15 INSTRUCTIONS -RISC-V

RISCV	INSTRUCTI	FORMAT	32 BIT CODE FORMAT	32 BIT CODE	32 BIT CODE
INSTRUCTIONS	ON AS IN	TYPE			IN
	OBJDUMP		. [44 0] 4[40 45]	000000000000000000000000000000000000000	HEXADECIMAL
IALD / Jugan	70ro # 0		imm[11:0] rs1[19:15] funct3[14:12] rd[11:7]	00000000000000000	0x000000e7
JALR (Jump and link	zero # 0 <main-< td=""><td></td><td>opcode[6:0]</td><td>000 00000 1100111</td><td></td></main-<>		opcode[6:0]	000 00000 1100111	
Register)	0x100b0>		opcode[o.o]		
LD (load	ra,8(sp)	I	imm[11:0] rs1[19:15]	00000001000 00010	0x00813083
doubleword)	14,0(3P)	'	funct3[14:12] rd[11:7]	011 00001 0000011	000013003
,			opcode[6:0]		
OR (Bitwise	a1, a1, a3	R	funct7[31:25] rs2[24:20]	0000000 01111 01011	0x00d5e5b3
OR)			rs1[19:15] funct3[14:12]	110 01011 0110011	
			rd[11:7] opcode[6:0]		
ORI (Bitwise	s1,s1,16	1	imm[11:0] rs1[19:15]	00000010000 01001	0x0104e493
OR			funct3[14:12] rd[11:7]	110 01001 0010011	
Immediate)			opcode[6:0]		
SRLI (Shift	a5,a5,0x30	1	imm[11:0] rs1[19:15]	000000110000 01111	0x0307d793
Right Local			funct3[14:12] rd[11:7]	101 01111 0010011	
Immediate)			opcode[6:0]		
SLLI (Shift Left	a3, a1, 0x8	I	imm[11:0] rs1[19:15]	000000001000 01011	0x00859693
local			funct3[14:12] rd[11:7]	001 01101 0010011	
Immediate)	h	<u> </u>	opcode[6:0]	000004 04444 40004	0
BNE (Branch if	bne a5, a3, 10538	В	imm[12 10:5] rs2[24:20] rs1[19:15] funct3[14:12]	000001 01111 10001 001 0010 1100011	0xead798e3
Not equal)	10538		imm[4:1 11] opcode[6:0]	001 0010 1100011	
LH (Load	a5,18(a5)	ı	imm[11:0] rs1[19:15]	000000010010 01111	0x01279783
Halfword)	a5,18(a5)	'	funct3[14:12] rd[11:7]	001 01111 0000011	0.01279783
Hanword			opcode[6:0]	001 01111 0000011	
LUI (Load	lui a2, 0x1	U	imm[31:12] rd[11:7]	000000000000000000000000000000000000000	0x00001637
Upper	, , , , , , , , , , , ,		0110111	01010 0110111	
Immediate)					
ADDI (ADD	sp, sp, -16	I	imm[11:0] rs1[19:15]	111111111000 00010	0xff010113
Immediate)			funct3[14:12] rd[11:7]	000 00010 0010011	
			opcode[6:0]		
SD (Store	ra, 8(sp)	S	imm[11:5] rs2[24:20]	0000000 00001 00010	0x00113423
Doubleword)			rs1[19:15] funct3[14:12]	011 01000 0100011	
			imm[4:0] opcode[6:0]		
JAL (Jump and	ra, 1040c	J	imm[20] imm[10:1]	00000011010000000001	0x340000ef
Link)	<printf></printf>		imm[11] imm[19:12]	1101111	
	- 0 55550		rd[11:7] opcode[6:0]		0 ((((0.000
AUIPC (Add	a5, 0xffff0	U	imm[31:12] rd[11:7]	11111111111111110000	0xffff0797
upper			opcode[6:0]	01111 0010111	
Immediate to PC)					
ADD (addition)	s0,a5,s0	R	funct7[31:25] rs2[24:20]	0000000 01000 01111	0x00878433
			rs1[19:15] funct3[14:12]	000 01000 0110011	
			rd[11:7] opcode[6:0]		
SUB	a2, a2, a0	R	funct7[31:25] rs2[24:20]	0100000 01010 01100	0x40a60633
(Subtraction)			rs1[19:15] funct3[14:12]	000 01100 0110011	
			rd[11:7] opcode[6:0]		