EXPERIMENT NO.:

TITLE: Design of A 4-Bit Parallel Binary Adder Circuit Using The IC-Chip 4008.

OBJECTIVE: To design of A 4-Bit Parallel Binary Adder Circuit Using The IC-Chip 4008.

THEORY:

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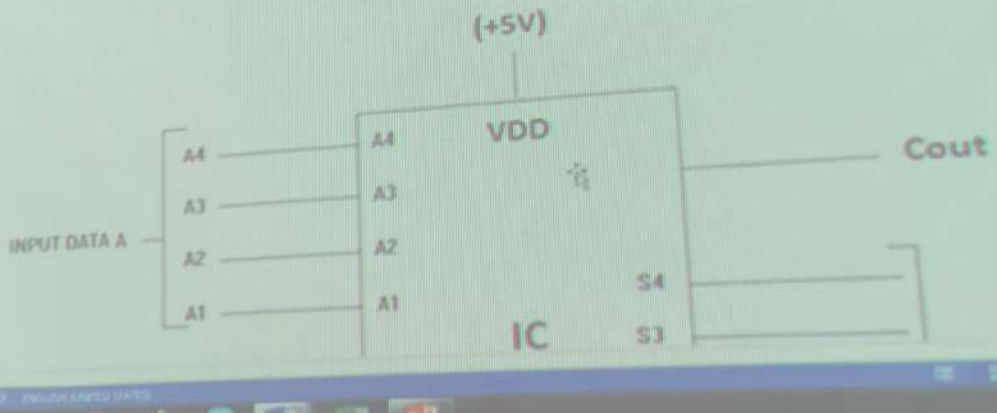
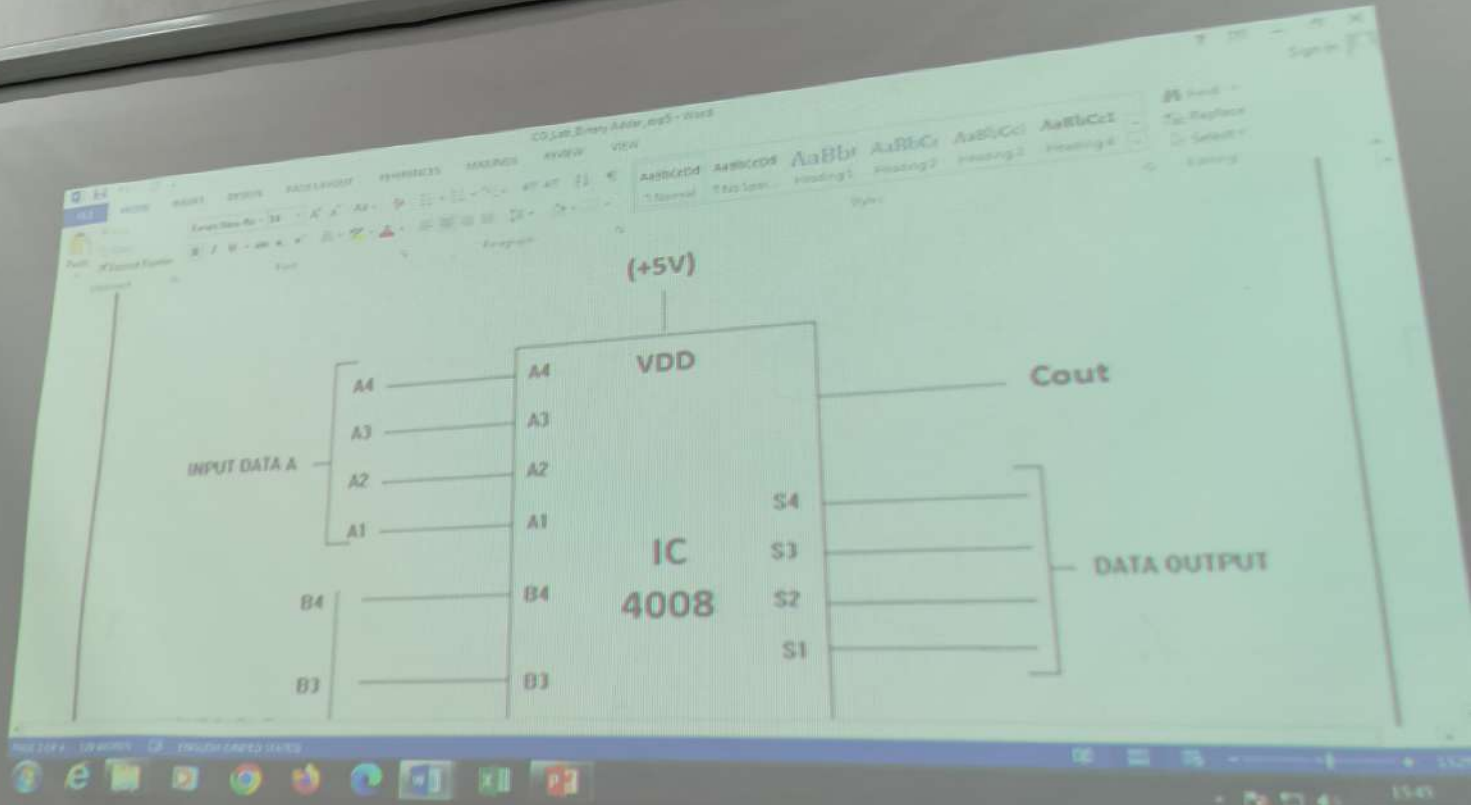
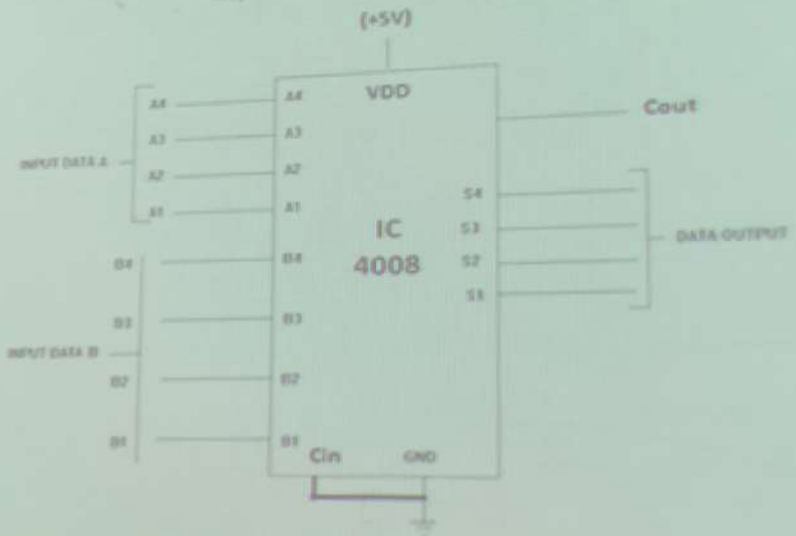
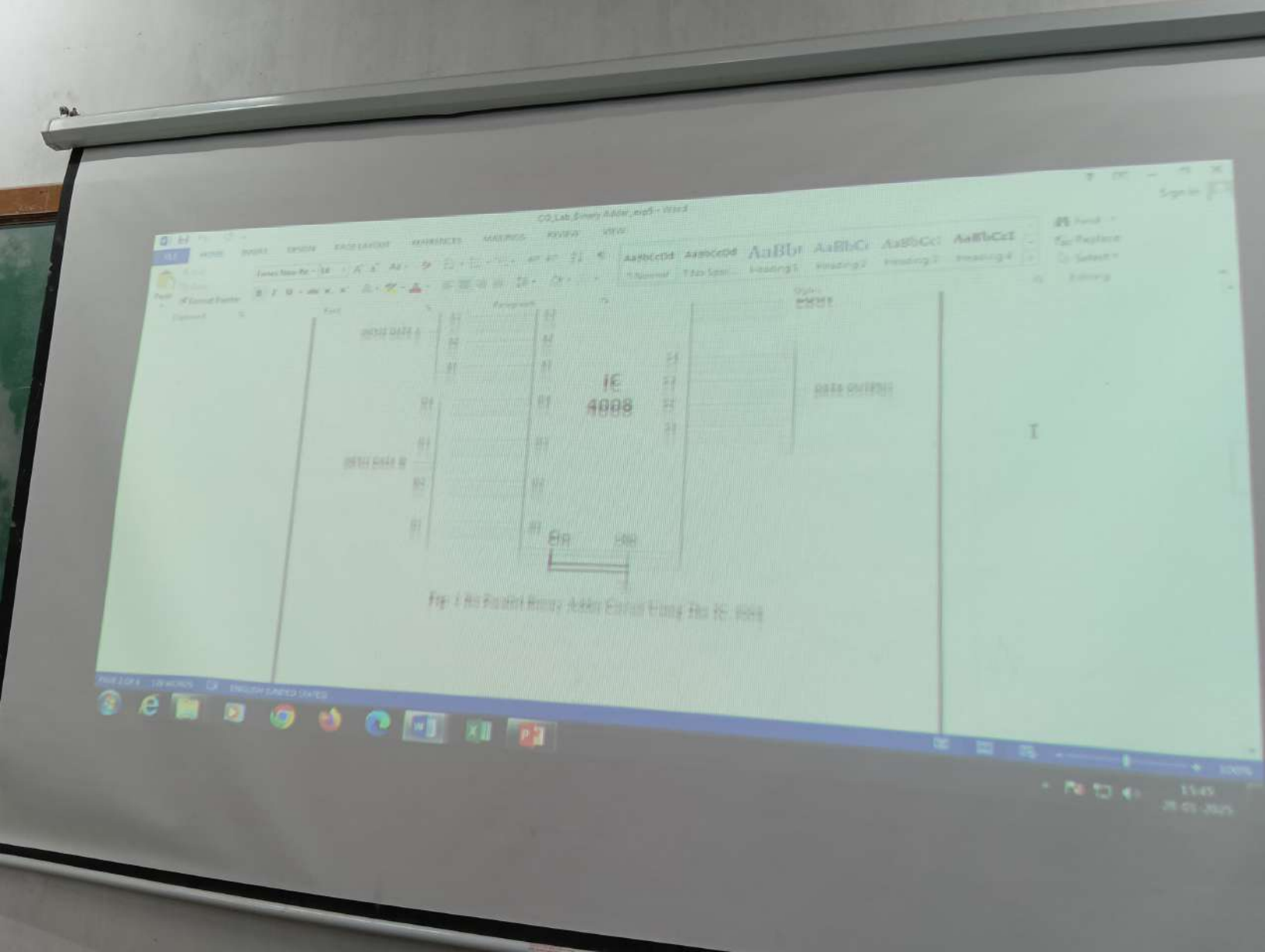
The 4-bit parallel adder circuit performs the operation of addition. It has two 4-bit inputs $A_4A_3A_2A_1$ and $B_4B_3B_2B_1$. The IC - 4008 is a 4-bit full adder that takes two 4-bit binary numbers. Adders are part of the arithmetic and logic unit (ALU).

