Cameron Mathis

Stack Machine:

Instruction:

OP code Memory Address

8 bits 24 bits

Programs:
.text

.text		
	PUSH X	0x01200000
	PUSH X	0x01200000
	PUSH X	0x01200000
	MULT	0x04000000
	PUSH A	0x01200001
	MULT	0x04000000
	PUSH B	0x01200002
	PUSH X	0x01200000
	MULT	0x04000000
	PUSH C	0x01200003
	PUSH	0x03000000
	ADD	0x03000000
	POP	0x02000000
	END	0x05000000
.data		
	X:3	0x00200000:3
	A:7	0x00200001:7
	B:5	0x00200002:5
	C:4	0x00200003:4

Code Size: 68 bytes

Accumulator:

Instruction:

OP code	Memory Address	
8 bits	24 bits	

Programs:

.text		
	LOAD X	0x01200000
	MULX	0x04200000
	MULA	0x04200001
	STO S1	0x02300000
	LOAD B	0x01200002
	MULX	0x04200000
	STO S2	0x02300001
	LOAD C	0x01200003
	ADD S1	0x03300000
	ADD S2	0x03300001
	END	0x05000000
.data		
	X:3	0x00200000:3
	A:7	0x00200001:7
	B:5	0x00200002:5
	C:4	0x00200003:4

Code Size: 60 Bytes

Code Size of MIPS program: 52 Bytes