C♯
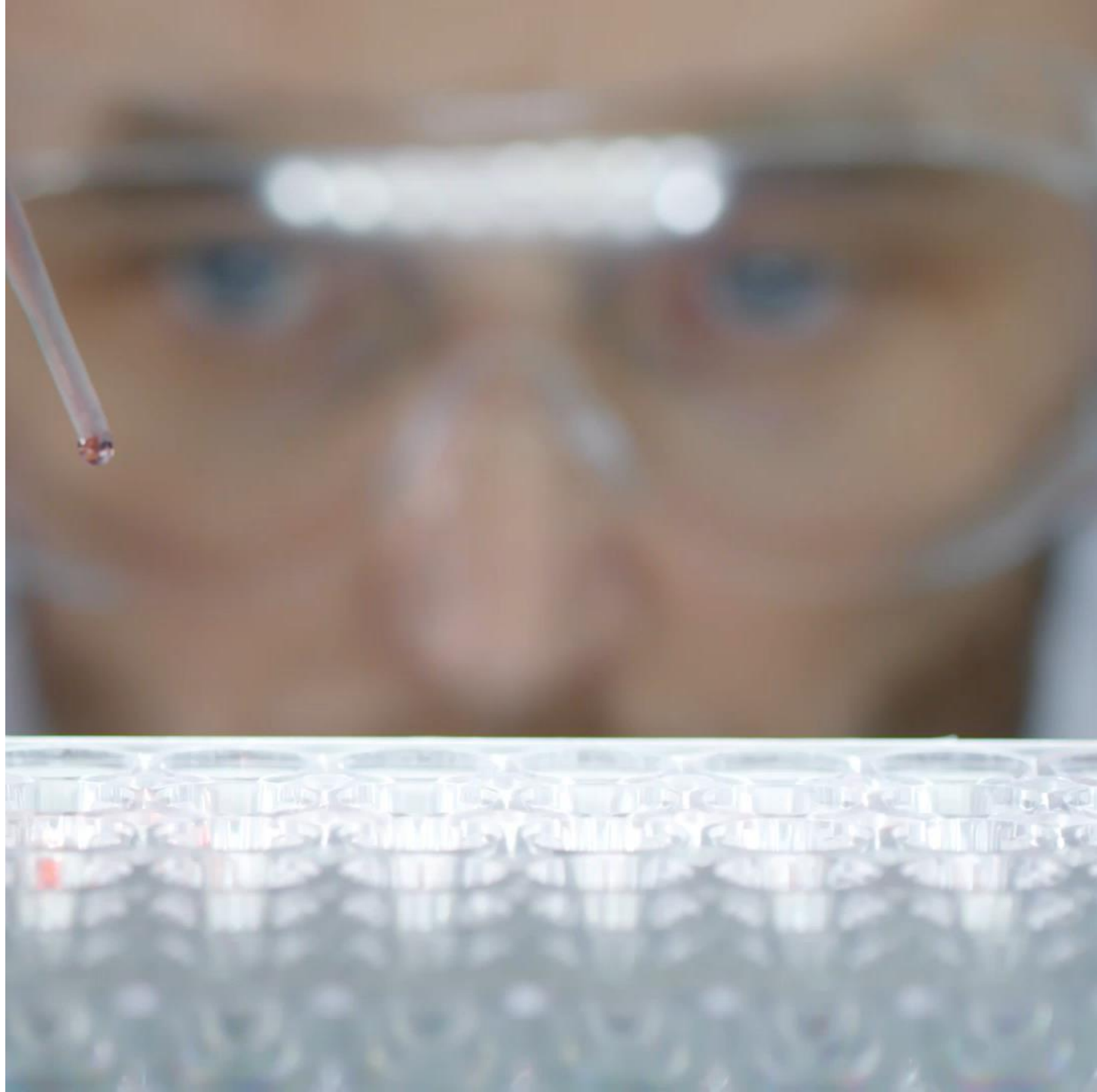# this._course.Dispose();

Rasmus Lystrøm

Associate Professor

ITU

Agenda

Docs
Automatic package updates
CRUD using Blazor
Using Azure Storage for Files
Integration Testing
App Roles and AAD auth
DevOps
Infrastructure as Code
Continuous Deployment
A note on the exam
Questions and Feedback

When in doubt; read the docs!

