a = "Hello world"

b = "One Hello world"

c = "world fun"

re.search("^Hello", b)

re.s("world$", a)

a = "hello@world"

re.findall("@.+", a) → ["@world"]

re.fa("^h.+o", a) → ["hello@wo"]

b = "ho" c = "abc"

a = "hello hi"

re.fa("h.*o", b) → ["ho"]

re.fa("h.+o", b) → []

re.fa("a.*b", c) → ["ab"]

re.fa("b.+c", c) → []

\s — whitespace

\S — non-whitespace

a = "Email: rohan@gmail.com end"

re.fa("\S+@.+", a)

a = "From: <email>"

b = "[Re] From: <email"

re.search("From:", a) → T

re.s ("From:", b) → T

re.s("^From:", a) → T

re.s("^From:", b) → F

a = "X-Sieve: abc"

b = "X: def"

re.s("^X.*:", a) → T

re.s("^X.+:", a) → T

re.s("^X.*:", b) → T

re.s("^X.+:", b) → F

re.s("^X\S*:", a)

"Xabc:"

a = "X-aabc: abc"

b = "x-def: def"

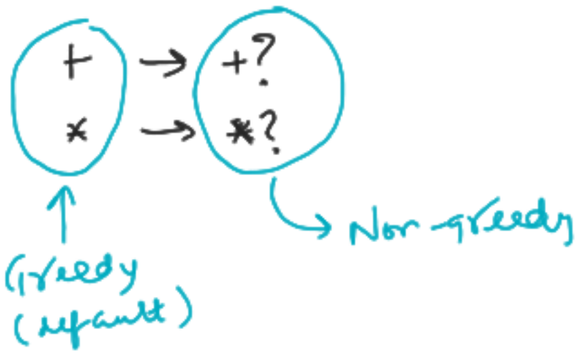
c = "X-a: ac"

re.s("^X-[abc]+:", a)

x

re.fa("[0123456789]+", x) → ["2", "19", "42"]

[0-9]+

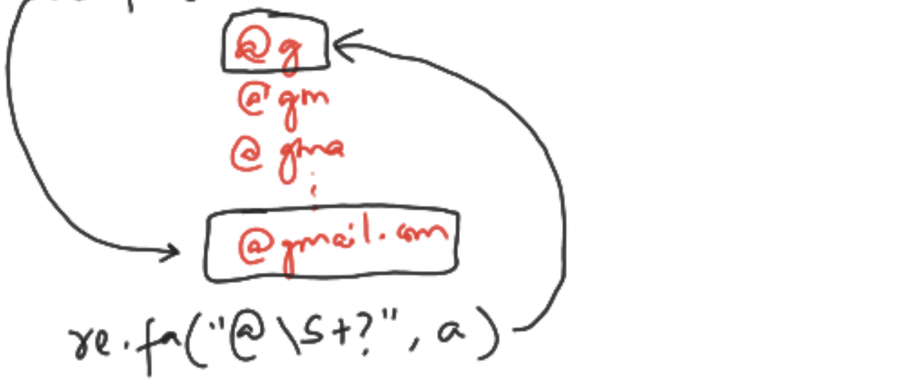


a = "Email: rohan@gmail.com end"

re.fa("\S+@\S+?", a) → ["rohan@g"]

re.fa("\S+?@\S+?", a) → ["n@g"]

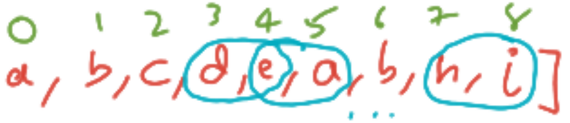
re.fa("@\S+", a) → ["@gmail.com"]



myText = ["hello", "how", "are", "you"]

target = WG(["how", "are"])

indexOf(myText, target, 0)

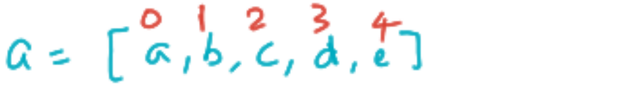


myText = [a, b, c, d, e, a, b, h, i]

target = [a, b] → WG

indexOf(myText, target, 3) ⟶ 5

```
i = start to (len - target.len)
    WG curr = new WG(myText, i, target.len)
```




```
WG w = new WG(a, 2, 2);
```

↓

[c, d]

myText = [a, b, c, d, e, a, b, c, h, i]
0 1 2 3 4 5 6 7 8 9

order = 3

getRandomText(7)

SB sb = new SB();

key → WG [e, a]

nw = 5

o = 2

nw - o > 3

sb → "e, a" w → WG ["how", "are", "you"]

