CSSE 374 – Software Architecture and Design I

Completeness Checklist for Milestone 5

- □ Domain model
- □ System sequence diagrams
- □ Operation contracts
- □ Logical architecture
- □ Interaction diagrams
- □ Design class diagram(s)
- □ Analysis of the GRASP Principles
- □ Analysis of the use of GoF Patterns
- □ Acceptance test plan
- □ Code
- □ Functional Demonstration
- □ Demonstration of correspondence between design documents and code

Scoring Rubric for Milestone 5

Criteria (weight)	5 Exemplary	3 Satisfactory	1 Needs Improvement	Weighted Score
Professionalism (×2)	Document is neatly drawn and formatted. (Apart from any problems with the notation) it could be shared with a stakeholder without changes. Document is free of errors in spelling, grammar and punctuation.	Document is somewhat sloppy, but could be shared with a "real-world" stakeholder after some revisions. Document has a small number of errors in spelling, grammar, or punctuation.	Document is largely unprofessional. It would have to be largely reworked before sharing the document with a savvy stakeholder. Document has many errors in spelling, grammar, and punctuation.	
Cohesiveness (×2)	The parts of the document reinforce each other. Each piece is consistent with the others and the document as a whole tells a story.	The parts of the document mostly reinforce each other. Each piece is generally consistent with the others with just a few minor differences.	The parts of the document are disjointed. They are largely inconsistent, to the point that it is unclear whether they describe the same system.	
Clarity of Diagrams (×2)	Diagrams are well labeled and at an appropriate level of abstraction so that stakeholders familiar with the problem domain could readily understand them.	Diagrams are mostly well labeled, with no more than 15% cryptic labels. Diagrams are generally at an appropriate level of abstraction, though a stakeholder familiar with the problem domain might need some guidance to understand them.	Labels are often cryptic or abstraction is used to the point that the actual analysis and design implications would be obscured to all but an expert in both the notation and the domain.	
Conciseness of Diagrams (×1)	Diagrams appropriately use the abstraction features of the notation to minimize useless redundancy	Diagrams may include some unhelpful redundancy, but the general representations are still readily comprehensible	Diagrams are highly redundant to the point that they are difficult to comprehend.	
Effectiveness of Analysis (×2)	Analysis artifacts identify all important domain concepts and clearly define the system interface. They demonstrate a deep understanding of the problem domain.	Analysis artifacts identify many important domain concepts and define the system interface. They demonstrate a reasonable understanding of the problem domain.	Analysis artifacts identify only a few of the domain concepts or only cursorily define the system interface. They betray a superficial understanding of the problem domain.	
Effectiveness of Design Models (×3)	Design conveys all important elements, constructs, and behaviors. It demonstrates a deep understanding of the solution to the problem.	Design conveys many key elements, constructs, and behaviors. Some situations might be treated in an unusual manner, but such treatment is documented.	Design minimally conveys key elements, constructs, and behaviors. It shows a superficial understanding of the problem and its solution.	

Criteria	5	3	1	Weighted
(weight)	Exemplary	Satisfactory	Needs Improvement	Score
Correctness of Solution (×3)	The design is viable within assumptions and rationale presented. Key tradeoffs are successfully analyzed and defended.	The design is largely viable within assumptions and rationale presented. Key tradeoffs are presented, but may not be fully or clearly analyzed.	The viability of the design is questionable. Some assumptions and rationale lacking. Key tradeoffs are missing or may be poorly analyzed.	
Elegance of Solution (×2)	Design effectively applies GRASP principles and design patterns to reduce coupling, increase cohesion, and lower the representation gap.	Design often applies GRASP principles and design patterns to reduce coupling, increase cohesion, or lower the representation gap	Design does not seem to apply GRASP principles and design patterns. It is ad hoc and does not demonstrate commonly accepted design practices.	
Discussion of Patterns (×2)	Document discusses the application of design patterns such that design decisions are clearly communicated and supported.	Document discusses the application of design patterns, demonstrating a basic understand of the patterns, but not consistently showing how those patterns informed the design decisions made.	Document discusses design patterns in a cursory manner or not at all.	
Correct Use of Notation (×2)	All notation used in the diagrams is appropriate to the diagram type and is used correctly.	All notation used in the diagrams is appropriate to the diagram type. At most two sorts of errors are made in the application of each diagram type.	Diagrams use notation inappropriate to the diagram type or contain a large variety of errors in the application of the notation.	
Software Demonstration (×4)	Software is free of obvious defects. Demonstration told a story. The important features of the system were covered in a compelling way that made clear how the problem was solved from the user's perspective.	Software shows no more than 4 obvious defects. Demonstration provided concise, but thorough review of the system that made clear how the problem was solved from the user's perspective.	Software shows 4 or more obvious defects. Demonstration was either incomplete or was just a litany of features.	
Software Style (×1)	Code is clear and well documented with consistent and appropriate naming and formatting. No "magic numbers" are used.	Code is mostly clear and well documented. The majority of identifiers are well named and the formatting is mostly consistent. No "magic numbers" are used.	Code is often unclear or undocumented. Obscure or terse identifiers are the norm. Formatting may be inconsistent. "Magic numbers" may be used.	
Correspondence of code and design (×4)	Code for the system is consistent with design diagrams, both structurally (as documented by Design Class Diagrams) and behaviorally (as documented by Interaction Diagrams).	Code for the system is mostly consistent with design diagrams apart from a few minor discrepancies.	Code for the system is inconsistent with the design diagrams.	
Subtotal Score (Sum of above / 1.5):				
(Subtotal Score) × (% of Assignment Completed):				
Total Score:				