



CSSE3012

The Software Process

Final Exam Hints

Final Exam

- June 10 at 4:00pm (AEST)
 - ❑ confirm details on schedule
- 3 hours
 - + 10 minutes reading
 - + 15 minutes upload
- Download file from BlackBoard test
- Upload answers to TurnItIn
 - ❑ PDF – one file with all answers
 - ❑ Multiple uploads allowed

Structure

- 3 Questions
 - ❑ 2 short answer questions (56% of marks)
 - multi-part
 - ❑ 1 scenario questions (44% of marks)
 - multi-part
- Open book

Types of Questions

- Software Processes
 - ❑ Select process model for a project
 - ❑ Impact of different issues on process
- Process Improvement
 - ❑ Concepts related to maturity
 - ❑ Achievable level for a type of process
- Modelling Concepts
 - ❑ General modelling concepts
 - ❑ Relationship between models
 - ❑ Applicability in a context

Types of Questions

- Requirements & Risk
 - ❑ Elicitation techniques
 - ❑ Risk identification, reduction, and analysis
- Quality Management
 - ❑ Reviews, inspection, code coverage
- Modelling
 - ❑ Create a partial requirements model
- Estimation & Ethics
- Scenario based on description of project
 - ❑ little more detail than for assignments

Deferred Exam is Different

- More Questions
 - ❑ some short answer
 - multi-part
 - ❑ modelling activity
- Distribution of marks is different
- Some topics may be different

Example Questions

- Describe 2 major differences between Agile and Plan Driven process models.
 - ❑ ~ 5 minutes
- Describe 2 major differences between Agile and Incremental process models.
 - ❑ ~ 5 minutes

Example Questions

- Describe 1 strength and 1 weakness of using an algorithmic cost estimation technique like COCOMO2.
 - ☐ < 5 minutes
- What is a potential weakness of affinity estimation?
 - ☐ < 5 minutes

Example Questions

- Explain how inspections and reviews complement dynamic testing in the development process.
 - ☐ < 5 minutes

Example Questions

- Both use cases and user stories describe a functional requirement from a user's perspective. Explain the differences between these two techniques and how they are used in the development process.
 - < 10 minutes

Example Questions

- Non-functional requirements describe constraints on a system. Explain why it is important to identify non-functional requirements. Provide an example of an appropriate non-functional requirement for a patient records system in a hospital.
 - ❑ < 10 minutes

Example Questions

- The Software Engineering Institute's Capability Maturity Model (CMM) was presented as a framework that could be used for process improvement. Explain how CMM can be used to look for practices that are in need of improvement.
 - ☐ < 5 minutes

Example Questions

- Explain why it is important to identify quality goals at the start of analysing a system.
 - < 5 minutes

Alarm System

- Rooms have one alarm and a number of sensors
 - ❑ smoke & heat sensors, and manual triggers
- Central panel displays which sensors are triggered
- Test mode is entered by a code at the central panel
 - ❑ causes all alarms in the building to sound a test tone until the code is entered again
- When a sensor is triggered, panel enters standby mode
 - ❑ only the local (same room) alarm will sound
 - ❑ a code can be entered at the central panel to either disable the alarm or switch the panel to emergency mode
 - ❑ if the alarm is not disabled after two minutes, the panel enters emergency mode automatically
 - ❑ in emergency mode, a request is sent to the fire service, and all of the building's alarms are activated
 - ❑ only a member of the fire service can take the panel out of emergency mode

Example Questions: Alarm System

- Draw a use case diagram
- Write a use case description for the scenario of when a smoke sensor is triggered
- Draw an activity diagram for testing alarms
- Write two user stories
- Identify two risks for the system
 - What are their probabilities and severities?
 - Justify your answer
 - Describe two mitigation strategies for one risk
 - Compare & contrast
- Describe two non-functional requirements
- Select a suitable process – justify your choice

Good Luck

- You shouldn't need it 😊