CIRCUIT DIAGRAM:




(+5V)
VDD
A4
A3
A2
A1
INPUT DATA A
B4
B3
IC
4008
S4
S3
S2
S1
Cout
DATA OUTPUT


(+5V)
VDD
A4
A3
A2
A1
INPUT DATA A
B4
B3
B2
B1
INPUT DATA B
IC
4008
Cout
S4
S3
S2
S1
DATA OUTPUT
Cin
GND



PIN DIAGRAM OF 4-BIT BINARY FULL ADDER IC-4008:

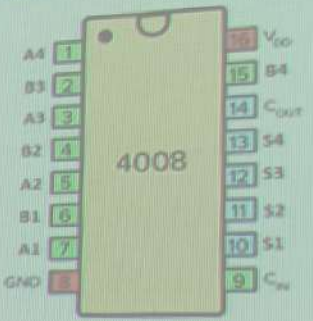


Fig: Pin diagram of 4-bit binary Full adder IC-4008

INSTRUMENT & COMPONENT REQUIRED:

Sl. No.	Item	Specification	Qty.

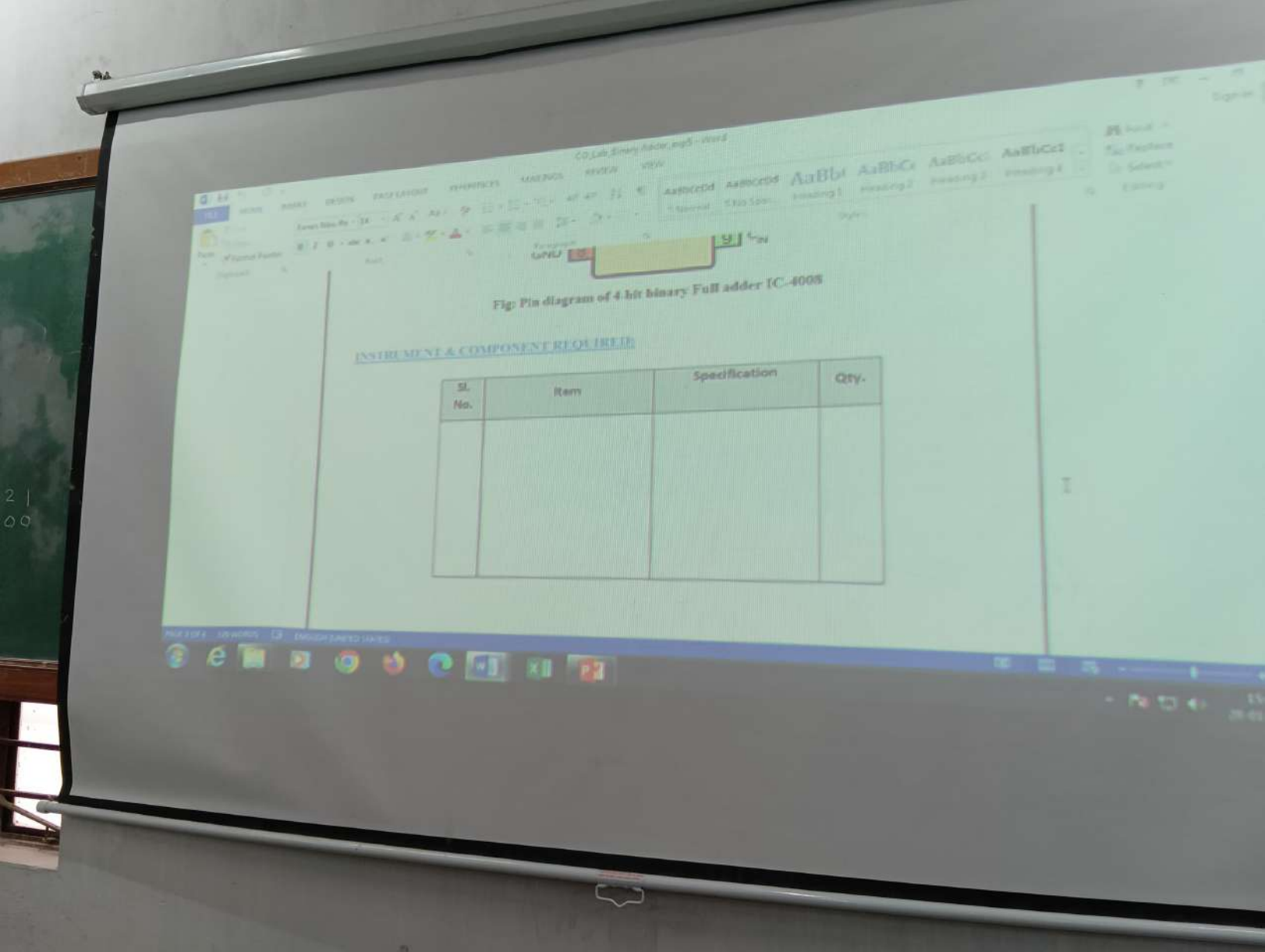


Fig: Pin diagram of 4 bit binary Full adder IC-4008

INSTRUMENT & COMPONENT REQUIRED:

Sl. No.	Item	Specification	Qty.

VERIFICATION TABLE:

Input(A)				Input(B)				Output(S)				
A_4	A_3	A_2	A_1	B_4	B_3	B_2	B_1	Cout	S_4	S_3	S_2	S_1

CONCLUSION: