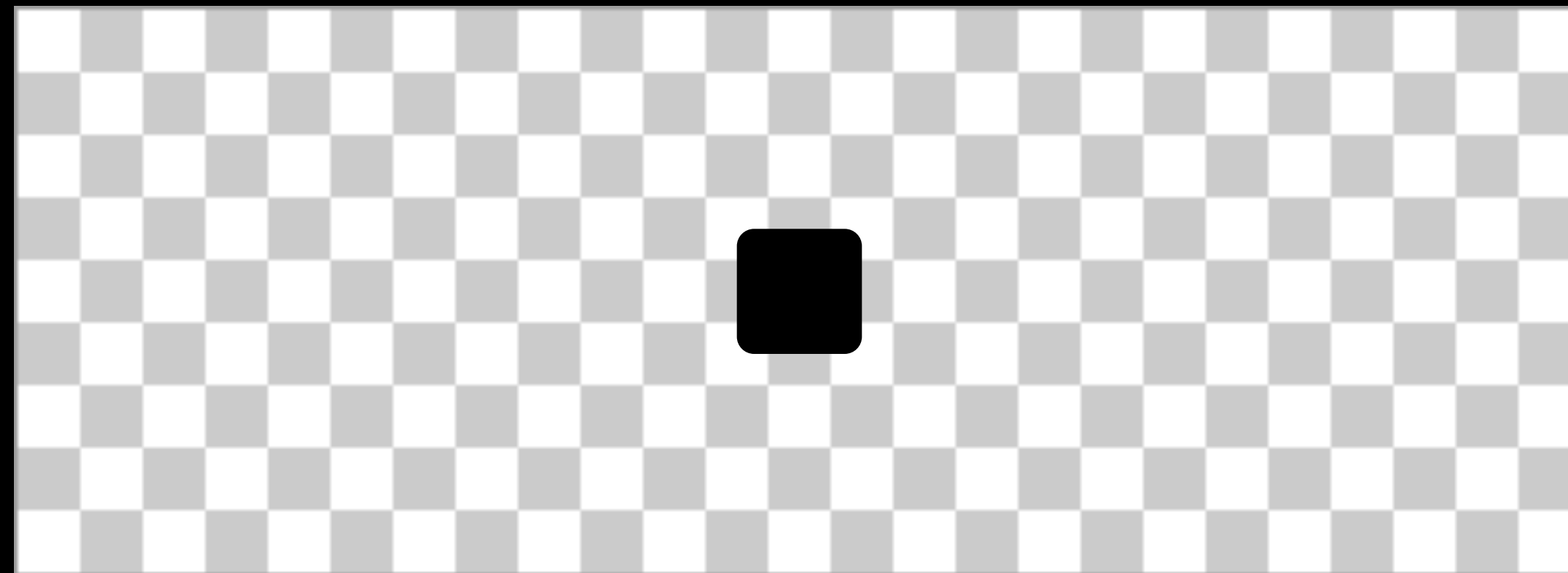
```
imageView.image = image;
```



Dynamic Images

```
image = [image imageWithRenderingMode:UIImageRenderingModeAlwaysTemplate];
```

