

ISA Instruction Set Architecture

- Memory Organization
- Registers
- Instruction Set
 1. Opcodes
 2. Data Types
 3. Addressing Modes

LC-3 Memory Organization

64K words

Addressability = 16 bits

Address space = 2^{16}

LC-3 Registers

8 16-bit General Purpose

R0, R1, .., R7

LC-3 Instruction Set

16 bit Instructions

15 Operations

2's Complement Integer

Immediate / Literal

Register

Memory Reference

PC-Relative

Base+Offset

Indirect