Conclusion:

- In conclusion, converting between binary and Gray code is important in digital systems. Gray code helps prevent errors during value transitions. Converting binary to Gray and back is crucial for accurate information processing, especially in devices like rotary encoders and communication systems. This process ensures reliability in digital applications.

➢ Gray Code_To_Binary Code

Truth Table:

Gray Code				→	Binary Code			
0	0	0	0		0	0	0	0
0	0	0	1		0	0	0	1
0	0	1	1		0	0	1	0
0	0	1	0		0	0	1	1
0	1	1	0		0	1	0	0
0	1	1	1		0	1	0	1
0	1	0	1		0	1	1	0
0	1	0	0		0	1	1	1
1	1	0	0		1	0	0	0
1	1	0	1		1	0	0	1
1	1	1	1		1	0	1	0
1	1	1	0		1	0	1	1
1	0	1	0		1	1	0	0
1	0	1	1		1	1	0	1
1	0	0	1		1	1	1	0
1	0	0	0		1	1	1	1

(Lab Report : 04)

➢ Title:

"Binary to Gray Code And Gray to Binary Code Conversion"

➢ Objective:

- **Binary to Gray Code Conversion:**

Objective: The primary objective is to convert a binary number into its corresponding Gray code.

- **Gray to Binary Code Conversion:**

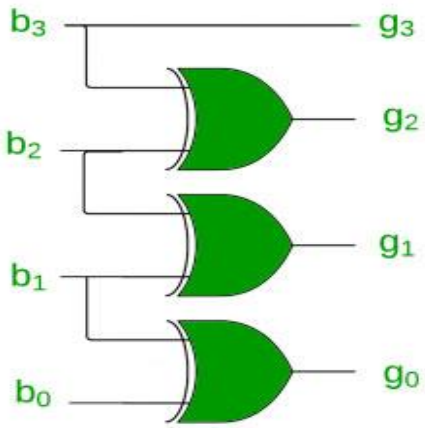
Objective: The goal here is to convert a Gray code number back to its binary representation.

➢ Equipments:

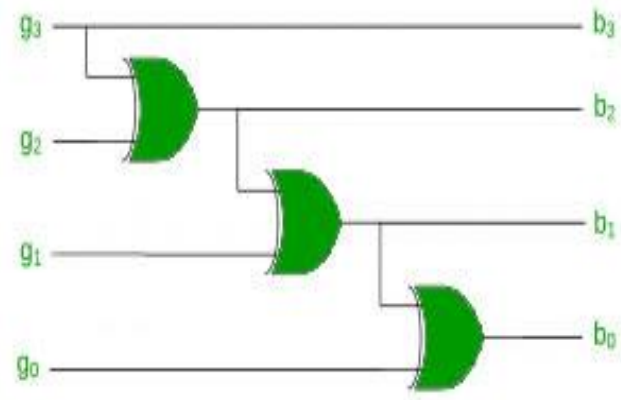
- **Power Supply**
- **Bread board**
- **Connecting Wires**
- **(XOR)-IC**

➢ Logic Diagram:

Binary to Gray :



Gray to Binary :



➢ Binary Code_To_Gray Code

Truth Table:

Binary Code				→	Gray Code			
0	0	0	0		0	0	0	0
0	0	0	1		0	0	0	1
0	0	1	0		0	0	1	1
0	0	1	1		0	0	1	0
0	1	0	0		0	1	1	0
0	1	0	1		0	1	1	1
0	1	1	0		0	1	0	1
0	1	1	1		0	1	0	0
1	0	0	0		1	1	0	0
1	0	0	1		1	1	0	1
1	0	1	0		1	1	1	1
1	0	1	1		1	1	1	0
1	1	0	0		1	0	1	0
1	1	0	1		1	0	1	1
1	1	1	0		1	0	0	1
1	1	1	1		1	0	0	0