Rose-Hulman Institute of Technology
Computer Science and Software Engineering
Prof. Archana Chidanandan

Team ____1-6_____ **Milestone 1 (Assembly Language and Machine Language Specifications)** Total points ___27.5___

Evaluation Criteria Categories	Specific Criteria	Comments	Score
Consistency with higher level specifications	❑ Given the semantics of the Assembly Language (AL) specification, the sample program can be implemented ❑ Every instruction allowed by the assembly language (AL) specification has a unique machine language (ML) representation o Each instruction type includes enough fields to represent the information specified in the corresponding AL statements o Each field is allocated enough bits to represent all values allowed by the AL specification o For each instruction type, the total number of bits allocated to fields is not greater than the number of bits available ❑ Sample programs are translated into binary as described in ML specification	The AL is capable aside from the missing ability to jump to R7. -1 The AL matches up with the ML. They have enough fields and other things. The GCD is converted, but the sample program isn't. -0.5	(2.5/4)
Self-consistency	❑ Sample program uses the syntax described in AL specification ❑ Sample program uses the registers described in AL specification (number and type) ❑ Sample program uses the representation given in the ML specification, including correct values for fields specifying branch and jump targets	The syntaxes are correct in both programs. The one which is converted to ML is done so correctly and registers are used correctly.	(4/4)
Demonstration of design principles 1. Simplicity favors regularity 2. Smaller is faster 3. Good design demands good compromises 4. Make the common case fast	❑ AL instructions are easy to understand and are not overly specialized ❑ Number of instructions is minimized ❑ Number of registers is minimized ❑ Where the above criteria conflict, good compromises are made (to make the common case fast) ❑ Number of instruction types is small ❑ Instruction types have regularity	The AL doesn't look excessively complicated. The number of instructions isn't minimized, but is of an appropriate size. The number of registers is minimized to 6. There appear to be five instruction types. This is quite a few but not too many. They are consistent by type.	(4/4)

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Evaluation Criteria Categories	Specific Criteria	Comments	Score

Documentation
❑ Organization
❑ Completeness
❑ Conciseness
❑ Grammar and style
• Memo
  • Objective assessment of design and status
• Design Documentation
  • Demonstration of conceptual understanding
  • Highlights interesting features
• Design Process Journal
  • Alternatives considered
  • Tradeoffs
  • Decisions
• Website
	❑ Clear English specifications
	  o Instruction set (incl. prototypical AL statements)
	  o Registers
	  ▪ Number of general purpose registers
	  ▪ Specification of special purpose registers (if applicable)
	  ▪ Naming conventions
	  ▪ Usage conventions
	  o Instruction types
	  o Representation of each instruction
		You memo is pretty good. I have no major complaints.
		
		Your design document looks professional and contains all necessary information.
		
		Your design process journal could be made more professional with more description. However, it seems fine for this stage of the project. It covers the necessities and is therefore acceptable.
		
		Your website is good.
		
		AL and registers are covered appropriately as are instruction types and ML.
		
		Special purpose registers need to be covered. (PC, EPC, etc) -1
			(17/18)