Source: http://keepcalm-o-matic.co.uk/p/keep-calm-and-rtfm-123

Keeping your code up to date

ALWAYS upgrade to the *latest* version of your framework.

ALWAYS upgrade to the *latest* version of your dependencies – NuGet, npm, Maven, etc.

Use **Dependabot**.

Automatic Package Upgrades - Demo

```yaml
---

version: 2
updates:
  - package-ecosystem: nuget
    directory: /
    schedule:
      interval: daily
```

Blazor CRUD and Azure Storage
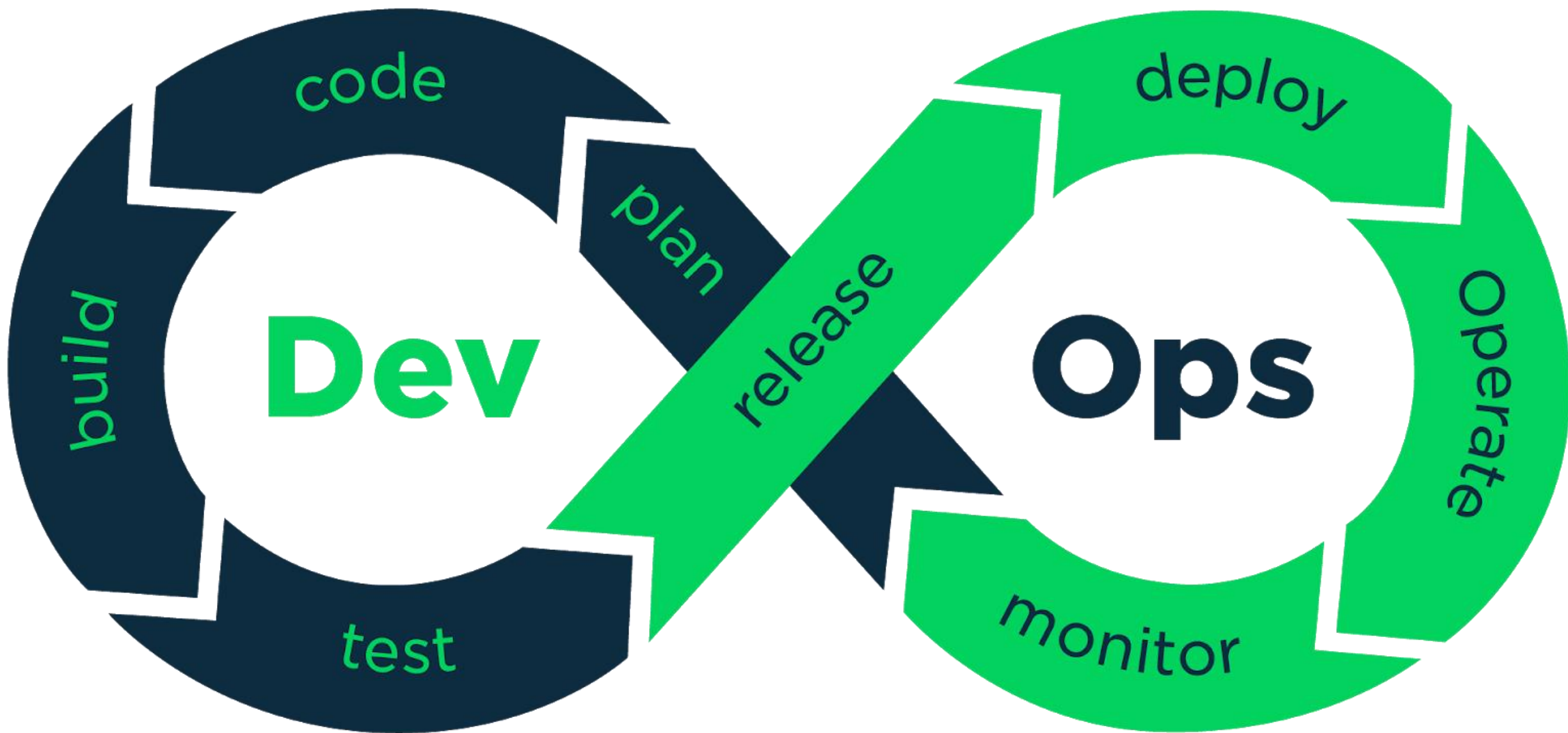
Demo

App Roles and AAD auth

Demo

Integration Testing

Unit Testing

System Integration Testing

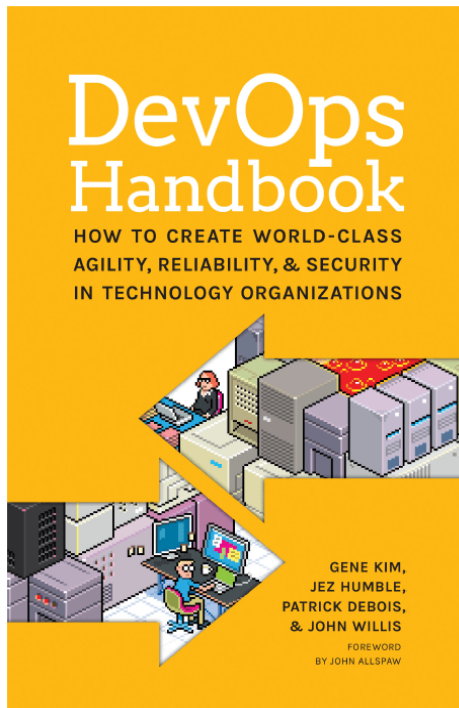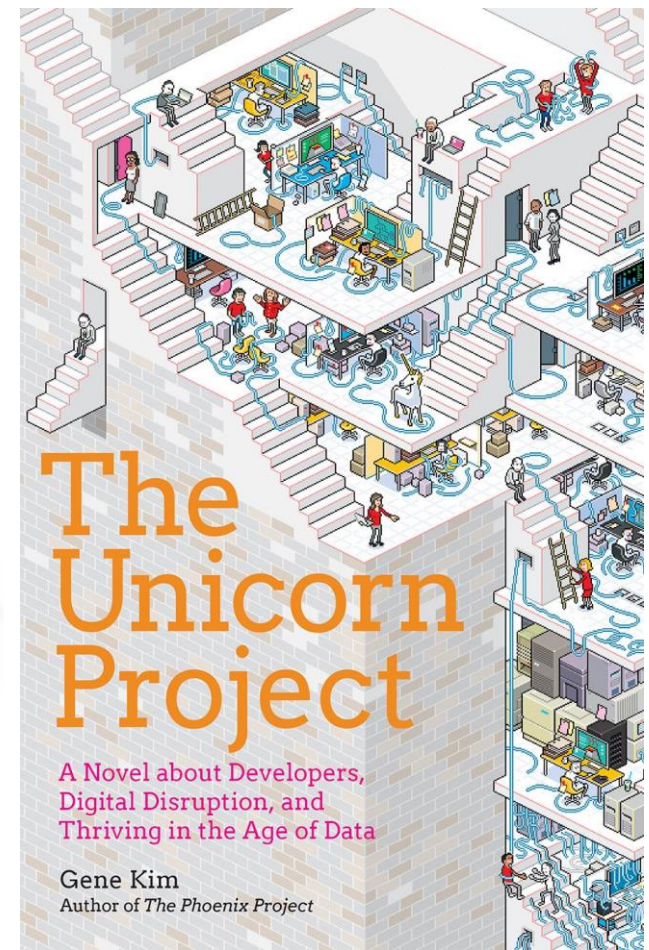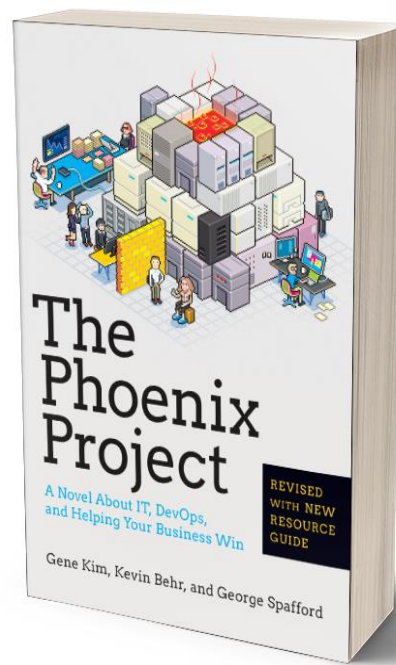TestNbug.com

