Course Name: A Level (1st Sem) Subject: CO

Topic: Gray Codes Date: 05-05-20

Gray Codes: The **reflected binary code**, also known as **Gray code**, is a binary numeral system where two successive values differ in only one bit (binary digit). This means that it is arranged so that every transition from one value to the next value involves only one bit change.

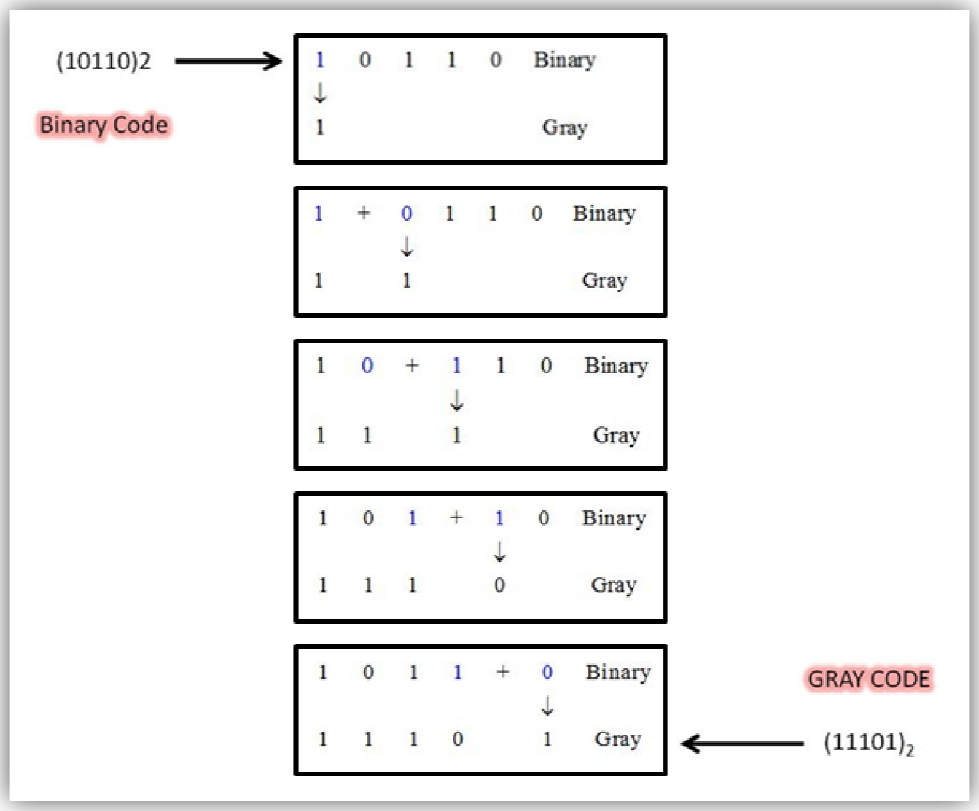
The adjacent table shows the GRAY CODE with its corresponding binary code in 4 digits.

In this image we can see that Gray Code of decimal 0 is 0000, of decimal 1 is 0001and similarly of decimal 2 is 0011. Now observe the difference in 0000, 0001, 0011. You can see that only one bit has changed in these transitions.

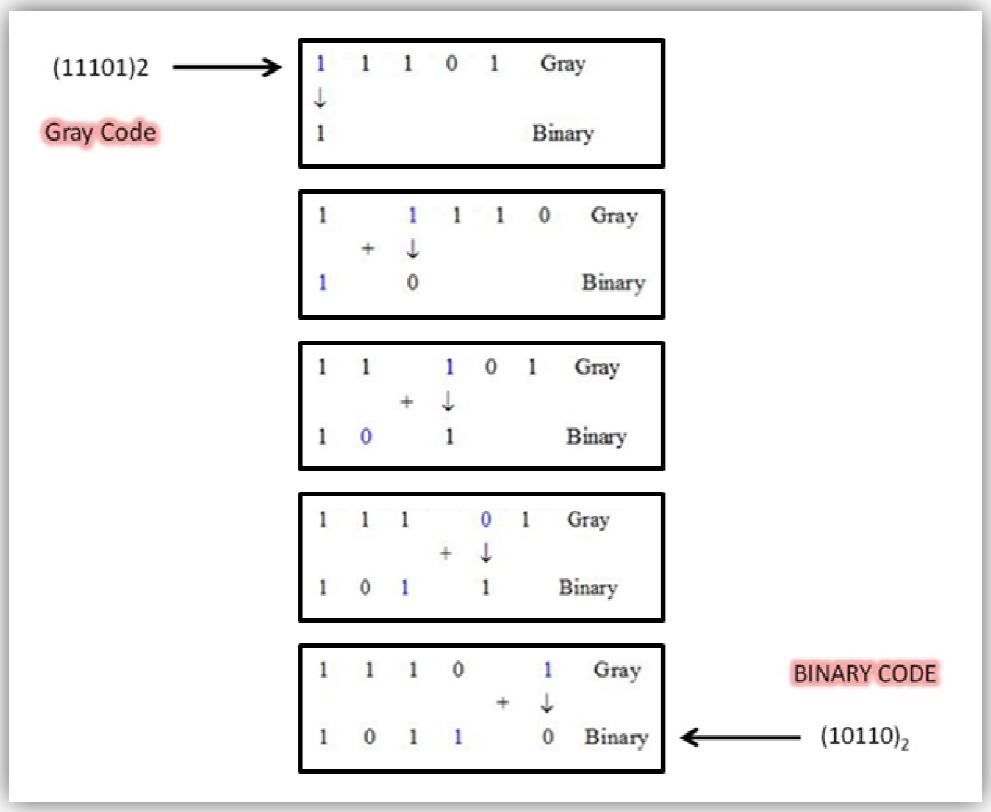
This is literally what Gray Code is all about.

Decimal	Binary	Gray Code
0	0000	0000
1	0001	0001
2	0010	0011
3	0011	0010
4	0100	0110
5	0101	0111
6	0110	0101
7	0111	0100
8	1000	1100

Conversion of binary code into gray code:



Conversion of gray code into binary code:



Assignment:

1. Briefly discuss about Gray Codes.
2. Convert Binary $(100100)_2$ to Gray.
3. Convert Gray $(110101)_2$ to Binary.