Praktikum Entwicklung von Mediensystemen mit iOS

Wintersemester 2012 / 2013

Prof. Heinrich Hußmann, Dr. Alexander De Luca, Fabius Steinberger
• Honors Degree in Technology Management at the Center for Digital Technology and Management (Barerstr. 21).

• Open for students from TUM and LMU, mainly from Computer Science, Engineering and Business Administration.

• 45 ECTS in about 3 semesters (1 semester abroad).

• All courses are in english, interdisciplinary and with industry partners.

• To start in spring 2013, apply until November 30th 2012.

• www.cdtm.de

• http://vimeo.com/41021086
Today

• Animations and Drawing
• Tips & Tricks
• Assignment 4
• Outlook

Correction: iOS 6 Location Manager method

- (void)locationManager:(CLLocationManager *)manager didUpdateLocations:(NSArray *)locations
Example

Sliding Sam
Animations

• Views can fly around, rotate, fade in/out and much more.
• Animations can make your app appear much more exciting.
• The following properties of the UIView class are animatable:
  • @property frame
  • @property bounds
  • @property center
  • @property transform
  • @property alpha
  • @property backgroundColor
  • @property contentStretch
Example

Spiel starten

Optionen

Highscores

TravelMate
Fade In / Out

- Change alpha from 0 (transparent) to 1 (opaque) in 3 seconds:

```objective-c
imageView.alpha = 0.0;
[UIView animateWithDuration:3.0 animations:^{
    imageView.alpha = 1.0;
}];
```
Rotate

- Rotate by 90° in 3 seconds:

```objc
[UIView animateWithDuration:3.0 animations:^{
    imageView.transform = CGAffineTransformMakeRotation(M_PI_2);
}];
```
Scale

- Scale from 10% to 100% in 3 seconds:

```objc
imageView.transform = CGAffineTransformMakeScale(0.1, 0.1);
[UIView animateWithDuration:3.0 animations:^{
    imageView.transform = CGAffineTransformMakeScale(1, 1);
}];
```
Move

• Move from origin to center:

```swift
imageView.center = CGPointMake(0, 0);

[UIView animateWithDuration:3.0 animations:^{
    imageView.center = imageView.superview.center;
}];
```
Animation Options

• Multiple animations at once are possible

• Options examples:
  • `UIViewAnimationOptionCurveEaseInOut`: start slowly, accelerate, stop slowly
  • `UIViewAnimationOptionTransitionFlipFromLeft`: flip around vertical axis

• Completion examples:
  • Start another animation
  • Play sound
Drawing

- Instead of using PNGs, you can draw custom shapes with CoreGraphics (a.k.a. CG or Quartz 2D).

- Example with drawRect:

```objc
@interface CustomShape : UIView

- (void)drawRect:(CGRect)rect {
    CGContextRef context = UIGraphicsGetCurrentContext();
    CGContextSetFillColorWithColor(context, [UIColor redColor].CGColor);
    CGContextFillEllipseInRect(context, rect);
}
```
Drawing

• Core Graphics also supports shadows, gradients, layers etc. (documentation)

• Image filters à la Instagram can be done with Core Image (documentation).

• 3D drawing can be done with OpenGL (documentation).
Google Doc
Assignment 4

• App with user input and animations
• You can do this assignment in teams of two
• Due next Wednesday 12:00, upload to Uniworx
Outlook

• 7.11. (this week): Assignment 4 is the last one
• 14.11. (next week): Start of team project
• 21.11. (Buss- und Bettag): No course
• 28.11.: Present your app idea