COL216 Computer Architecture

Encoding of instructions to be implemented

Cond F I Opcode S Rn Rd Operand2 Instruction	31 30 29 28	27 26	25	24	23 2	2 21	20	19 18 17 16	15 14 13 12	11 10 9 8	7 6 5 4	3 2 1 0	
1	Cond	F			Opcod	e	S	Rn	Rd	Operand2			Instruction
1110 00		00	1		0100	0100							ADD imm
1110 00	1110						0			The second secon	lmm8		SUB imm
1110 00 0000 Rn Rd ShftSpec 000000000 Rm SUB reg 000000000 MOV reg 000000000 CMP reg 000000000 CMP reg 000000000 CMP reg 000000000 ShftSpec 000000000 Rm SUB reg 000000000 MOV reg 000000000 CMP reg 000000000 ShftSpec 000000000 MOV reg 0000000000 ShftSpec 0000000000 MOV reg 0000000000 ShftSpec 0000000000 MOV reg 0000000000 ShftSpec 00000000000 ShftSpec 000000000000 ShftSpec 00000000000 ShftSpec 000000000000 ShftSpec 000000000000 ShftSpec 00000000000000 ShftSpec 00000000000000 ShftSpec 000000000000000 ShftSpec 000000000000000000000000000000000000													MOV imm
ADD reg ShftSpec Rm ShftSpec SUB reg MOV reg CMP reg							1	Rn	Rd				
1101			0				_			I KM			
1101							0					Rm	
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 Cond F I P U B W L Rn Rd Offset 1110 01 0 0 0 1 Rn Rd Imm12 STR imm offset (4 STR imm													
Cond F I P U B W L Rn Rd Offset Instruction 1110 01 0 0 0 0 0 0 Imm12 STR imm offset (-1) 1110 01 0 <					1010		1						CMP reg
Cond F I P U B W L Rn Rd Offset Instruction 1110 01 0 0 0 1 0 0 1 0 Imm12 STR imm offset (-1) STR imm offset (-1) <td colspan="13"></td>													
1110 01 0 0 0 0 0 0 0 STR imm offset (+ LDR imm offset (+ STR imm offset (+ STR imm offset (+ STR imm offset (- STR imm			25	-	_	_	20			11 10 9 8		3 2 1 0	
1110 01 0 0 1 Rn Rd Imm12 LDR imm offset (-1 STR im	Cond	F		Р	U B	W	L	Rn Rd Offset					
STR imm offset (-		01	0		1				Rd	lmm12			STR imm offset (+)
STR imm offset (-	1110			0 —		0	0	Rn					
LDR imm offset (-					0								
													LDR imm offset (-)
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				_									
Cond F Opc Offset Instruction		F	0	рс									
1110 B	1110												
		10 10		.0	lmm24						· · · · · · · · · · · · · · · · · · ·		
0001 BNE	0001										BNE		

This should be '1' instead of '0'