

Team ____1-4____

Milestone 1 (Assembly Language and Machine Language Specifications) Total points ____27____

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 assembly language is sufficient for the program.</p> <p>Every instruction has a machine-code binary representation.</p> <p>There are enough fields for each instruction.</p> <p>Program 2 and GCD are in ML as well as AL.</p>	(4/4)
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 program is fine. It fits with the AL specifications.</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 AL instructions are easy to use and understand.</p> <p>The registers and instructions are minimized to still allow versatility.</p> <p>There are three types and 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 is pretty good, but it has poor grammar. This makes it more difficult to understand.</p> <p>The design process journal is a little crude, but it makes sense. It covers the thoughts and decisions made by the group.</p> <p>The design document is missing. This document is specified on the web-page, it should contain a collaboration of your manuals (AL, ML, etc.) These specifications can be found on the website, as I said. -2. Have it by next time. Description is given somewhat to the left of here under categories.</p> <p>Specify special purpose registers (PC, EPC etc). -1</p>	<p>(15/18)</p>