

Review For Midterm Exam

CS472 – SWE

Topics

1. SW methodologies: Waterfall, RUP, and Agile; Scrum: Roles and cycle
2. Requirements: Functional & Non-Functional, user stories
3. Analysis: use case diagram, sequence diagram, class diagram, database diagram, activity diagram.
4. SW architecture: Monolithic, layered, micro-services.
5. SW Design: Domain Driven Design, Rich model, SOLID.
6. Cloud Computing: IaaS, PaaS, FaaS, SaaS, server-based architecture, serverless architecture
7. DevOps: Git, CI/CD, IaC, Logging & Monitoring
8. Container: Docker, Docker Compose, Kubernetes (minikube, cloud)

Exam Information

1. Format: In-person, On-paper
2. Time: 10:00 AM – 12:30 PM, Friday, 12/05/2025
3. Location: M218

Question Types

1. MCQ

What does SOLID represent in software engineering?

 - A. A set of principles for database optimization
 - B. A group of five object-oriented design principles
 - C. A framework for mobile development
 - D. A methodology for Agile project management
2. Draw a diagram (use case, sequence diagram, class diagram, component diagram, deployment diagram)
3. Write requirement statements or user stories
4. Code