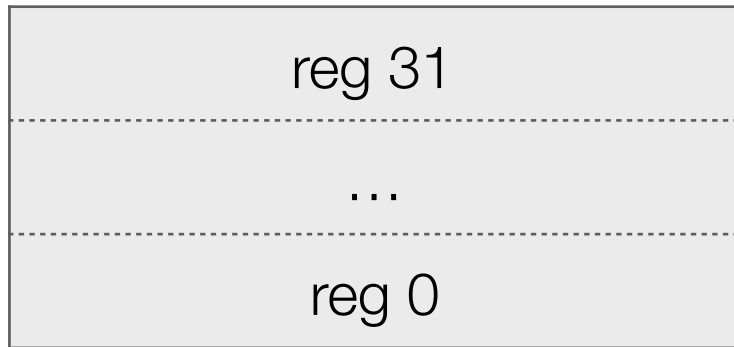
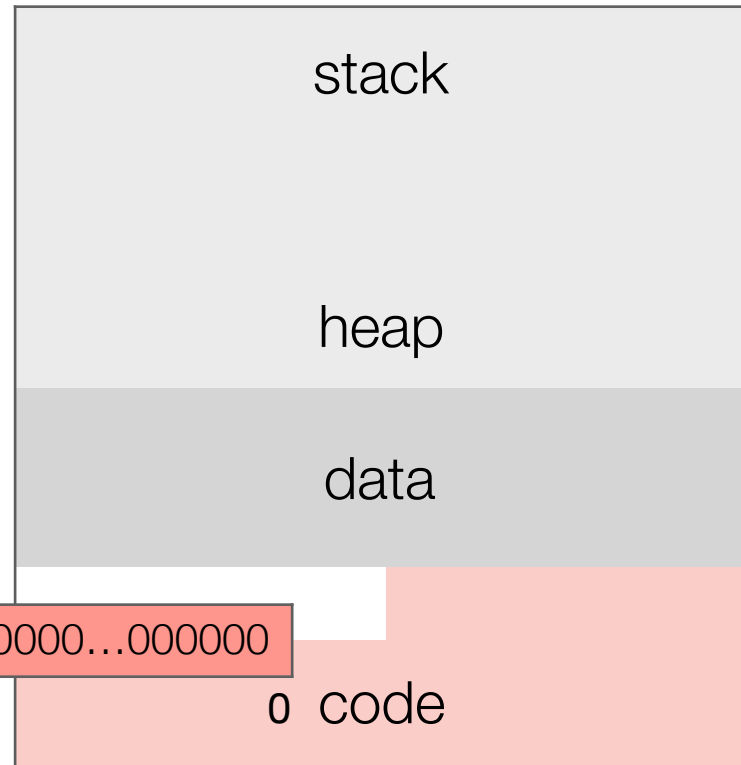


Fetch

- A 32-bit instruction gets fetched from memory and is then stored in the instruction register (ir)
- 2 instructions stored in memory using hi/low word

