

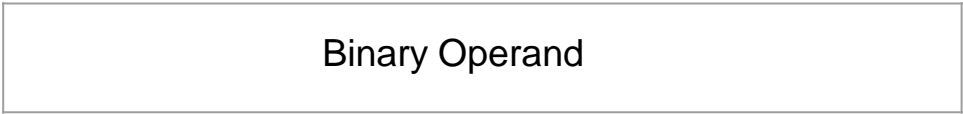
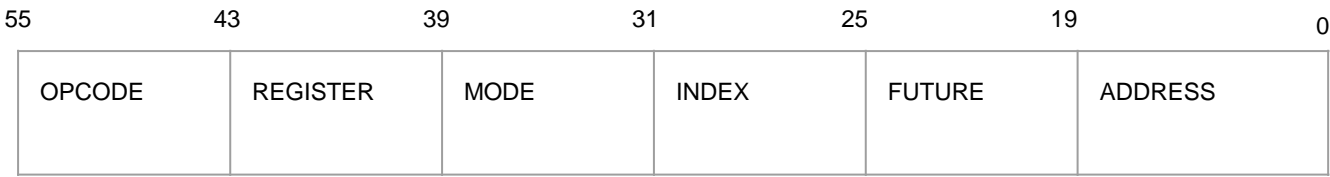
56-Bit Computer

Vishiel Outar

Step 1:

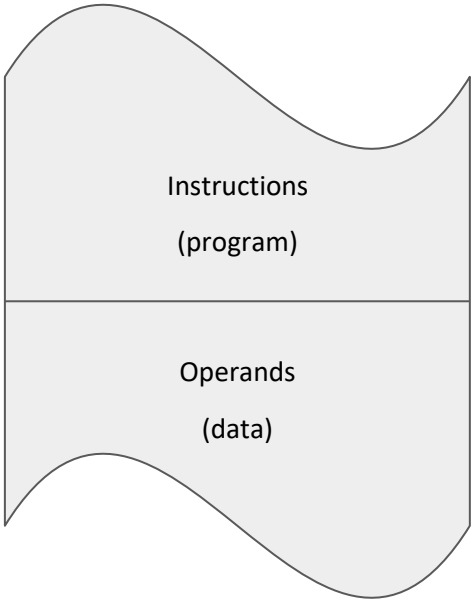
OPCODE	REGISTER	MODE	INDEX REGISTER	FUTURE	ADDRESS
12	4	8	6	6	20

