



## Engineering Journal

Overall Document				
Key Elements	0	1-2	3-4	5-6
Organized information allowing easy lookup		Dated logs, but lack of attempt to allow easy lookup.	Dated logs, and somewhat informative for allowing easy lookup. Table of contents may be there, but not very useful.	Excellent table of contents, dated logs, informative and resourceful appendix allowing quick lookup and extended learning.
Informative – allow others to learn from		Show basic attempt to present and illustrate progress, but sloppy and hard to follow.	Show good attempt to provide clear illustration of progress: problems → possible solutions, etc.	Show clear, well-organized, and supportive information, good flow of illustration of progress: issues → solutions.

Log specific				
Key Elements	0	1-2	3-4	5-6
Show problems/issues, potential solutions, and tests to verify the solution		Relevance, context, and some problems/issues are mentioned, but confusing. Lack of illustration on possible solutions.	Problems/issues are specifically defined, but solutions are not well-defined. Missing or very little indication of in-depth investigation/research.	Problem/issues are specifically defined in clear context, and criteria for possible solutions are also well-defined. External investigation/research included.

Provide data from tests on sensors, actuators, and different situation tasks to support hardware design	Some data, but very weak, and only superficial.	Some data to support hardware design. Evaluation of different configurations of sensors and actuators.	Good amount of data to support hardware design. Evaluation of various configurations of sensors and actuators. Research on different hardware structures. Clear presentation of data and analysis.
Provide data from tests on different situation tasks to support software design *	Some data, but very weak, and only superficial.	Some data to support software design. Evaluation of different algorithms to solve the proposed challenges.	Good amount of data to support software design. Evaluation of various algorithms to solve the proposed challenges. Research on innovative algorithms. Clear presentation of data and analysis.
Short term planning and task overview	Little sign of upfront planning. Do the work as it comes.	Show good attempt to have a plan upfront, but unfortunately, not followed through.	Sound project planning. Tasks are clearly designated with dates, goals, decisions, and accomplishments.
Show tests for issues & performance	Testing and evaluating the design using specifications. Testing and evaluation processes are inadequate. Little sign of design revision for performance improvement.	Somewhat detailed test plans. There seems to be a process for both testing and design review for performance improvement. But lack of analysis on the findings of issues, and investigation.	Sound test plans and the implementation of comprehensive test cases. Shows that the design process is repeated multiple times to improve performance on an individual design. Conclusions are clearly presented
Illustration on design with diagrams such as flowchart, UML, schematic, CAD, etc.	Some illustration of the design, but very weak, confusing, incoherent	Diagrams showing with level of modularization, but lack of illustration in the process of implementation, integration, and testing.	Excellent quality diagrams, flow of information, integration.

\* Analysis and comparison of different approaches to solving a given problem, e.g., comparison of different path-searching algorithms, victim detection, etc.