Memo

TO: Micah Taylor, Project Lead

FROM: Benjamin Efron, Josh Gayso, Thomas Bonatti, Jeffery Humphrey, Designers

DATE: January 14, 2015

SUBJECT: Assembly Language Design

We currently have almost all of our assembly design determined, with some room for possible minor changes. We decided that the processor will use a half accumulator half load – store design, where a main accumulator register is the automatically used in most operations and some auxiliary registers are included for utility. Most aspects of the assembly language and the specific instructions have been determined, however, we may still decide to change some minor conventions, such as designating one of the now temporary registers as an address register where most address instructions will be written to and read from. Currently we are planning on implementing the processor as a single cycle processor with the possibility of upgrading it to a pipelining processor, though multi-cycle is still a possibility as some of the instructions, specifically commonly used ones such as move, copy, and swap can all be done much faster than arithmetic and memory instructions.