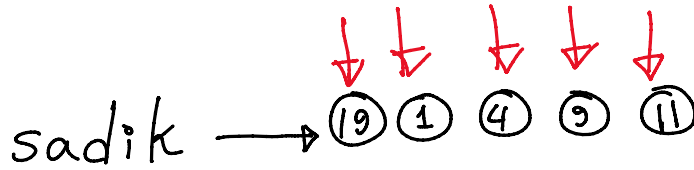
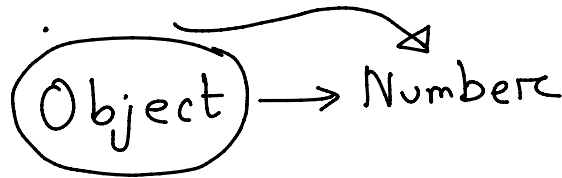


# Hashing



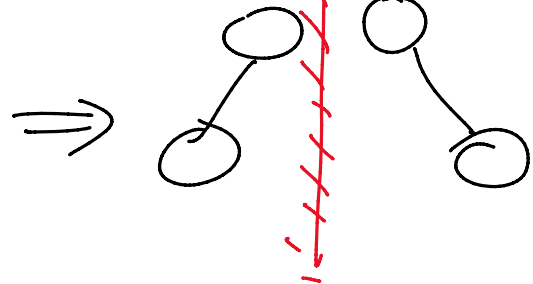
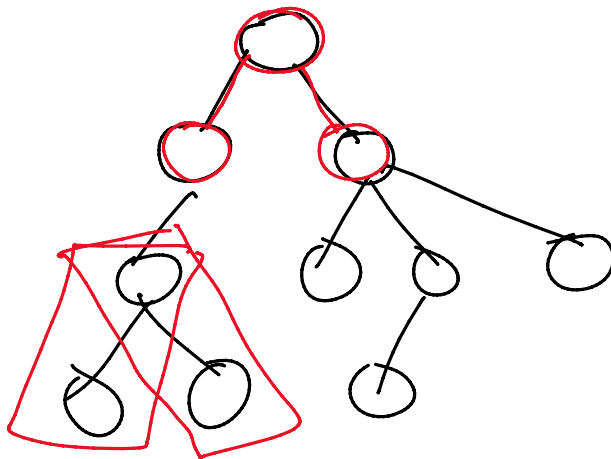
\* 27  
\* 1

a	1
b	2
c	3
⋮	⋮
z	26
A	27

$$(19 \times 27^4) + (1 \times 27^3) + (4 \times 27^2) + (9 \times 27^1) + (11 \times 27^0)$$

