

Data Representation in Computer and C

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1. Unsigned Data Representation

- 1. Unsigned Numbers are positive numbers
- 2. Min and Max value of *n* bit Unsigned Integer is $[0 \text{ to } 2^n - 1]$

1.1. C Program to print Binary Representation of Unsigned Integers

2. Signed Data Representation

- 1. Signed Numbers handle both +ve and -ve numbers, there range is smaller than unsigned Numbers
- 2. The Left most bit is called **MSB (Most Significant Bit)** as this bit holds the highest value
- 3. Right most bit is called **LSB (Least Significant Bit)**
- 4. In *n* bit Signed Number MSB is reserved as **sign bit** 1 for -ve and 0 for +ve numbers
- 5. Rest *n* – 1 bit hold the value of number
- 6. Range of *n* bit Signed Number is []

3. Floating Point Number Representation