Number System [Binary & Decimal Number System]

⇒ Method to represent values or quantities using different digits.

Decimal system!

1. The decimal number system has base 10.
2. It uses digits from 0 to 9.
3. Base! It is a number of symbols (digits) a number systems uses.

Binary system!

1. It has a base of 2.
2. It only two digits i.e. 0 and 1.

Dec. to Bin. Conversion!

1. Divide number by 2.
2. Store reminder (that will be a bit in binary)

3. Repeat Above steps with the quotient until quotient is less than 2.
4. Reverse the bits so obtained.

Dec. to Bin. Conversion (Bitwise)!

1. Obtain bit with bitwise And operation i.e. (N & 1)
2. Right shift N by 1. (N = N >> 1)
3. Repeat above steps till N > 0.
4. Reverse the bits so obtained

[For interview Use bitwise method].

Binary to Decimal!

1. Multiple each digit with its place value.
2. Add up all place value.
3. Sum is the decimal number.