Cyclometer-Design Phase

Name or Team: *your-info*

This phase requires you to document the object-oriented structural and behavioral design of your cyclometer.

Dimension	Exceptional Performance 4	Competent Performance 3	Acceptable Performance 2	Developing Performance 1	Beginning Performance 0
Software Architecture (20%)	There is a complete description of the software architecture, tasking including synchronization and timing, and external connections to the system.	There are some minor issues with the description of the software architecture, tasking structure, or external connections to the system.	Description of software architecture provides a base level understanding, tasking discussion does not fully describe tasks, there is not sufficient information for reader to connect the system.	There are major issues with the software architecture, tasking, or connections discussion.	Minimal discussion of the software architecture, tasking structure, and connections.
Calculation Description (20%)	A complete description of wheel pulse handling and computation of all measured values is given.	There are some minor issues with the description of wheel pulse handling and computation of measured values.	Calculation is given in brief detail only and the approach, how often calculations are done, or the results are not clear.	There are major issues with the calculation discussion.	There is no useful discussion of how the calculations are performed in the cyclometer.
Calculation Sequence Diagrams (15%)	Clearly described sequence diagrams for calculation features. Diagrams are easy to follow.	Sequence diagrams with most aspects of calculations described. A few issues with following the diagrams.	Sequence diagrams show participants and most exchanges. Several issues with the layout of the diagrams.	Sequence diagrams show little insight into how the calculations are performed. Diagrams are cluttered and difficult to follow.	Sequence diagrams contain no useful information.
Obj. Discovery and Structure (15%)	Objects cover the entire system; Structure is logical, well-defined, and makes appropriate use of OO principles.	Some issues with the object structure, one or two specific objects, or OO principles; Structure is well-defined.	Most system aspects are covered but structure could be improved by appropriate use of OO principles.	Object identification has problems; OO principles seem to be ignored; Structure could be improved.	Many essential objects are missed; Object structure is neither logical nor well-defined.
Statechart Behavior Specification (20%)	Statechart correctly covers all of the system behavior; statechart is well structured; Explanation is clear and aids the reader in understanding the system.	One or two small aspects of system behavior may have been missed; there are some issues with the statechart structure or documentation.	Statechart may miss one or two significant aspects of system behavior; structural is satisfactory; documentation provides most of the necessary information.	Most of the behavior is focused into a small number of states with little or no additional structure; may be missing a significant functionality	Most of the behavior in the system is missing from the statechart.
Model Diagram Mechanics (5%)	Diagrams are clear, concise and descriptive. Diagrams have appropriate annotations; Follow standard practice and heuristics.	A few places where the diagrams are not clear, do not follow standard practice or the heuristics.	Diagrams have explanations and annotations that are mostly clear and concise.	Diagrams are difficult to read, have inconsistencies, or may not meet assignment requirements.	Structure and statechart diagrams are of little use.

Dimension	Exceptional Performance 4	Competent Performance 3	Acceptable Performance 2	Developing Performance 1	Beginning Performance 0
Report Mechanics (5%)	Report has an excellent organization and presents material in a very logical sequence. No spelling or grammar errors, excellent formatting, highly readable.	The report can be followed easily and all material is present. Spelling and grammar errors rare, excellent formatting	All material is present in the report, but there are issues with the presentation. Spelling, grammar, and formatting errors appear on several pages but do not interfere with readability.	There are significant issues with coherence and ordering. Significant material is missing. Few pages without mechanics errors making reading a chore. Readability is a significant problem.	The report has no apparent organization or logical order. Mechanics errors make it a struggle to decipher meaning.