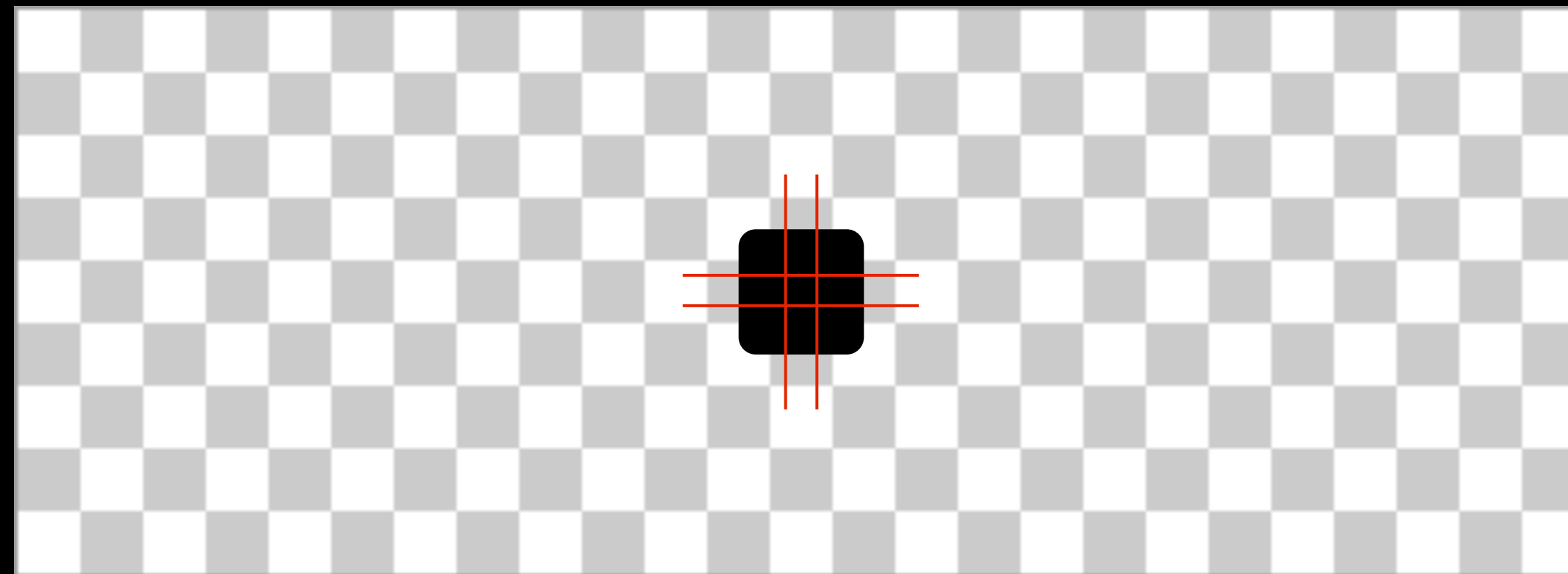
```
imageView.image = image;
```



Dynamic Images

```
image = [image imageWithRenderingMode:UIImageRenderingModeAlwaysTemplate];
```

