

Class Assignment 05

Task-1: Complete the data tables.

Task -2: Attach the Simulation Part

F.1 Experimental Data (Binary Adder-Subtractor):

Operation	M	A	B	C ₄	S ₄ S ₃ S ₂ S ₁
7 + 5	0	0111	0101	0	1100
4 + 6	0	0100	0110	0	1010
9 + 11	0	1001	1011	1	0100
15 + 15	0	1111	1111	1	1110
7 – 5	1	0111	0101	1	0010
4 – 6	1	0100	0110	0	1110
11 – 2	1	1011	0010	1	1001
15 – 15	1	1111	1111	1	0000

Table F.1.1

F.2 Experimental Data (Ripple-Through-Carry Adder):

Operation	A	B	Overflow Carry	Sum
7 + 5				
18 + 19				
72 + 83				
129 + 255				

Table F.2.1

F.3 Experimental Data (BCD Adder):

Decimal Value	Binary Sum					BCD Sum				
	K	Z ₃	Z ₂	Z ₁	Z ₀	C	S ₃	S ₂	S ₁	S ₀
0	0	0	0	0	0					
1	0	0	0	0	1					
2	0	0	0	1	0					
3	0	0	0	1	1					
4	0	0	1	0	0					
5	0	0	1	0	1					
6	0	0	1	1	0					
7	0	0	1	1	1					
8	0	1	0	0	0					
9	0	1	0	0	1					
10	0	1	0	1	0					

Class Assignment 05

11	0	1	0	1	1					
12	0	1	1	0	0					
13	0	1	1	0	1					
14	0	1	1	1	0					
15	0	1	1	1	1					
16	1	0	0	0	0					
17	1	0	0	0	1					
18	1	0	0	1	0					
19	1	0	0	1	1					

Table F.3.1

Operation	A	B	Overflow Carry	Sum
9 + 0				
9 + 1				
9 + 2				
9 + 3				
9 + 4				
9 + 5				
9 + 6				
9 + 7				
9 + 8				
9 + 9				

Table F.

Class Assignment 05

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