# Praktikum Entwicklung von Mediensystemen mit

# iOS

Wintersemester 2012 / 2013

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- 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

Info Events Winter Term 2012

LMU
Tuesday, 13. Nov 2012, 6pm, Ludwigstr. 28, Room 211B

TUM
Wednesday, 14. Nov 2012, 2:15pm, Garching, Informatics Building, Room 01.13.007

CDTM
Monday, 19. Nov 2012, 7pm, Barer Str. 21, Room S2534
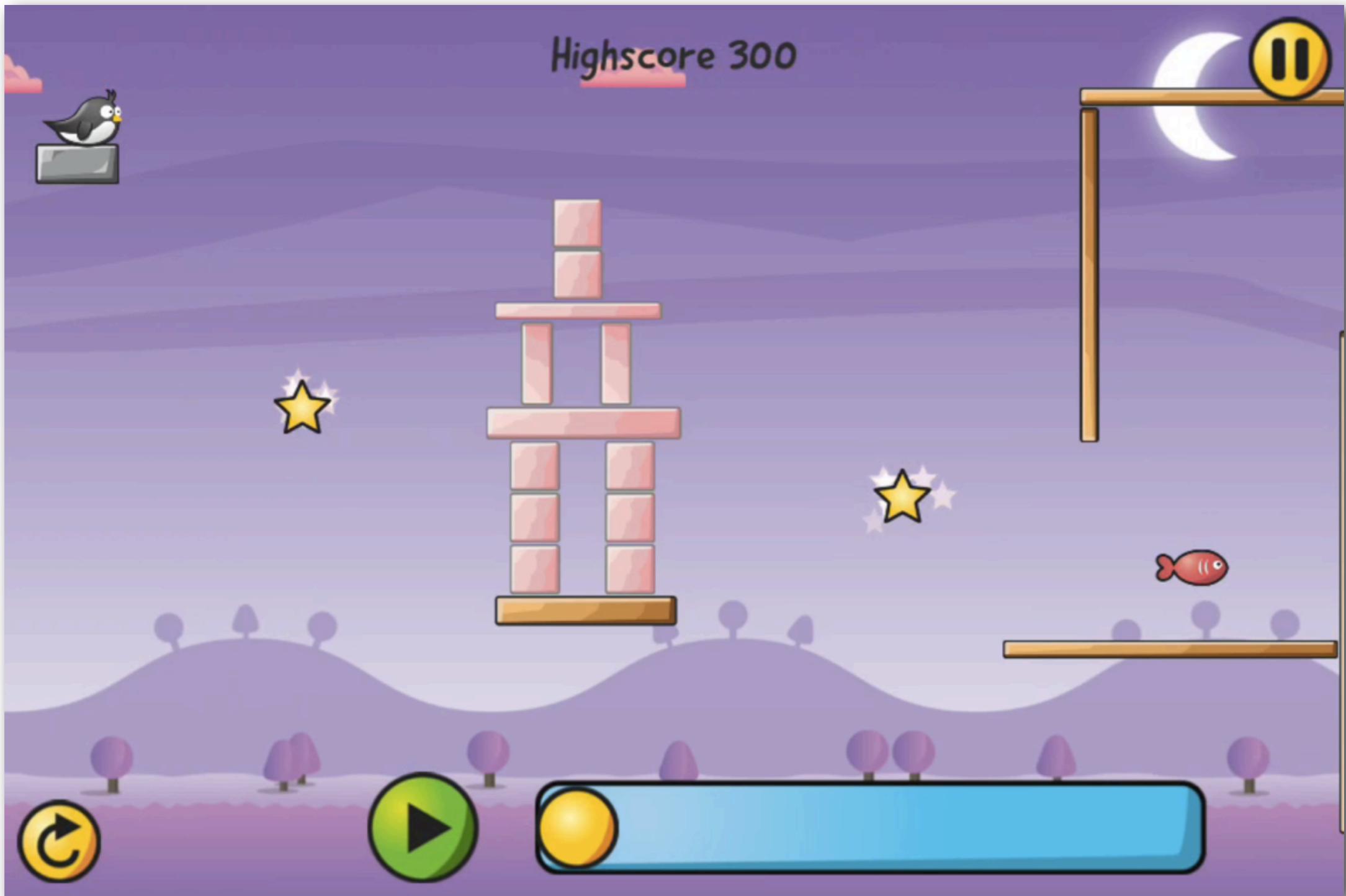
# Today

- 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



TravelMate

# Fade In / Out

- Change alpha from 0 (transparent) to 1 (opaque) in 3 seconds:
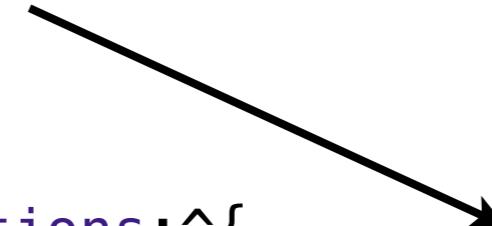
```
imageView.alpha = 0.0;

[UIView animateWithDuration:3.0 animations:^{
    imageView.alpha = 1.0;
}];
```

# Rotate

- Rotate by 90° in 3 seconds:
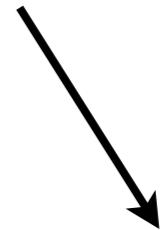
```
[UIView animateWithDuration:3.0 animations:^{
    imageView.transform = CGAffineTransformMakeRotation(M_PI_2);
}];
```

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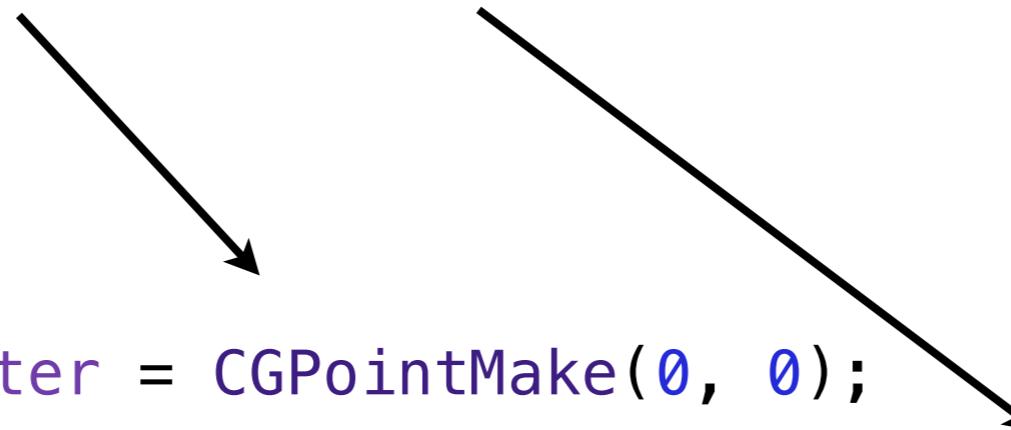
- Scale from 10% to 100% in 3 seconds:

```
imageView.transform = CGAffineTransformMakeScale(0.1, 0.1);

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

# Move

- Move from origin to center:

```
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:
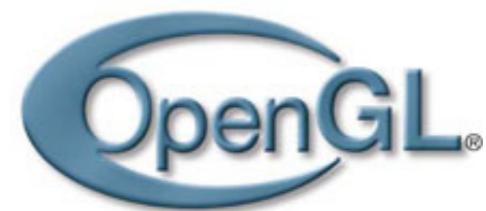
```
@interface CustomShape : UIView   .h

- (void)drawRect:(CGRect)rect      .m
{
    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).

# Tips & Tricks

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