



Lightning Lecture Series //

## Animating Xamarin.Forms

- ▶ Lecture will begin shortly
- ▶ Download class materials from [university.xamarin.com](http://university.xamarin.com)

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# The Basics

Getting familiar with the animation methods



# Why Animations?

1. Detailed Graphics
2. Fine Tuning for Devices
3. A Rich User Experience
4. They make your app look like it was cared for



Xamarin University

# Animation Types

- ❖ Animations are built into a Xamarin.Forms through a range of extensions methods



Fading in/out



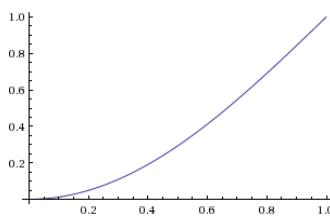
Rotation



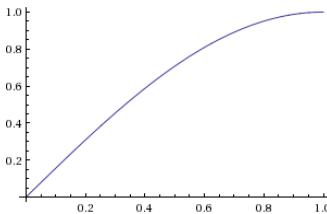
Changing Location  
and Dimensions

# Easing Effects

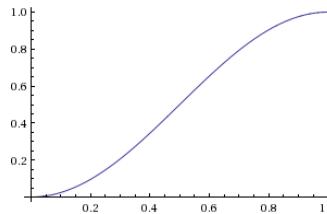
- ❖ Easing indicates how the motion in the animation will be performed.



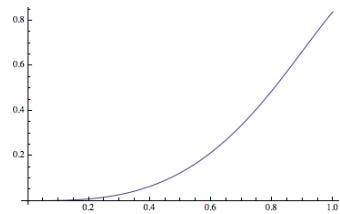
Sine-in



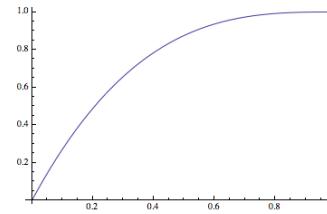
Sine-out



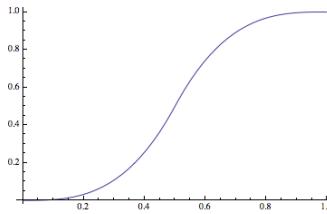
Sine-in-out



Cubic-in



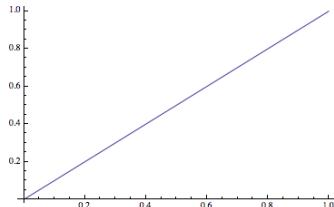
Cubic-out



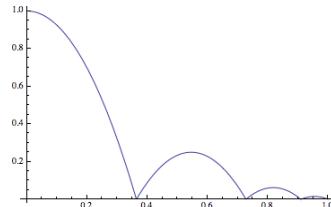
Cubic-in-out

# Easing Effects

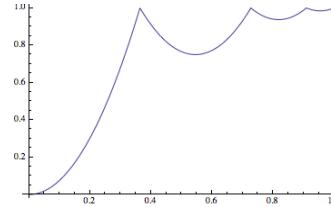
- ❖ Easing indicates how the motion in the animation will be performed.



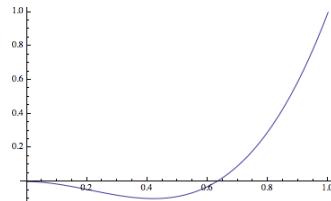
Linear



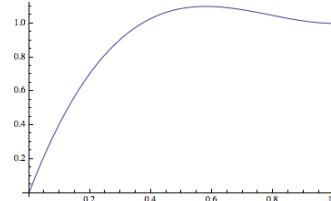
Bounce-in



Bounce-out



Spring-in



Spring-out

# Performing Animations

- ❖ Animation methods are async versions of existing View methods for manipulating controls with the Suffix To. E.g. LayoutTo

```
image.Rotation = 45;  
await image.RotateTo(45);
```

```
image.Opacity = 0.5;  
await image.FadeTo(0.5);
```

```
image.Layout(new Rectangle(180, 80, image.Width, image.Height));  
await image.LayoutTo(new Rectangle(180, 80, image.Width, image.Height),  
2000, Easing.SpringOut);
```

# Concurrent Animations

- ❖ For concurrent animations, you Task.WaitAll and Task.WaitAny will allow for creating a barrier for multiple animations to finish

```
public async Task AnimateIn()
{
    const uint animateTime = 700;
    Easing easing = Easing.Linear;

    await Task.WhenAll(
        leftImage.FadeTo(1, animateTime, easing),
        rightImage.FadeTo(1, animateTime, easing),
        coreText.FadeTo(1, animateTime, easing)
    );
}
```

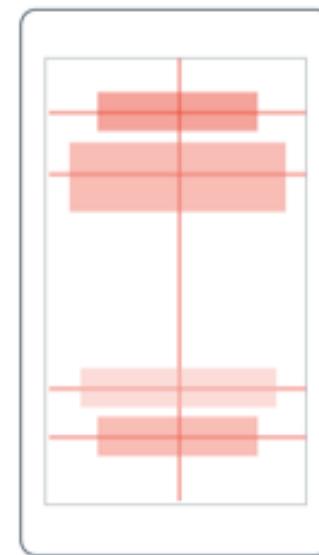
# 3D Effects

- ❖ There are also other opportunities to perform animation by altering the planes for animations



# Selecting a layout

- ❖ Ideally use AbsoluteLayout when animating as the positions maybe affected
- ❖ Fade is a stable animation regardless of Layout



# Demonstration

Fading, Translation and Rotation



# Great Resources

- ❖ Creating Mobile Apps with Xamarin.Forms by Charles Petzold's
  - Chapter 22



// Xamarin.Forms animations

Questions?

Thank You!

