

**Term Project Milestone 2 Evaluation Team # 1-1 Points: 30/40**

Evaluation Criteria Categories	Specific Criteria	Comments	Score
Consistency with higher level specifications	<ul style="list-style-type: none"> <li><input type="checkbox"/> Every instruction allowed by the machine language (ML) specification has a unique register transfer language (RTL) representation</li> <li><input type="checkbox"/> The sequences of register transfers specified by each RTL description correctly implement the functions described in the assembly language (AL) specification</li> <li><input type="checkbox"/> Every component referenced in the RTL descriptions is determined</li> <li><input type="checkbox"/> For each component, input, output, and control signals that are sufficient to implement the RTL descriptions are identified, including the size of each signal</li> </ul>	<p>Every instruction is worked out in RTL except M and W which appear unnecessary since there is an input register and an output register which can just be tied to always take in and always output -1.</p> <p>&amp;, =, J, @, R, U, !,  , S, and -. Well, the errors here are consistent. Lots of missing Reg[], S is poorly done C=mem[C] is not a good thing. -3</p> <p>Every component is specified as are signals and lengths.</p>	(2/6)
Self-consistency	<ul style="list-style-type: none"> <li><input type="checkbox"/> The effect of each individual RTL statement is unambiguous</li> <li><input type="checkbox"/> No state element is assigned more than one value in any given clock cycle</li> </ul>	<p>Most statements are clear, C=mem[C] in S is a random draw from memory. -2</p> <p>No element is assigned twice in one cycle.</p>	(4/6)
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"> <li><input type="checkbox"/> Significant delays are balanced between cycles, so that the clock cycle can be as short as reasonably possible</li> <li><input type="checkbox"/> Each instruction uses as few clock cycles as possible without extending the clock cycle</li> <li><input type="checkbox"/> Each component is used efficiently at each clock cycle, and components are not duplicated unnecessarily</li> </ul>	<p>Delays are balanced appropriately.</p> <p>R has a clock cycle error, as C is assigned to a value already stored in B.-2</p> <p>Components are used appropriately. I see no blatant errors.</p>	(4/6)
Documentation (see below) <input type="checkbox"/> Organization <input type="checkbox"/> Completeness <input type="checkbox"/> Conciseness <input type="checkbox"/> Grammar and style	<ul style="list-style-type: none"> <li><input type="checkbox"/> Clear English specifications                             <ul style="list-style-type: none"> <li><input type="checkbox"/> The behavior of each component is described unambiguously</li> <li><input type="checkbox"/> Documentation, as listed in the following page, demonstrates all the design issues discussed above</li> </ul> </li> </ul>	<p>Description of components could be done better. The wording implies that the memory can only be accessed via PC, which store and load would imply otherwise. -1</p> <p>Journal contains grammatical errors in last two entries. -1</p> <p>Memo, website, and design document are fine.</p>	(14/16)

Milestone 1 updates	<ul style="list-style-type: none"><li><input type="checkbox"/> List of instructions described.</li><li><input type="checkbox"/> List of special purpose and general purpose registers.</li><li><input type="checkbox"/> Rules for machine language translation.</li><li><input type="checkbox"/> Sample programs in assembly and machine language.</li></ul>	This all looks fine. Since AL can't change, I would make M and W do nothing and just have those registers always take in/send out their info.	(6/6)
---------------------	--	---	-------

Required Documents

- Memo
  - Objective assessment of design and status
- Design Documentation
  - Demonstration of conceptual understanding
  - Highlights interesting features
- Design Process Journal
  - Alternatives considered
  - Tradeoffs
  - Decisions
- Website