

Team 2-3

Milestone 1 (Assembly Language and Machine Language Specifications)

Total points 28

Evaluation Criteria Categories	Specific Criteria	Comments	Score
Consistency with higher level specifications	<ul style="list-style-type: none"> <input type="checkbox"/> Given the semantics of the Assembly Language (AL) specification, the sample program can be implemented <input type="checkbox"/> Every instruction allowed by the assembly language (AL) specification has a unique machine language (ML) representation <ul style="list-style-type: none"> <input type="checkbox"/> Each instruction type includes enough fields to represent the information specified in the corresponding AL statements <input type="checkbox"/> Each field is allocated enough bits to represent all values allowed by the AL specification <input type="checkbox"/> For each instruction type, the total number of bits allocated to fields is not greater than the number of bits available <input type="checkbox"/> Sample programs are translated into binary as described in ML specification 	<p>The AL can handle the required programs.</p> <p>The AL isn't fully convertible to ML. Conversions for some commands are given, but not all commands can be translated with what is given in the design document. -1</p> <p>I can't find a machine code version of your programs. They should be up there.-1</p> <p>Jal and jr are difficult to accomplish, taking many lines of code (4). Done by lui and lli with ss used after. You may stick with this or reconsider.</p>	(2/4)
Self-consistency	<ul style="list-style-type: none"> <input type="checkbox"/> Sample program uses the syntax described in AL specification <input type="checkbox"/> Sample program uses the registers described in AL specification (number and type) <input type="checkbox"/> Sample program uses the representation given in the ML specification, including correct values for fields specifying branch and jump targets 	<p>The sample programs follow the syntax specified.</p> <p>The registers are used as indicated.</p> <p>ML isn't given for the programs. Points removed above for this error.</p>	(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	<ul style="list-style-type: none"> <input type="checkbox"/> AL instructions are easy to understand and are not overly specialized <input type="checkbox"/> Number of instructions is minimized <input type="checkbox"/> Number of registers is minimized <input type="checkbox"/> Where the above criteria conflict, good compromises are made (to make the common case fast) <input type="checkbox"/> Number of instruction types is small <input type="checkbox"/> Instruction types have regularity 	<p>The instruction set is a little complex, but not so much that it is a hindrance. It is set up to allow for condition-codes to eliminate branch commands.</p> <p>This minimizes instructions and although they have many registers they have allocated all but two of them. I would suggest using a portion of the memory as the stack, since special registers may prove inefficient, but no deduction no matter which you choose.</p> <p>There are three instruction types which are consistent.</p>	(4/4)

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<p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Organization <input type="checkbox"/> Completeness <input type="checkbox"/> Conciseness <input type="checkbox"/> Grammar and style • Memo <ul style="list-style-type: none"> • Objective assessment of design and status • Design Documentation <ul style="list-style-type: none"> • Demonstration of conceptual understanding • Highlights interesting features • Design Process Journal <ul style="list-style-type: none"> • Alternatives considered • Tradeoffs • Decisions • Website 	<ul style="list-style-type: none"> <input type="checkbox"/> Clear English specifications <ul style="list-style-type: none"> ○ Instruction set (incl. prototypical AL statements) ○ Registers <ul style="list-style-type: none"> ▪ Number of general purpose registers ▪ Specification of special purpose registers (if applicable) ▪ Naming conventions ▪ Usage conventions ○ Instruction types ○ Representation of each instruction 	<p>Your memo could use some work. It is lacking some information about your design, it only gives a short progress report.</p> <p>Your design document is good, points were subtracted above for missing information, such as a full list of ML for all of your AL. No points will be lost here for missing info. Just include it all next time.</p> <p>Your design journal is pretty well done. It seems to contain everything it needs.</p> <p>Your website isn't bad, but I would prefer to see some information about your project or perhaps the current memo on the opening page, just so it isn't so bland and some info will be easy to access.</p>	<p>(18/18)</p>