2. PROGRAM ORGANIZATION

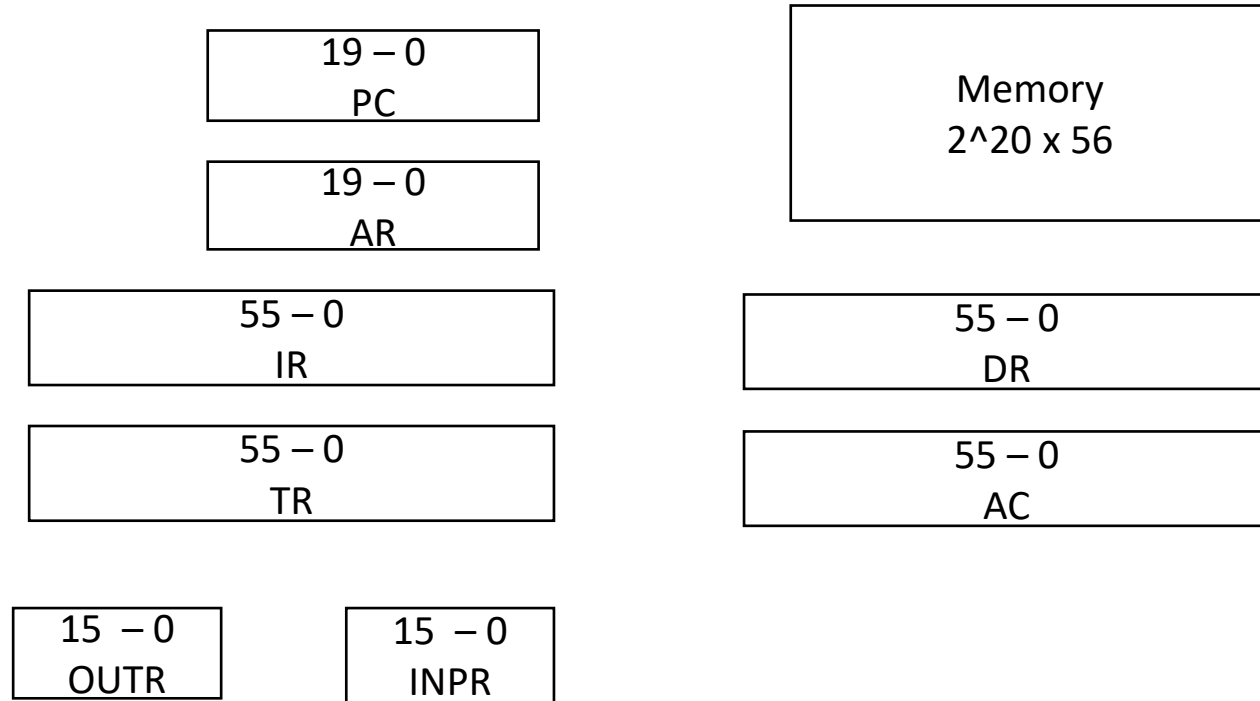


Memory

$2^{20} \times 56$



PROCESSOR REGISTER
(ACCUMULATOR OR AC)

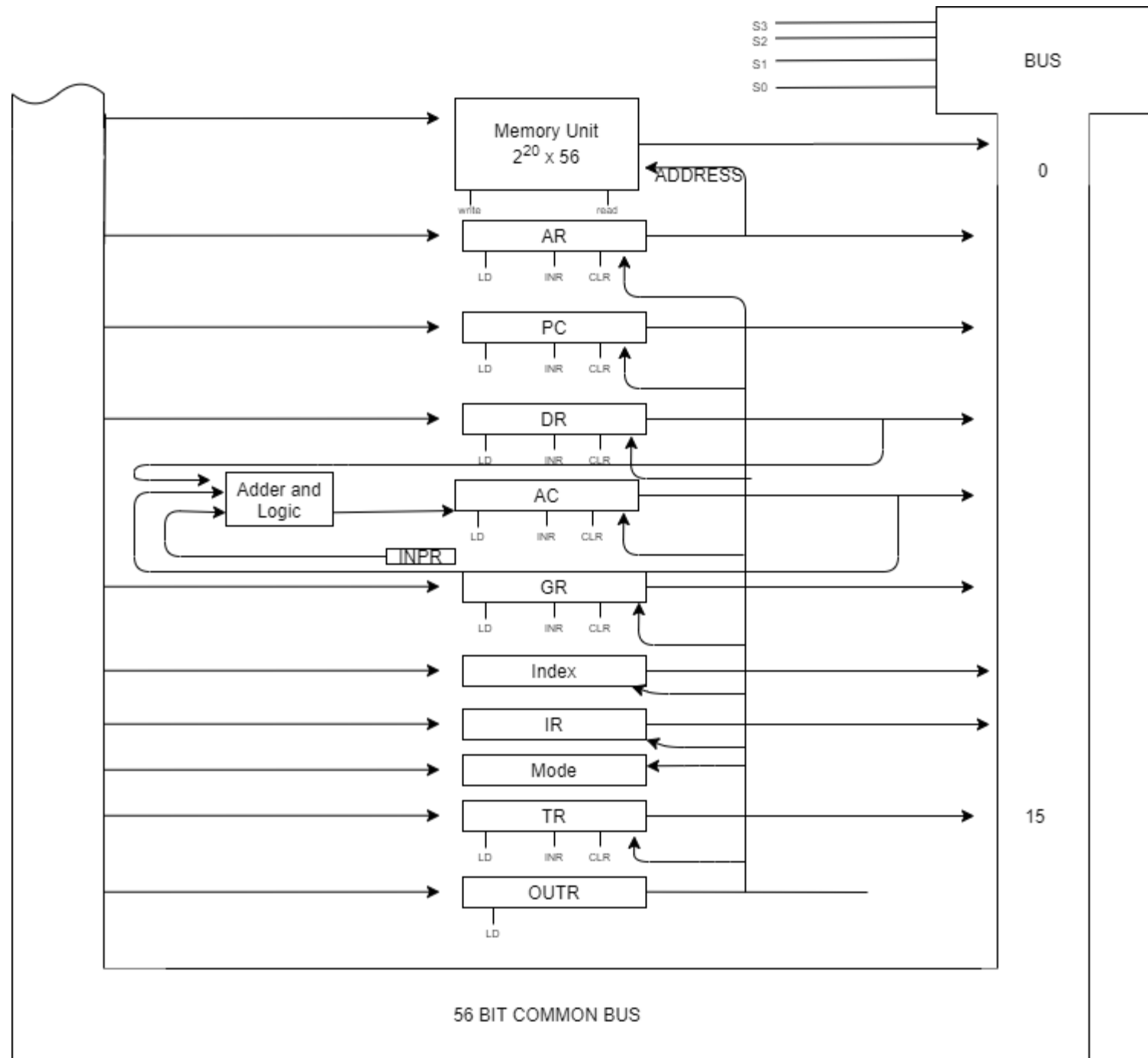


Step 3

Register Symbol	Number of Bit	Name of Register	Purpose
DR	56	Accumulator	Holds memory operands
AR	20	Address Register	Holds address for the memory of the computer
AC	56	Accumulator	Processor register
IR	56	Instruction Register	Holds computer instructions
PC	20	Program Counter	Holds the address of all the addresses in the computer
TR	56	Temporary Register	Holds all temporary data
INPR	16	Input Register	Holds the input character(s)
OUTR	16	Output Register	Holds the output character(s)