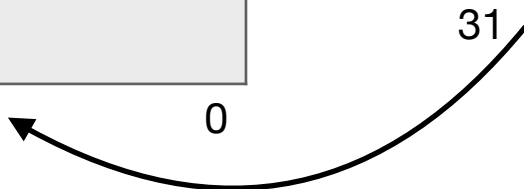


63 0



31

63 0

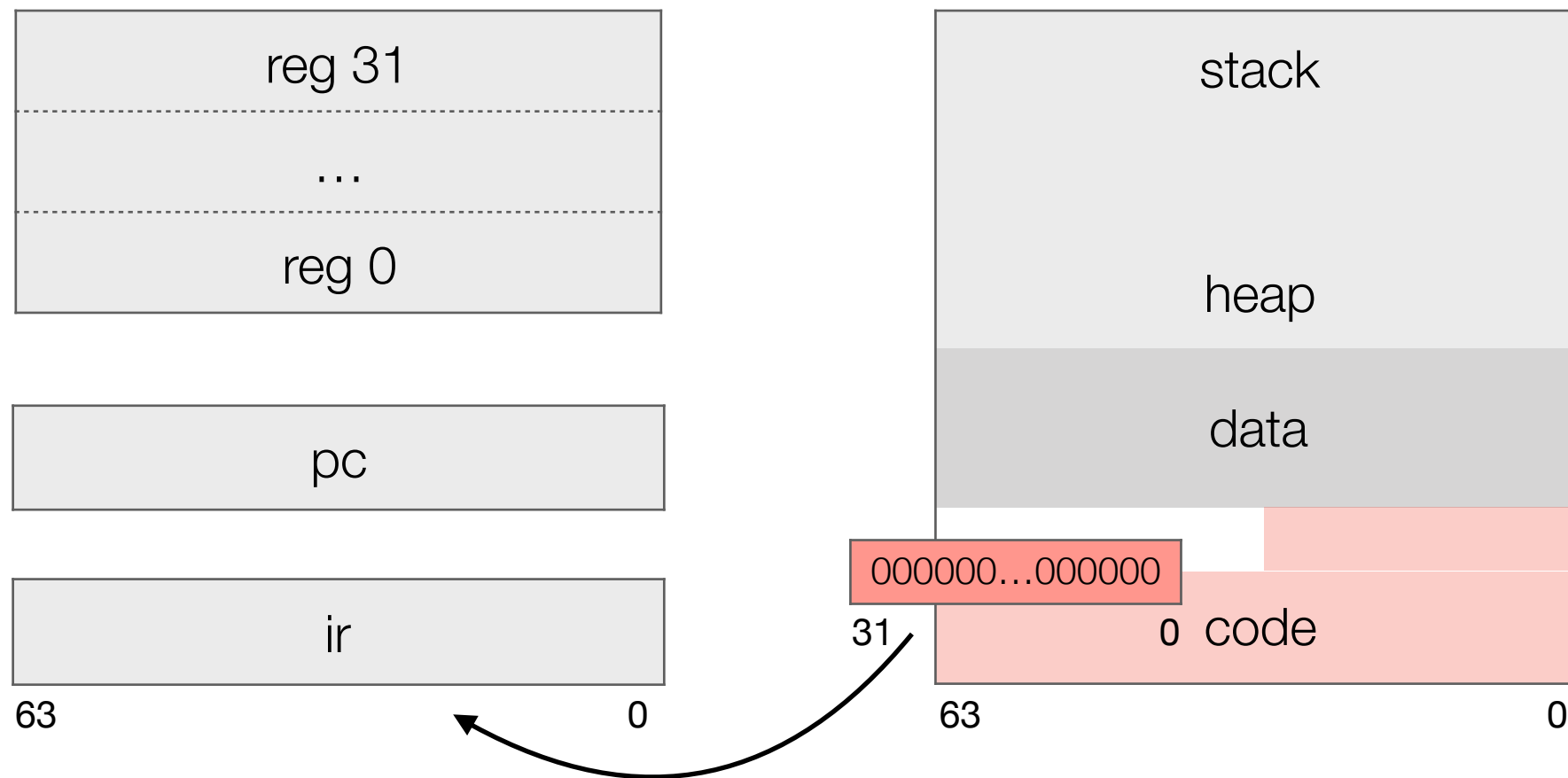


Decode -Remember

- The opcode specifies the instruction format in which the instruction is encoded.
- After decoding the binary code of the instruction, the processor knows what instruction and parameters it is dealing with.
- Example **ADDI**:
 - Immediate instructions contain bits that are interpreted as numerical value that is retrieved using shifting operations.
 - 5 bit are enough to encode 32 registers.

immediate	rs1	funct3	rd	opcode
12 bit	5 bit	3 bit	5 bit	7 bit

Fetch



- A 32-bit instruction gets fetched from memory and is then stored in the instruction register (*ir*)
- 2 instructions stored in memory using hi/low word