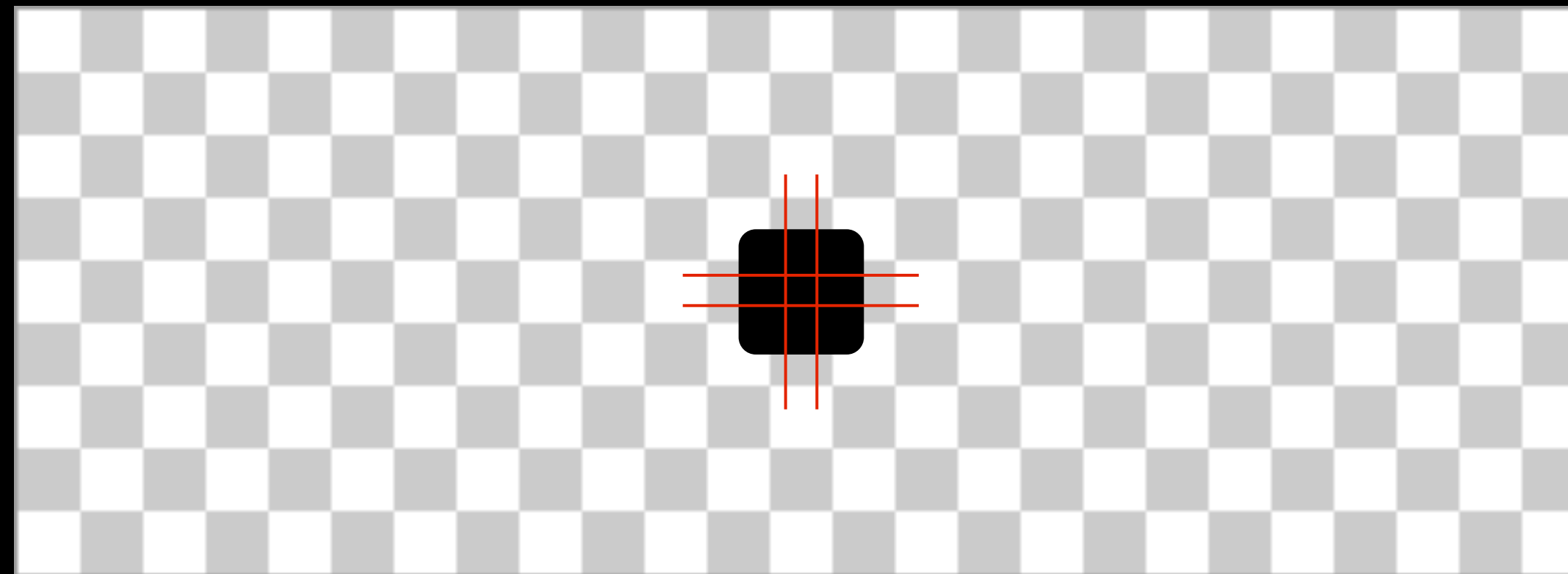
```
imageView.image = image;
```



Dynamic Images

```
image = [image imageWithRenderingMode:UIImageRenderingModeAlwaysTemplate];  
image = [image resizableImageWithCapInsets:UIEdgeInsetsMake(...)];
```

```
imageView.image = image;
```



Sending Actions

```
@interface TTTRatingControl : UIControl
```

Sending Actions

```
@interface TTTRatingControl : UIControl

- (void)touchButton:(UIButton *)button
{
    self.rating = button.tag;
    [self sendActionsForControlEvents:UIControlEventTouchUpInside];
}
```

Sending Actions

```
@interface TTTRatingControl : UIControl

- (void)touchButton:(UIButton *)button
{
    self.rating = button.tag;
    [self sendActionsForControlEvents:UIControlEventsValueChanged];
}

[ratingControl addTarget:self action:@selector(changeRating:)
forControlEvents:UIControlEventsValueChanged];
```

