



UNIVERSIDADE FEDERAL DE SÃO CARLOS

Centro de Ciências Exatas e de Tecnologia

Departamento de Computação

Arquitetura e Organização de Computadores 1

Prática 6 Unidade de Controle

Professores: Luciano de Oliveira Neris e Mauricio Fernandes Figueiredo

Autores (Grupo R)

Guilherme Campos Marques, 727338 e Engenharia da Computação

Leticia Bossatto Marchezi, 791003 e Ciência da Computação

Marcos Cardoso Vendrame, 790725 e Ciência da Computação

Mateus Grota Nishimura Ferro, 771043 e Ciência da Computação

São Carlos, 29 de Maio de 2021

1. Seção A

Link para o projeto: https://edaplayground.com/x/U_Hf

2. Seção B

Guilherme Campos Marques, 727338

Dígito final: 8

0x20020001

Tipo I

addi \$v0 \$0 0x0001

(0x20020001)

2	0	0	2	0	0	0	1
---	---	---	---	---	---	---	---

0010	0000	0000	0010	0000	0000	0000	0001
------	------	------	------	------	------	------	------

001000	00000	00010	00000	00000	000001
--------	-------	-------	-------	-------	--------

001000b	0d	2d	1d
---------	----	----	----

op (6 bits)

rs (5 bits)

rt (5 bits)

imm (16 bits)

Instruction	Opcode	RegWrite	RegDst	ALUSrc	Branch	MemWrite	MemtoReg	ALUOp
addi	001000	1	0	1	0	0	0	00

Leticia Bossatto Marchezi, 791003.

Repetição do dígito final 3 - código do dígito 9 escolhido:

0xAC020054.

Tipo I

sw \$v0, 84(\$0)

(0xAC020054)

a	c	0	2	0	0	5	4
---	---	---	---	---	---	---	---

1010	1100	0000	0010	0000	0000	0101	0100
------	------	------	------	------	------	------	------

101011	00000	00010	0000000001010100
--------	-------	-------	------------------

101011b	0d	2d	84d
op (6 bits)	rs (5 bits)	rt (5 bits)	imm (16 bits)

Instruction	Opcode	RegWrite	RegDst	ALUSrc	Branch	MemWrite	MemtoReg	ALUOp
sw	101011	0	X	1	0	1	X	00

Marcos Cardoso Vendrame, 790725

Dígito Final: 5

0xAC670044

Tipo I

sw \$a3, 68(\$v1)

(0xAC670044)

A	C	6	7	0	0	4	4
---	---	---	---	---	---	---	---

1010	1100	0110	0111	0000	0000	0100	0100
------	------	------	------	------	------	------	------

101011	00011	00111	0000 0000 0100 0100
--------	-------	-------	---------------------

101011b	3d	7d	68d
op (6 bits)	rs (5 bits)	rt (5 bits)	imm (16 bits)

Instruction	Opcode	RegWrite	RegDst	ALUSrc	Branch	MemWrite	MemtoReg	ALUOp
SW	101011	0	X	1	0	1	X	00

Mateus Grota Nishimura Ferro, 771043

Dígito final: 3

0x00853820

Tipo R

add \$a3 \$a0 \$a1

(0x00853820)

0	0	8	5	3	8	2	0
---	---	---	---	---	---	---	---

0000	0000	1000	0101	0011	1000	0010	0000
------	------	------	------	------	------	------	------

000000	00100	00101	00111	00000	100000
--------	-------	-------	-------	-------	--------

000000b	4d	5d	7d	00000b	100000b
op (6 bits)	rs (5 bits)	rt (5 bits)	rd (5 bits)	shamt (5bits)	funct (6 bits)

Instruction	Opcode	RegWrite	RegDst	ALUSrc	Branch	MemWrite	MemtoReg	ALUOp
R-type	000000	1	1	0	0	0	0	10