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

Team ____1-1_____ **Milestone 1 (Assembly Language and Machine Language Specifications)** Total points ___26.5/30_

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 program can and has been done. I would suggest another branch command, but it is up to you. Enough fields are present.4 sets of 4. The GCD is not written in procedure form. It is also not ready for the other interrupt. Values are not read in from the input, nor written to output, as the adjustment was needed. -0.5 No sample program -1	(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	Syntax is properly done. Yes, it uses the registers described. Code is converted to binary with a few errors. Please fix. Please provide a generic other program and convert to binary.	(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	These instructions are well planned. It would appear that the program is minimized with this set. Registers is also minimized. There are three instructions types, so the number is small. The types are consistent: P is register, I is immediate, and J is jump.	(4/4)

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

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
		Delete the bad web-site, keep the fishsticks-heaven one. No penalty this time.
		
		The site and documents specify the assembly language and machine codes. It also gives the Euclid's example program which will later be in the Kernel.
		
		All 16 registers need to be specified as well as any special purpose registers. -2
			(16/18)