

# CPSC 3720 Lesson 41

Happy Thanksgiving



Connie Taylor  
Professor of Practice

# CUSports – Review Schedule



REVIEW DATE	TEAMS
NOV 23	<p>4 – image(4).png – Pricing </p> <p>3 – Chaos- Payment </p> <p>2 – Dynamic Devs- Search </p>

# Sprint 4

**Total of 40 points; due Tuesday Dec 1 @ 11:59pm**

**Each team will be measured on the following items:**

- Any corrections identified in Sprint 3 for the API Definition, Doc, Mock/Examples, and DFDs; identify what changes were made in a file you upload to this assignment. (7 points)
- A final retrospective for the team published in the Retrospective Board on Trello. Consider the overall project (6 points)
- All your Sprint 1, 2 and 3 APIs uploaded into the Clemson API Library (See Explore Tab in Postman) (7 points)

**Individually, you will be measured on the following items:**

- Provide a link and/or a screenshot of Project team Postman Collections checked into your individual GIT repository. This is done by integrating your Postman project with your GIT repository (10 points).
- Complete the Team assessment (see Canvas) for your 4 other team members and upload a completed version (10 points).

# Quiz 5

Total of 30 points  
Due Wednesday Dec 2 @ 5:00pm

Will cover Lessons 38-42

# Excel or Die

**Keeping up with the rate of technological change is essential for organizations in these competitive environments who must keep demanding customers happy and satisfied while delivering consistent revenues to keep stakeholders satisfied.**



J.CREW



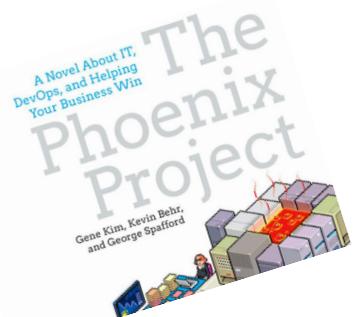
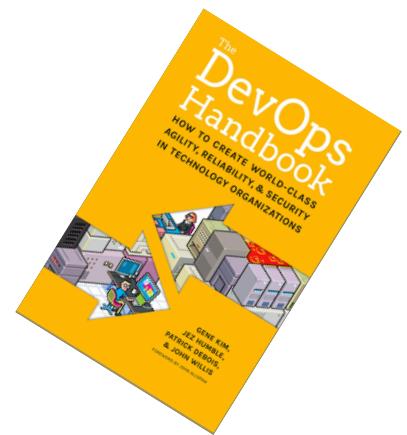
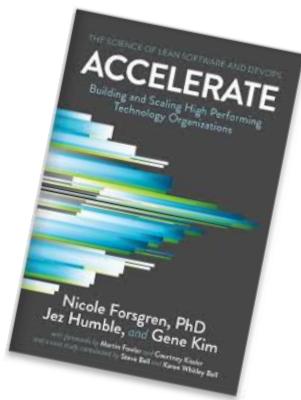
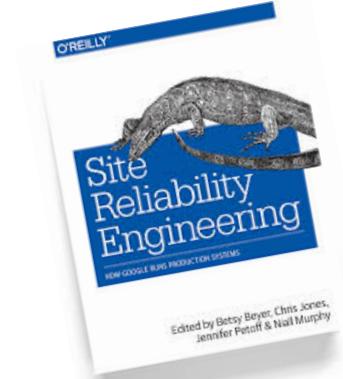
# How Devops helps business meet challenging times

<https://www.infoworld.com/article/3561289/devops-expert-gene-kim-how-devops-helps-business-meet-challenging-times.html>

Retail threat pushed adoption of Devops in that industry and now COVID in all industries...

“One of the most important skills, abilities, traits needed in these pioneering rebellions [is] using devops to overthrow the ancient powerful order, who are very happy to do things the way they have for 30 to 40 years – is the cross functional skills to be able to reach across the table to their business counterparts and help solve problems.”

# DevOps Success



<https://services.google.com/fh/files/misc/state-of-devops-2019.pdf>

**Delivering software quickly, reliably, and safely is at the heart of technology transformation and organizational performance.**

We see continued evidence that software speed, stability, and availability contribute to organizational performance (including profitability, productivity, and customer satisfaction). Our highest performers are twice as likely to meet or exceed their organizational performance goals.

# From Measuring Maturity to Measuring Capabilities

## PERFORMANCE METRICS



SOFTWARE DEVELOPMENT



SOFTWARE DEPLOYMENT



SERVICE OPERATION

Lead Time

Change Fail

Availability

Deployment Frequency

Time to Restore

FOUR KEY METRICS

# From Measuring Maturity to Measuring Capabilities

Aspect of Software Delivery Performance*	Elite	High	Medium	Low
<b>Deployment frequency</b> For the primary application or service you work on, how often does your organization deploy code to production or release it to end users?	On-demand (multiple deploys per day)	Between once per day and once per week	Between once per week and once per month	Between once per month and once every six months
<b>Lead time for changes</b> For the primary application or service you work on, what is your lead time for changes (i.e., how long does it take to go from code committed to code successfully running in production)?	Less than one day	Between one day and one week	Between one week and one month	Between one month and six months
<b>Time to restore service *</b> For the primary application or service you work on, how long does it generally take to restore service when a service incident or a defect that impacts users occurs (e.g., unplanned outage or service impairment)?	Less than one hour	Less than one day <sup>a</sup>	Less than one day <sup>a</sup>	Between one week and one month
<b>Change failure rate</b> For the primary application or service you work on, what percentage of changes to production or released to users result in degraded service (e.g., lead to service impairment or service outage) and subsequently require remediation (e.g., require a hotfix, rollback, fix forward, patch)?	0-15% <sup>b,c</sup>	0-15% <sup>b,d</sup>	0-15% <sup>c,d</sup>	46-60%

\*Also known as Mean Time to Recovery (MTTR)

# Tools and Automation Critical to Success

## TOOL USAGE BY PERFORMANCE PROFILE

	Low	Medium	High	Elite
A mix of proprietary tools, open source, and commercial off-the-shelf (COTS) software	30%	34%	32%	33%
Mainly open source and COTS, heavily customized	17%	8%	7%	10%
Mainly open source and COTS, with little customization	14%	21%	18%	20%
Primarily COTS packaged software	8%	12%	8%	4%
Primarily developed in-house and proprietary to my organization	20%	6%	5%	6%
Primarily open source, heavily customized	6%	7%	5%	12%
Primarily open source, with little customization	5%	12%	24%	15%

## AUTOMATION AND INTEGRATION BY PERFORMANCE PROFILE

	Low	Medium	High	Elite
Automated build	64%	81%	91%	92%
Automated unit tests	57%	66%	84%	87%
Automated acceptance tests	28%	38%	48%	58%
Automated performance tests	18%	23%	18%	28%
Automated security tests	15%	28%	25%	31%
Automated provisioning and deployment to testing environments	39%	54%	68%	72%
Automated deployment to production	17%	38%	60%	69%
Integration with chatbots / Slack	29%	33%	24%	69%
Integration with production monitoring and observability tools	13%	23%	41%	57%
None of the above	9%	14%	5%	4%