Schedule and outline

Texts

- DevOps for Web Development (Abbreviated as DWD below)
- The phoenix project

Week 1 (Aug 24 - 28)

- Topics:
  - Continuous Deployment & Integration
  - Git
- Readings:
  - What is Dev Ops
  - Youtube video
  - DWD-ch 1
  - Continuous Integration
  - Git intro
  - Version Control
  - DWD-ch 2
  - [The phoenix project] Chapters 1 - 2
- Slides:
  - Intro
  - More Intro
  - Git basics
  - Git hello world
  - Basic git
  - Branching and merging
- Notes:
  - Create EC2 instance
- Assignments:
  - Assignment 1 - AWS

Week 2 (Aug 31 - Sep 4)

- Topics:
  - Cloud overview
  - Connecting to EC2 again
  - Our sample petClinic project
  - Jenkins
- Readings:
  - The phoenix project (3-6)
  - DWD-ch 2
  - DWD-ch 3
- Slides:
  - Chapter 2
  - Slides
- Notes:
- Assignments:
  - Assignment 2 - Git
  - Assignment 3 - Production VM
  - Assignment 4 - Jenkins
Week 3 (Sep 7 - 11)

- Topics:
  - The phoenix project (7-10)
- Slides:
- Assignments:
  - Assignment - Jenkins 2
  - Assignment - Jenkins Pipelines

Week 4 (Sep 14 - 18)

- Topics:
  - Jenkins - Deployment to Tomcat
- Assignments:
  - Assignment - Jenkins Production
- Readings:
  - reading phoenix (11-14)
- Slides:

Week 5 (Sep 21 - 25)

Exam 1

- Topics:
  - Vagrant
- Readings:
  - reading phoenix (15-18)
- Slides:

Week 6 (Sep 28 - Oct 2)

- Topics:
  - Terraform
- Slides:
  - Vagrant Slides
  - Terraform Slides
  - Terraform From Jenkins
- Assignments:
  - Vagrant local
  - Terraform
  - Terraform and Jenkins
- Readings:
  - reading phoenix (19-22)

Week 7 (Oct 5 - 9)

- Topics:
  - Automated Configuration (Configuration Management)
  - Ansible
  - Ansible Playbooks
  - Vagrant + Ansible
- Readings:
  - How ansible works
  - Benefits of CM
  - Ansible Getting Started (Also covered in my slides)
• Ansible Playbooks Intro
• More about playbooks
• reading phoenix (23-26)

• Slides:
  • Ansible 1
  • Ansible 2

• Assignments:
  • Ansible - Tomcat

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### Week 8 (Oct 12 - 14)

*Fall Break*

• Topics:
  • Continue with automation
• Readings:
  • See above
• Assignments:
  • Ansible - Users

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### Week 9 (Oct 19 - 23)

• Review: Kahoot
• Exam 2
• Topics:
• Readings:
  • reading phoenix (27-30)
• Assignments:
  • Cloud 1

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### Week 10 (Oct 26 - 30)

• Topics:
  • Cloud
• Readings:
  • Materials given
  • reading phoenix (31-34)
• Slides:
  • Cloud basics
  • GCP basics
• Assignments:
  • Cloud 2

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### Week 11 (Nov 2 - 6)

• Topics:
  • Docker
• Slides:
  • intro
• Readings:
  • files app.py requirements.txt
  • Materials given
  • phoenix up through end of book
• Assignments:
  • Assignment - Docker

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### Week 12 (Nov 9 - 13)
• Topics:
  ◦ Continuous Monitoring
  ◦ Nagios
• Readings:
  ◦ Continuous Monitoring
• Video:
  ◦ Monitoring for DevOps and Microservices suggested
• Assignments:
  ◦ Assignment - Nagios
• Slides

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**Week 13 (Nov 16 - 20)**

• Topics:
  ◦ Continuous Monitoring
  ◦ Nagios
• Readings:
  ◦ Continuous Monitoring
• Video:
  ◦ Monitoring for DevOps and Microservices suggested
• Assignments:
  ◦ Assignment - Nagios
• Slides

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**Week 14 (Nov 23)**

*Thanksgiving*

• Microservices
• Readings:
  ◦ Monolithic pattern
  ◦ Microservice pattern
  ◦ Breaking away from the monolith
  ◦ The 12 factor app
• Slides
• Assignments:
  ◦ Final paper on Phoenix

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**Week 15 (Nov 30 - Dec 4) (Online only this week)**

Work on paper Study for exam

Final - See date on syllabus