Count View

Victories

14

Count View

Victories

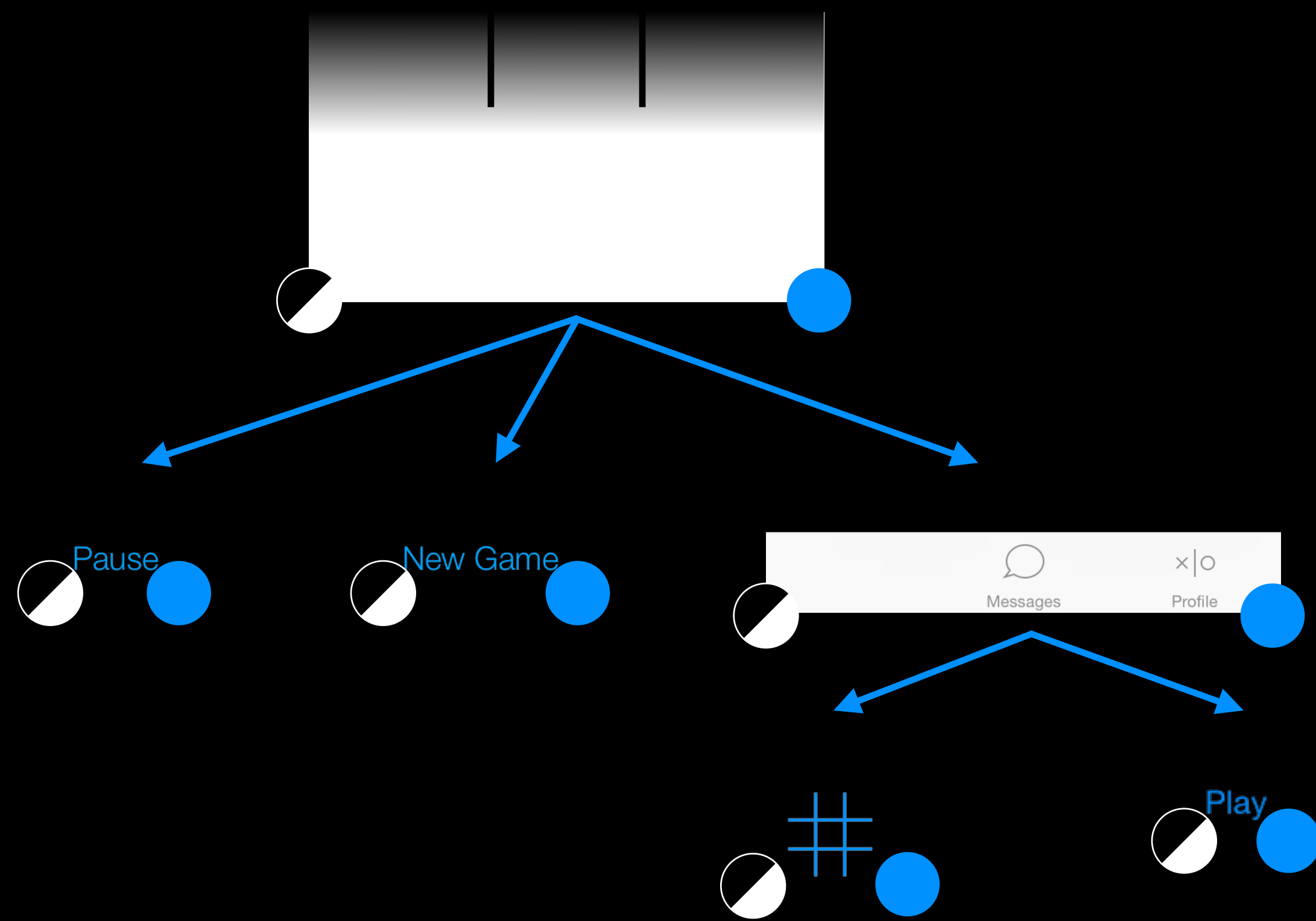


Victories

