

EECS 370 Exam Reference Sheet

Default data-type sizes

Type	Storage size
char	1 byte
int	4 bytes
short	2 bytes
long	8 bytes

LEGV8 ABI

- X30: **link register**
- X28: **stack pointer**
- X19-X27: **callee-saved**
- X0-15: **caller-saved**
- X0-X7: **arguments** (memory used if more space is needed)
- X0: **return value**

LC2K Instructions

opcode: bits 24-22. regA: bits 21-19. regB: bits 18-16. destReg: bits 2-0. OffsetField: bits 15-0.

Instruction Type	Instructions in category	Description of required fields
R-Type Instructions	add, nor (000, 001)	opcode, field0, field1, and field2 are required fields: <ul style="list-style-type: none">• field0 (regA)• field1 is a register (regB)• field2 is a register (destReg)
I-Type instructions	lw, sw, beq (010, 011, 100)	opcode, field0, field1 and field2 are required fields: <ul style="list-style-type: none">• field0 is a register (regA)• field1 is a register (regB)• field2 is either a numeric address, or a symbolic address (represented by a label)
J-Type instructions	jalr (101)	opcode, field0, and field1 are required fields: <ul style="list-style-type: none">• field0 is a register (regA)• field1 is a register (regB)
O-Type instructions	noop, halt (110, 111)	Only the opcode field is required