ARM Assembly

Part 1

A screenshot of a cell phone

Description automatically generated A screenshot of a cell phone

Description automatically generated

When the given code run there is an error at the “as -g -o third.o third.s” step because of the data type “.shalfword.” To fix this error we have to replace the data type with half word or “.hword.”

A screenshot of a computer

Description automatically generated

A screenshot of a cell phone

Description automatically generated

These images show the values of registers and accessing the memory at addresses using the “sh.”

Part 2

A screenshot of a computer screen

Description automatically generatedA screenshot of a social media post

Description automatically generated

A screenshot of a computer screen

Description automatically generated

This code is for the equation “Register = val2 + 3 + val3 – val1,” where val1 is signed and val2 and val3 are unsigned. This code is different form the tutorial because for this one we don’t specify the data type in .data but rather in .code, where when loading the value we use ldrsb to load the signed byte. This is completely different from Intel’s x86 processor.