Integration Testing

Demo

DevOps

DevOps is a set of practices that automates the processes between software development and IT teams, in order that they can build, test, and release software faster and more reliably. The concept of **DevOps** is founded on building a culture of collaboration between teams that historically functioned in relative siloes.

Books

The Phoenix Project
A Novel About IT, DevOps, and Helping Your Business Win

REVISED WITH NEW RESOURCE GUIDE

Gene Kim, Kevin Behr, and George Spafford

The Unicorn Project
A Novel about Developers, Digital Disruption, and Thriving in the Age of Data

Gene Kim
Author of *The Phoenix Project*

DevOps Handbook
HOW TO CREATE WORLD-CLASS AGILITY, RELIABILITY, & SECURITY IN TECHNOLOGY ORGANIZATIONS

GENE KIM, JEZ HUMBLE, PATRICK DEBOIS, & JOHN WILLIS

FOREWORD BY JOHN ALLSPAW

ACCELERATE
Building and Scaling High Performing Technology Organizations

Nicole Forsgren, PhD
Jez Humble, and Gene Kim

Accelerate
Building and Scaling High Performing Technology Organizations

Continuous Delivery
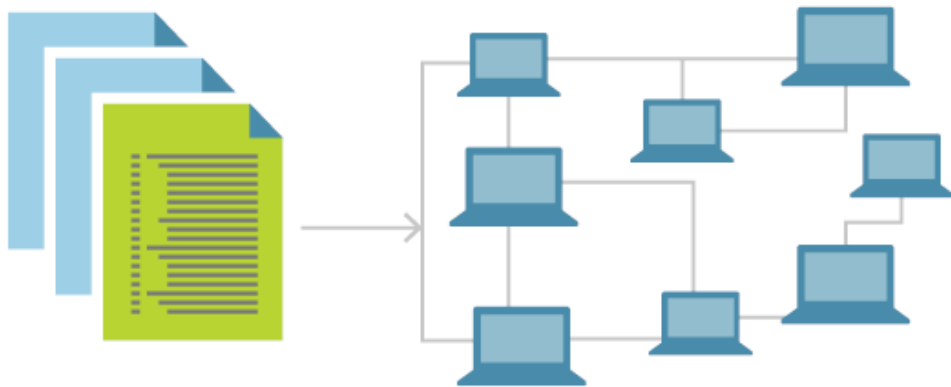
Continuous Delivery

Continuous delivery is an approach where teams release quality products frequently and predictably from source code repository to production in an automated fashion.

Continuous Deployment

Infrastructure as Code

Infrastructure as Code

Infrastructure as Code (IaC) is the management of infrastructure (networks, virtual machines, load balancers, and connection topology) in a descriptive model, using the same versioning as DevOps team uses for source code.

Idempotent

IaC is a key DevOps practice and is used in conjunction with CD

Source: https://docs.microsoft.com/en-us/azure/devops/learn/what-is-infrastructure-as-code

Infrastructure as Code Tools for Microsoft Azure

Azure PowerShell

Azure CLI

Bicep

ARM Templates

Terraform

Continuous Delivery and Deployment Infrastructure as Code

Demo

A note on the exam

Steps

1. Read through the whole thing – cover to cover
2. Read through the whole thing – cover to cover **AGAIN**
3. Choose an order:
   - Solve the easiest
   - The most points
   - The ones you know you can do

Questions and Feedback

Thank You!