CSL7090
Software & Data Engineering

Lecture #1 Course Modalities, Layered & Broker Patterns

Course Instructors:

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Google Classroom Code: dyplagt

About the course

3 Units

1. Cloud Computing and Virtualization
2. Data Management
3. Data Intensive Processing Systems

Unit 1: Cloud Computing and Virtualization

Basics of complex software design: Concept of modular software, microservices, communication, 4+1 architectural views and patterns

Cloud Computing: Architecture of cluster computing, design of data centers, open data center platforms, fault-tolerant system design

Virtualization: Type-1 and Type-2 virtualization, virtual machine, containers, dockers

Essential Tool Set for the Course

1. Notebook & Pen
2. Laptop / Smartphone
3. Internet Connectivity
4. Google Meet
5. **Slido (You may download mobile apps) - required for quizzes and polls**
6. Google Classroom App - to receive notifications
7. PDF reader and annotator
8. Document Editor

Slido Practice

Either you can install slido or open in browser - 2 Minutes

Slido Opinion Poll

slido

When Modular Software Design is incorporated in a software?

ⓘ Start presenting to display the poll results on this slide.

Slido Rating

slido

How good you are at programming?

ⓘ Start presenting to display the poll results on this slide.

Slido Opinion Poll

slido

Which city are you residing currently?

ⓘ Start presenting to display the poll results on this slide.

Slido Quiz

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Have you done database management course earlier?

ⓘ Start presenting to display the poll results on this slide.

Slido Timed Quiz

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What do you understand by Virtualization ?

ⓘ Start presenting to display the poll results on this slide.

Course Evaluation Component

- Continuous Evaluation:
  - Project or Research Paper - 25%
  - Assignments+Demo (3) - 15%
- Exams:
  - Minor 1 - 10%
  - Minor 2 - 20%
  - Final Semester Exam (2 hours): 30%
- Plagiarism Policy - Any amount of plagiarism in any component(s) will result into either reduction in the overall grade or ‘F’ grade

Class Conduct & Study Materials

- Pointers to various resources will be shared for every lecture
- 15 Lectures - Concepts and Fundamentals - SK
- 15 Lectures - Hands-on Practices - RS

References

1. Bass L., Clements P., Kazman R., (2012), Software Architecture in Practice, 3rd edition, Addison-Wesley Professional

2. Martin K., (2017), Designing Data-Intensive Applications: The Big Ideas Behind Reliable, Scalable, and Maintainable Systems, 1st Edition,O'Reilly Media