"e a" w.toString() → "how are you"

"ea"

for (i=0 ; i<3)

a → b c h

(d, h)

key = WG[(a, b, c)]

WG[(b, c, h)]

```
                0 1 2 3 4 5 6 7
myText: [a, b, c, d, a, b, c, i];
order = 3
followsMap = {
      [a, b, c] : [d, i],
      [b, c, d] : [a],
      [c, d, a] : [b],
      [d, a, b] : [c]
}
```

```
map = new HM();
al1 = new AL<Str>();
al1.add("ab");
map.put("a", al1);
map.get("a").add("bc");
```

{ "a" : ["ab", "bc"] }

```
Random r = new Random(42);
r.nextInt(100);  // 37
r.nextInt(100);  // 5
```

```
m.setRandom(42)
```

movies.csv

id, name, year

15, Narnia, 2005

215, Tenet, 2021

r_id, m_id, rat

r_id	m_id	rat
1	11	5
1	7	9
1	8	3
2	11	9
2	13	10

```
r1 = new Rater("1")
r1.addRating("11", 5)
r1.addRating("7", 9)
        :
r2 = new Rater("2")
r2.addRating("11", 9)
```

a = "rohan"
b = "rohan"
c = "rohan kumar"

a == b → F
b == a → F
a.equals(b) → T
b.equals(a) → T
a.equals(c) → F
c.contains(b) → T
b.contains(c) → F

```
myMovies = [
    {"1", "John Wick"},
    {"2","3 Idiots"},
    {"3","Oppenheimer"}
]

myRaters = [
    {"id1", [{"1", 9},{"3", 9.5}]},
    {"id2", [{"1", 8},{"2", 10}]}
 ]
```

m1 m2 m3 → m1 m2 m3

me → [0, 7, 6] → [*, 2, 1]

r → [5, 3, 9] → [0, -2, 4]

dp = (2X-2) + (1X4)
= 0

Rater me → getSimilarities()

↓

AL<Ratings>

↓ top 10 most similar raters

50 30 20

LRater> → {r1, r2, r3}

↓ ↓ ↓

Mov m1 3 7 5

wAvg for m1 = $\frac{(50\times3)+(30\times7)+(20\times5)}{(50+30+20)}$

topSimilarities = [r15, r1, r79, r105]
200 150 100 50

minimal rate = 3

	r15	r1	r79	r105
Oppenheimer	7	–	9	–
Troy	6	9	–	5

→ $WA = \frac{(200 \times 7) + (100 \times 9)}{200 + 100}$

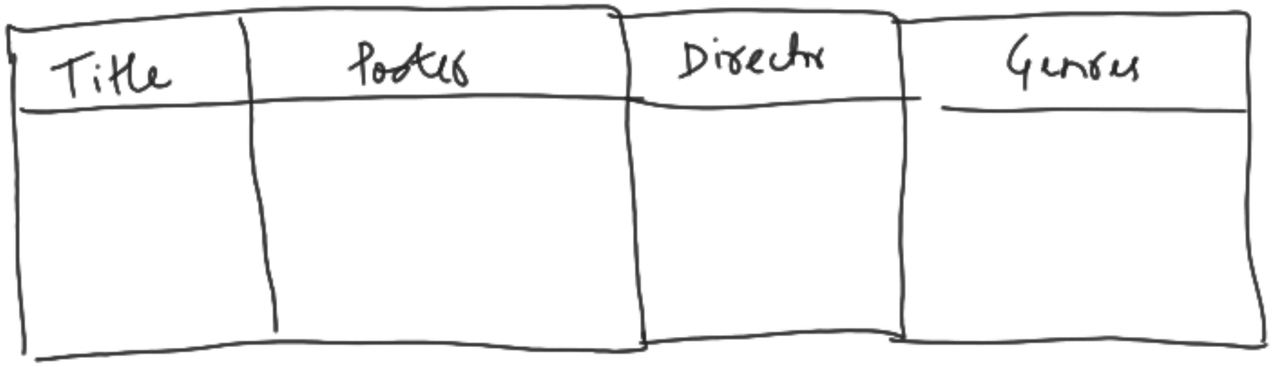
↳ $WA = \frac{200 \times 6 + 150 \times 9 + 50 \times 5}{200 + 150 + 50}$

	234	3285	1297
15	10	6	2
20	9	4	7

$dp = (10-5)(9-5) + (6-5)(4-5) + (2-5)(7-5)$

$= 20 + (-1) + (-6)$

$= 13$


Title
Poster
Director
Genres