8703069

8703069
334733-11
12874-9
495-4
19-1



## OS → Thread / Process

### Process

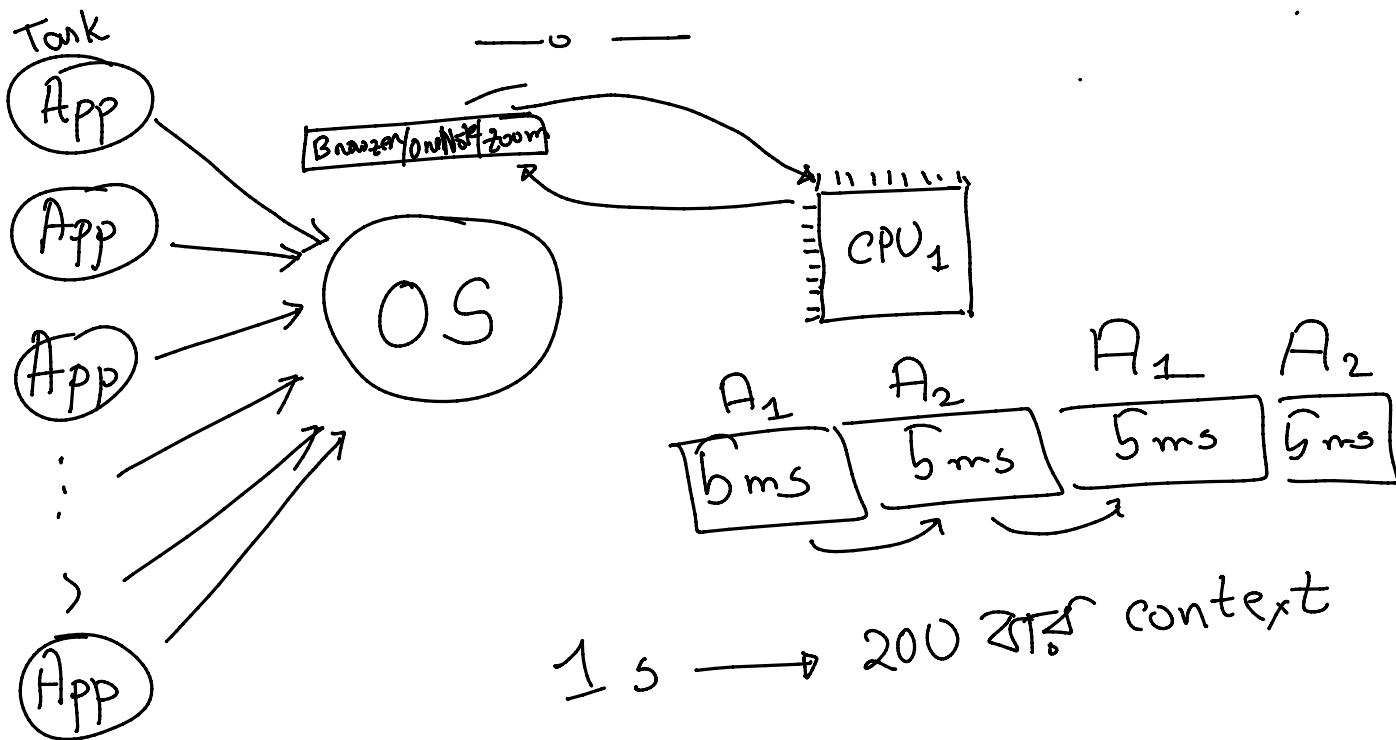
- 1) Execution of a program.
- 2) Not lightweight
- 3) Takes more time in creation & termination.
- ↳ Isolated

### Thread

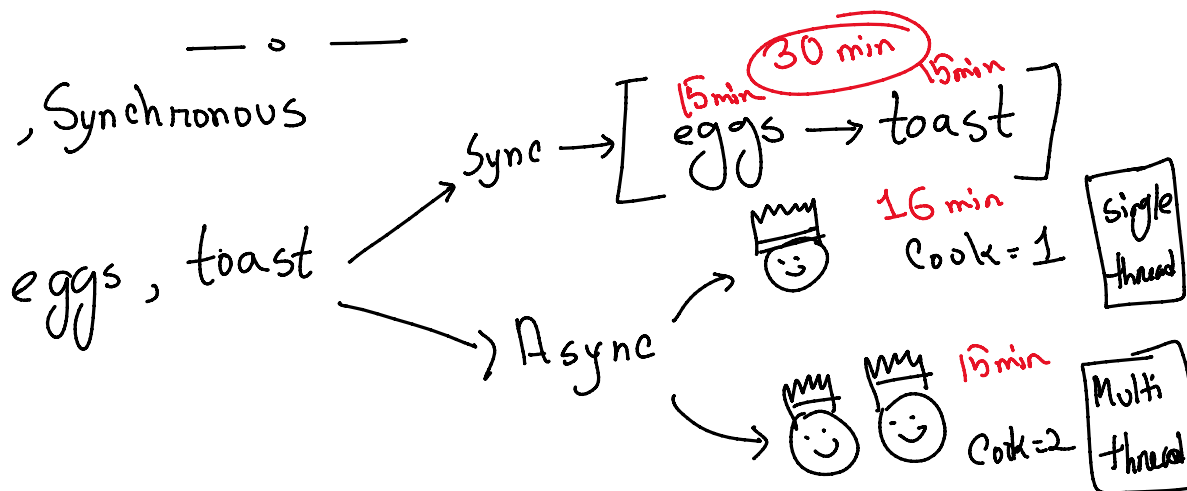
- 1) Segment of a process
- 2) Lightweight
- 3) Takes less time in creation & termination.
- 4) Not isolated.

4) Isolated

4) Not isolated.



# Asynchronous, Synchronous



1-100

Sync

1 X

2 ✓

3 ✓

4

5

...

Async - Multi-threaded

1

3 4

6 7

...

...

...

$$\frac{5}{100}$$

$$\frac{33}{x} + \frac{66}{y} + \frac{100}{z}$$