

	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	FORMAT	HEX CODE																												
1    addi    sp,sp,-16																																																														
	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1		I Type	FF010113																										
	IMM[11:0]											rs1					funct3					rd					opcode																																			
2    sd       ra,8(sp)	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	1	0	0	0	0	1	0	0	0	1	1																													
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[11:5]											rs2					rs1					funct3					imm[4:0]					opcode						S-type	10113423																							
3    li       a2,15	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	1	1																														
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[11:0]											rs1					funct3					rd					opcode						I-type	7FF00613																												
4    lui       a0,0x21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	0	0	1	1	0	1	1	1																														
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[31:12]													rd					opcode						U-type	15537																																				
5    ld       ra,8(sp)	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1																													
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[11:0]											rs1					funct3					rd					opcode						I-type	10113403																												
6    mv       a1,a0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	0	0	1	1																														
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[11:0]											rs1					funct3					rd					opcode						I-type	50593																												
7    j        12df8	0	0	0	1	0	0	1	0	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1																													
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[20:10:11:19:12]													rd					opcode						J-type	12DF806F																																				
8    lw       a5,80(s0)	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1																												
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[11:0]											rs1					funct3					rd					opcode						I-type	5042783																												
9    lh       a3,16(a4)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	1	1																													
	31	27	26	25	24	20	19	15	14	12	11	7	6	0																																																
	imm[11:0]											rs1					funct3					rd					opcode						I-type	1011683																												

10	slli	a5,a3,0x30	<div> 000000110000011010010111111011010011 </div> <div> 3127262524201915141211760 </div> <div> imm[11:0]rs1funct3rdopcode </div> <div>I-type</div>	30697D3
11	srlr	a5,a5,0x30	<div> 00000011000001111111010111111101010011 </div> <div> 3127262524201915141211760 </div> <div> imm[11:0]rs1funct3rdopcode </div> <div>I-type</div>	307D7D3
12	and	a3,a2,a3	<div> 000000000110101100111010110101101011 </div> <div> 3127262524201915141211760 </div> <div> funct7rs2rs1funct3rdopcode </div> <div>R-type</div> <div> a3 = 13a2 = 12a3 = 13 </div>	D676B3
13	sw	a5,-28(s0)	<div> 11111110111110100000100001000100011 </div> <div> 3127262524201915141211760 </div> <div> imm[11:5]rs2rs1funct3imm[4:0]opcode </div> <div>S-type</div> <div> a5 = 15s0 = x8 </div>	FEF42223
14	addiw	a5,a5,1	<div> 000000000000010111110000001111100011011 </div> <div> 3127262524201915141211760 </div> <div> imm[11:0]rs1funct3rdopcode </div> <div>I-type</div> <div> a5 = 15a5 = 15 </div>	17879B
15	addw	a5,a4,a5	<div> 0000000001111101111000000011111010111011 </div> <div> 3127262524201915141211760 </div> <div> funct7rs2rs1funct3rdopcode </div> <div>R-type</div> <div> a5 = 15a4 = 14a5 = 15 </div>	F707BB