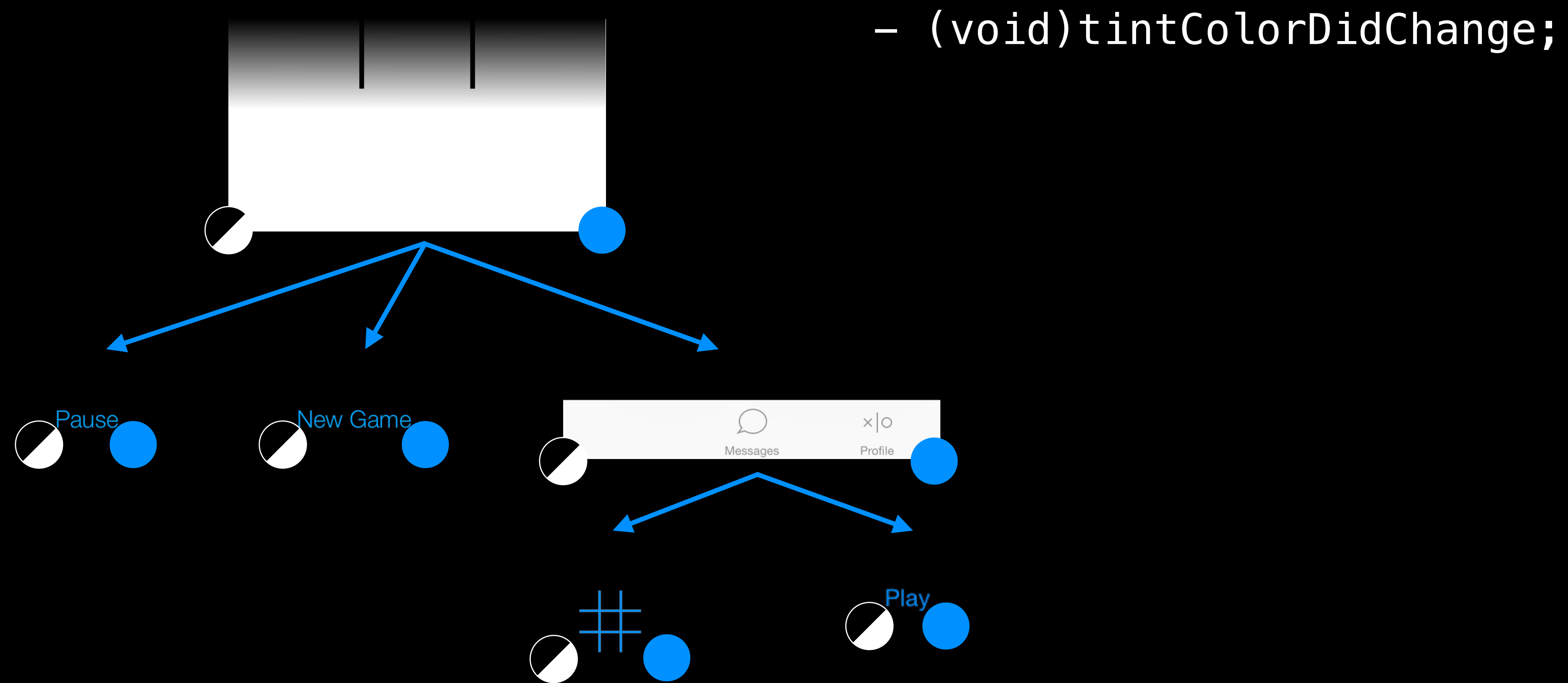


```
- (void)drawRect:(CGRect)rect
{
    [[self tintColor] set];
    // Drawing
}
```

