Term Project Milestone 2 Evaluation

Evaluation Criteria Categories	Specific Criteria	Comments	Score
Consistency with higher level specifications	Every instruction allowed by the machine language (ML) specification has a unique register transfer language (RTL) representation The sequences of register transfers specified by each RTL description correctly implement the functions described in the assembly language (AL) specification Every component referenced in the RTL descriptions is determined For each component, input, output, and control signals that are sufficient to implement the RTL descriptions are identified, including the size of each signal	Instructions specified in ML have RTL descriptions. Exception: Jump Register and Chain. RTL description seems consistent with specified AL output. Components are, for the most part, well specified. Register File will likely need more input address / output busses. Components mostly have well-specified control signals. Memory file might benefit from the addition of a memread signal.	2/3
Self-consistency	The effect of each individual RTL statement is unambiguous No state element is assigned more than one value in any given clock cycle	RTL statements are clear. Elements are not assigned multiple values in one clock cycle.	3/3
Demonstration of design principles 1. Simplicity favors regularity 2. Smaller is faster 3. Good design demands good compromises 4. Make the common case fast	Significant delays are balanced between cycles, so that the clock cycle can be as short as reasonably possible Each instruction uses as few clock cycles as possible without extending the clock cycle Each component is used efficiently at each clock cycle, and components are not duplicated unnecessarily	Delays are mostly well balanced. Sign-extend is very fast, does not need its own cycle in jump. (why are you sign-extending an address anyway?) Same for Jump Chain. LoadI should use the value in A instead of reading from the register file a second time. Assembler.	3/3

Documentation (see below) Organization Completeness Conciseness Grammar and style	Clear English specifications o The behavior of each component is described unambiguously o Documentation, as listed in the following page, demonstrates all the design issues discussed above	Minor CVS problems with corrupted website / memo. Design Process Documentation should include many of the things considered in the "thoughtsonproject" text file. It should show some of the alternatives that you considered and the reasoning behind you design decisions. Design Documentation provides a clear definition of the RTL used to implement your instructions, as well as a detailed analysis of the components necessary for your instructions. Website is good; links to relevant files and information.	15/16

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
- Webpage