Data Types

⇒ **Primitive Data Types**

- ↳ Inbuilt datatypes
- ↳ C / C++ data types

- Integral
  - Int
  - Char

- Bool

- floating point
  - Float
  - Double

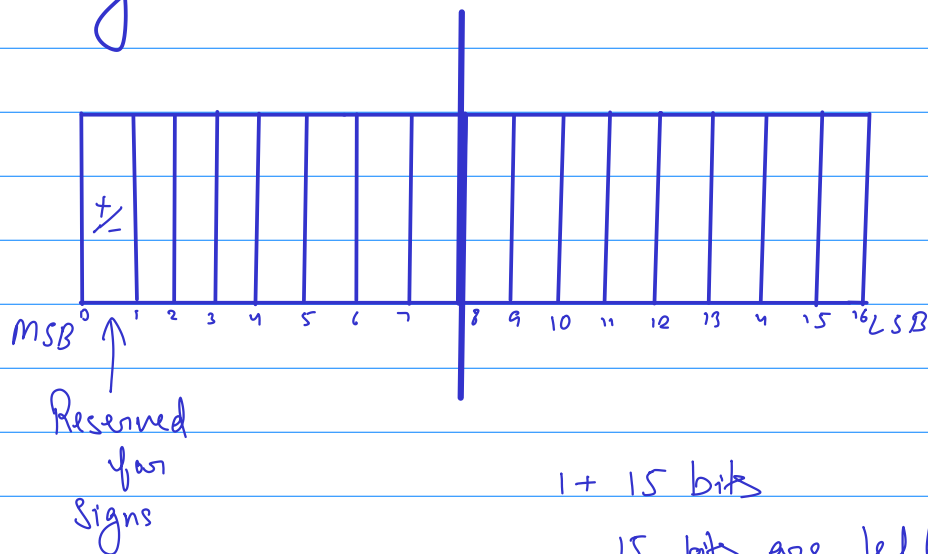⇒ **User defined**

- enum
- Structure
- Union
- class

⇒ **Derived**

- Array
- Pointers

- Reference

⇒ <u>Integers</u>

MSB 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 LSB

↑
Reserved
for
Signs

1 + 15 bits

15 bits are left for storing
numbers

MSB = Most Significant Bit.

LSB = Least Significant Bit.

$2^{15} = 32768$

Data Type	Size	Range
int	2 or 4	-32768 to 32767
float	4	-3.4×10^{-38} to 3.4×10^{38}
double	8	1.7×10^{-208} to 1.7×10^{308}
char	1	-128 to 127
bool	undefined	true/false