Step 4

Common Bus



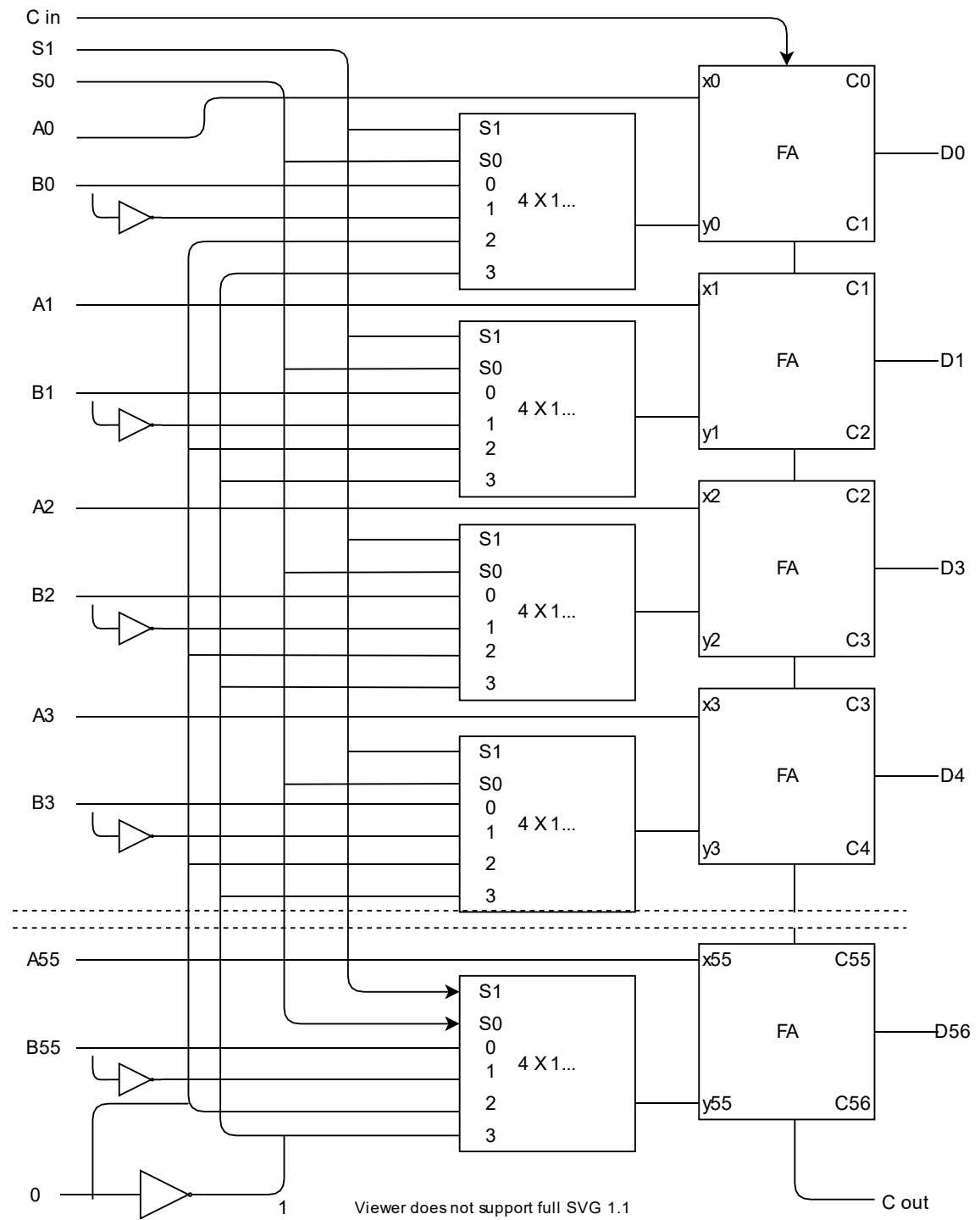
Part 5- Basic Instruction

Opcode 12 bits	General Register 4 bits	Index Register 8 bits	Mode 6 bits	Future 6 bits	Memory 20 bits
-------------------	-------------------------------	-----------------------------	----------------	------------------	-------------------

1111 1111 1111	Register Operation (44)
----------------	-------------------------

1111 1111 1111	I/O Operation (44)
----------------	--------------------

Part 6: ARITHMETIC LOGIC



Part 7: LOGIC UNIT

