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

Team ___2-1_____ **Milestone 1 (Assembly Language and Machine Language Specifications)** Total points ___27____

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	This AL is capable of handling the exceptions requested and a few other programs. They each are convertible to ML and their codes are given in documentation. Both are converted into binary.	(4/4)
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 assembly is used correctly as are registers. They are converted to machine language 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 instruction set looks fine. Not too specialized nor too general. The number of instructions is kept fairly low and the number of registers is the standard 16. There are three instruction type and they are consistent in machine break-up.	(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
		There is no mention of special purpose registers. I see a need for, at the least, PC and EPC. -1
		
		The general registers are explained well and chosen well enough. Everything is included in documentation (AL, ML, etc).
		
		Your memo should include things which the meeting decided upon, not necessarily the actual choice, but what was being discussed and perhaps mention of some design issues.
		
		There is no design document. This is basically a compilation of all your work. A description is given on the web-site under project and term project requirements. -2
		
		Your design process journal is awesome. It contains decisions made, alternative ideas, reasons for the choices, and even some of the interesting things. It is well written, clear, and thorough.
		
		Your website is ok. An introduction to your project would b nice on the first page, or a view of one of your documents, probably the memo.
			(15/18)