

lec 3:

Friday, February 19, 2021 6:22 PM

Summary

| Strings | lists | Dictionary | Tuples | Sets |
|---------------------------|------------|------------|------------|-----------|
| Immutable unchangeable | mutable | mutable | Im-mutable | mutable * |
| , , | [] | { } | () | { } |
| Ordered | Ordered | Ordered | Ordered | Unordered |
| Not unique | Not Unique | Not unique | Not Unique | Unique |

Example
unique

$$S' = \{1, 2, 3, 4, 3\}$$

$$S' \leftarrow \{1, 2, 4, 3\}$$

Example
order

$$S = \{1, 2, 3, 4\}$$

$$S \leftarrow \{1, 2, 4, 3\}$$

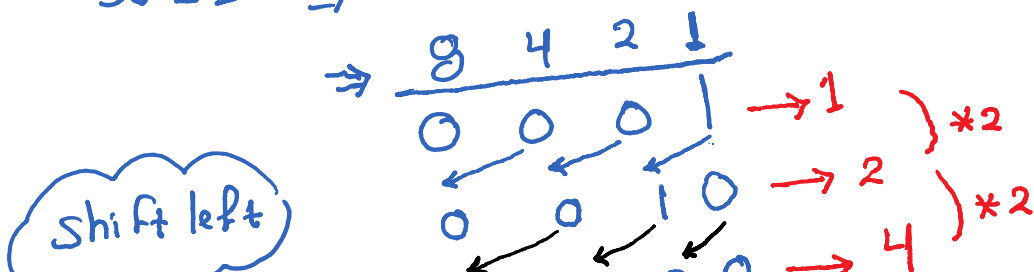
$$\{1, 3, 4, 2\}$$

Bitwise operations

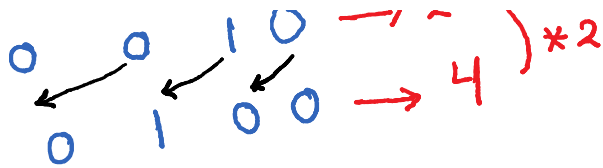
Shift left

Shift right

$x = 1 \Rightarrow$ Decimal



Shift left

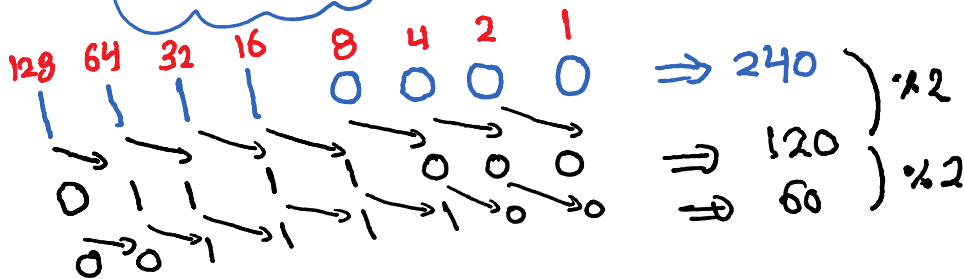


In Python

$$\begin{cases} x = 1 \\ x \ll 2 \Rightarrow \text{shift left } x \text{ by } 2 \\ x \ll 4 \end{cases}$$

Shift right

$$y = 240$$



$$\begin{cases} y = 240 \\ y \gg 2 \end{cases}$$

Example

$$\begin{aligned} 0101 &\Rightarrow 5 \\ 0101 &\Rightarrow 2 \end{aligned}$$