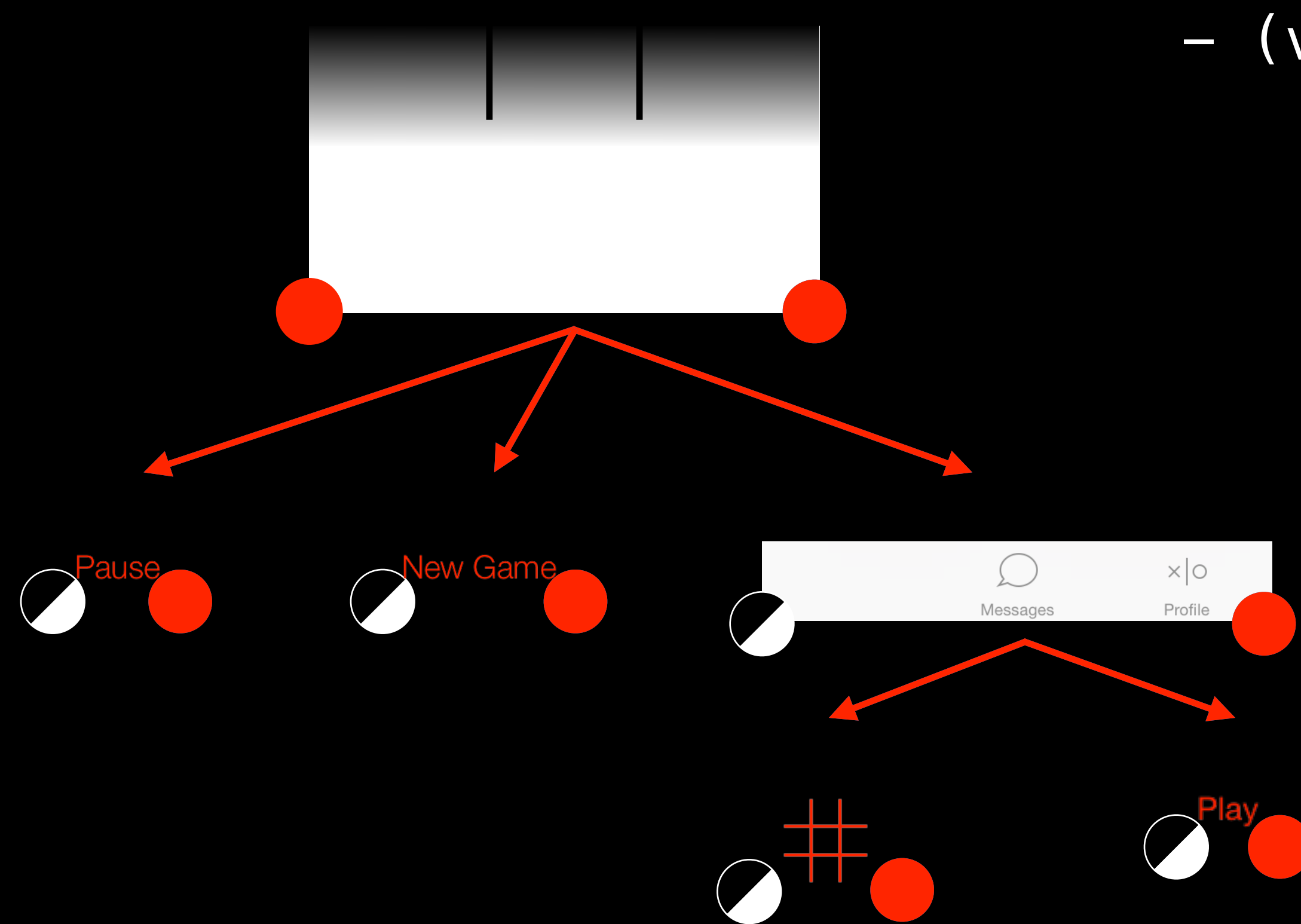
Tint Color



Tint Color

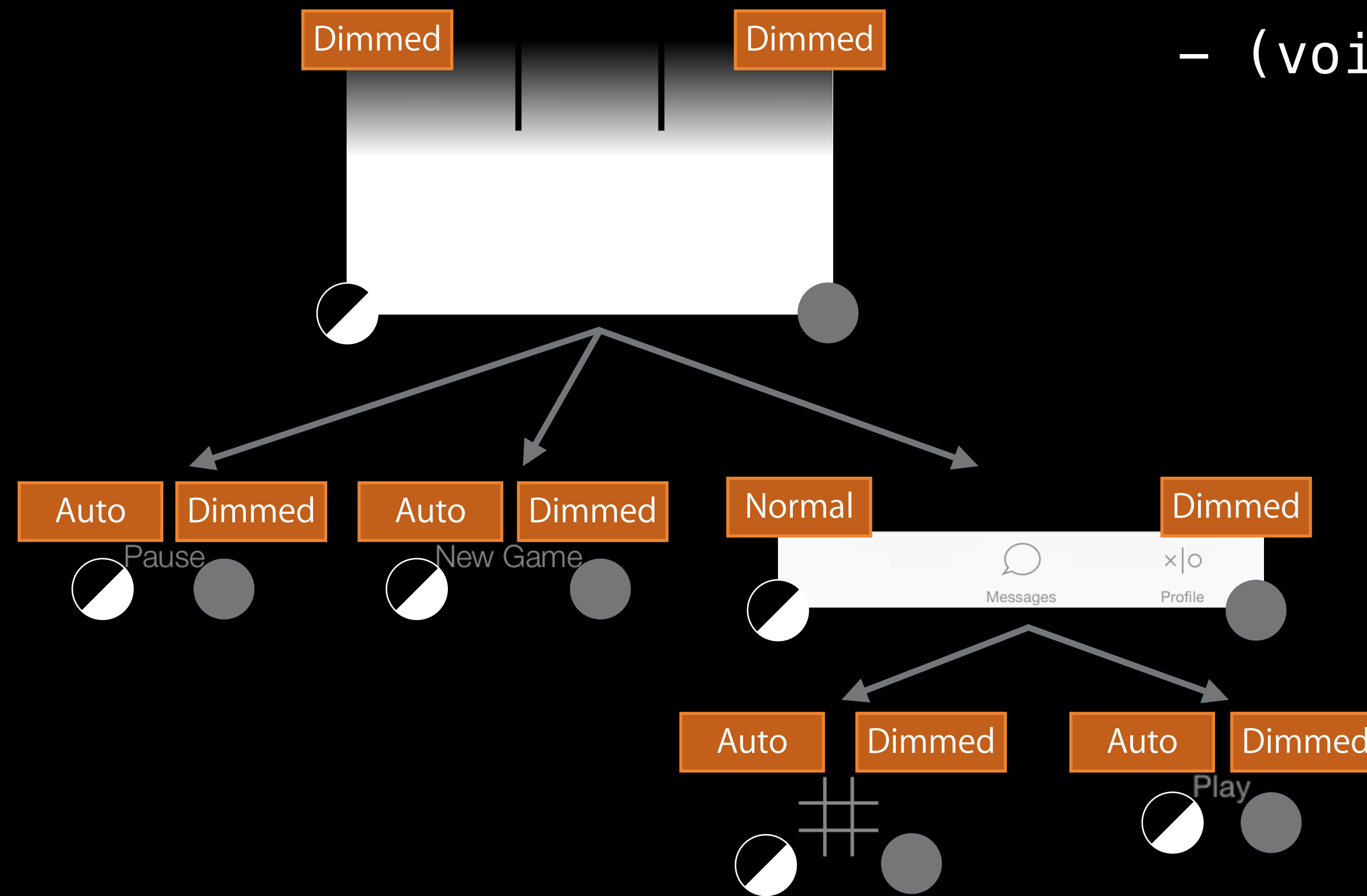


Tint Color



- (void)tintColorDidChange;

Tint Color



```
- (void)tintColorDidChange;
```

Victories



```
- (void)tintColorDidChange
{
    [super tintColorDidChange];
    [self setNeedsDisplayInRect:[self rectForCount:self.count]];
}
```

5/31/13, 5:38 PM

Victory



5/31/13, 5:38 PM

Victory



5/31/13, 5:38 PM

Victory



```
- (void)tintColorDidChange  
{  
    [super tintColorDidChange];  
    self.detailTextLabel.textColor = self.tintColor;  
}
```


Accessibility



Accessibility



```
- (BOOL)isAccessibilityElement
{
    return NO;
}
```

Accessibility



```
- (BOOL)isAccessibilityElement
{
    return NO;
}
```

```
[button setAccessibilityLabel:[NSString stringWithFormat:
    NSLocalizedString(@"%d stars", @"%d stars"), rating + 1]];
```

Accessibility

Victories



```
- (BOOL)isAccessibilityElement
{
    return YES;
}
```

Accessibility

Victories



```
- (BOOL)isAccessibilityElement
{
    return YES;
}
- (UIAccessibilityTraits)accessibilityTraits
{
    return UIAccessibilityTraitImage;
}
```

Accessibility

Victories



```
- (BOOL)isAccessibilityElement
{
    return YES;
}
- (UIAccessibilityTraits)accessibilityTraits
{
    return UIAccessibilityTraitImage;
}
- (NSString *)accessibilityLabel
{
    return [NSString stringWithFormat:@"%d", self.count];
}
```

Demo

Summary

- What's changed
- Advanced customization
- Making custom controls

 WWDC2013