What is RAM?

RAM : Random Access Memory

- We use RAM to store Runtime data.
  data Structure

What is data Structure ?

Structuring of data {in Storage || RAM}
Permanent Storage
Runtime Storage

- This data Structures are stored in RAM during Program Runtime.
- Examples of data Structures are
  - → Int {1, 2, 3, -5, ...}
  - → float {1.1, 3.8, ...}
  - → Char {a, b, c, ..., $, ₹, #}
  - → User build {Gender Class}
    Male, female, others
    data Structure !!

- It is very common for RAM to come in 4GB, 8GB, 12GB, 16 GB, 32GB, ...

8 GB

Giga = 10^9 ≈ Billion

Byte = 8 bits

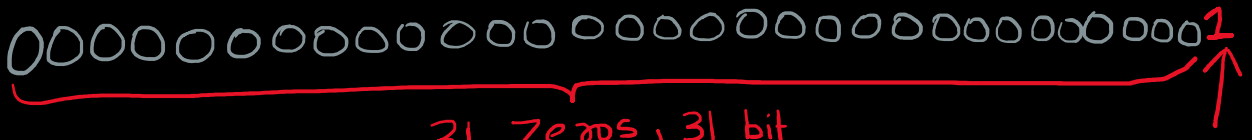
1 bit is either 0 or 1.

- 0 means low Voltage
- 1 means High Voltage

) Computer Works with low & high Voltages.

To Store, for example, {1, 7} in bits ...

- 1 (integer : takes 4 bytes)



31 zeros, 31 bit

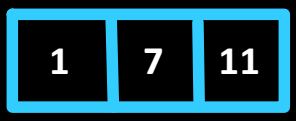
- 7

(2^ ..... 8 4 2 1) → bits are in form of 2^.

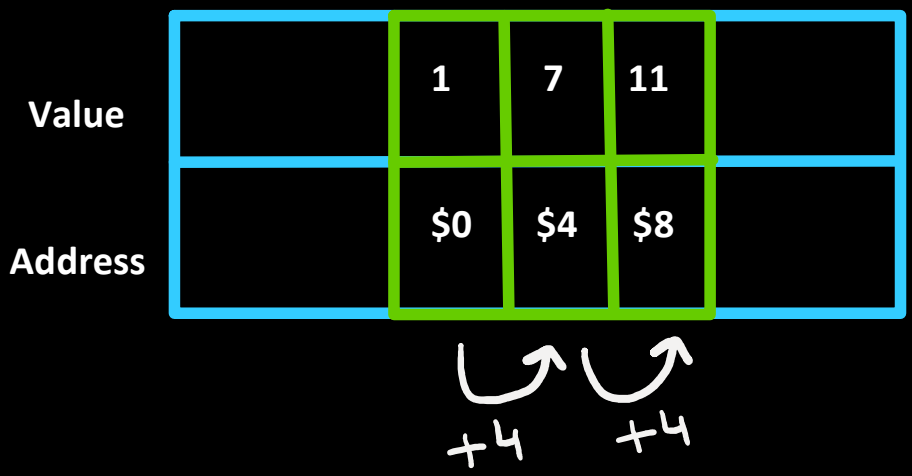
29-zeros

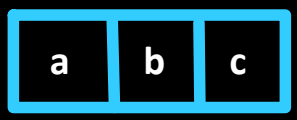
How Arrays are Stored in RAM?

- Array is a Contiguous block of data.



Mostly integers are stored in bytes of 4.





Mostly ASCII Characters are Stored in 1 byte.