정규 표현 식

: 복잡한 문자열 패턴을 정의하는 문자 표현 공식

```
Ex. 010-0000-0000   ->   ^\d{3}\-\d{4}\-d{4}$
```

: 왜 사용하는가? 복잡한 문자열을 처리할 때 사용하기 좋다! 7장 예제

- 문법#1

[]: [와] 사이의 문자들과 매치하거나 범위를 지정할 수 있다.

```
Ex1. [abc]
: 'a'(O), 'before'(O), 'deep'(X)
즉, abc 중 하나라도 매치하는 경우


Ex2. [a-zA-z]
: 알파벳 전체
```

https://regexr.com/

1. "tic tac toc"

City of stars,
Are you shining just for me?
City o tic tac tocf stars,
There's so much that i can't see.
Who tic tac tocknows
I felt it from the first embrace
I shared with you.
That now, Our dreams,
They've finally come true. tic tac toc

City of stars,
Just one thing everybody wants.
There in the bars
and through the smokescreen of the crowdedtic tac toc restaurants.

It's love
Yes, all we're looking for
is lo tic tac tocve from someone else

A rush
A glance
A t tic tac tocouch
A dance

To look in somebody's eyes,
To light up the skies,
To open the world and send me reeling,
A voice that says   tic tac toci'll be here
and you'll be alright
I don't care if I know just where I will go
Cautic tac tocse all that I need is this crazy feeling
And rat-a-tat of my heart
I think I want it to stay

City of stars,
Are you shinning just for me?
City of stars,
You never shined so brightly

t[iao]c - t로 시작하고 c로 끝나면서 소문자 i, a, o가 중간에 포함되는 문자열, 대소문자를 구분해야 함

- 문법#2

메타문자: 정규 표현 식을 위해 원래 의미가 아닌 다른 용도로 사용되는 문자.

```
.^$*+?{}[]\|()
```

1. . : \n을 제외한 모든 문자와 매치

Ex. a.b - acb, adb, aab

2. *: 바로 앞에 있는 글자가 반복해서 나올 수 있다. (0..*개)

Ex. tomor*ow - tomorrow, tomoow, tomorrrrow

3. + : 바로 앞에 있는 글자가 반복해서 나올 수 있다. (1..*개)

4. {}: 반복 횟수를 지정할 수 있다.

Ex1. {1, } - 1...*번, {0, } - 0...*번, {1, 3} - 1~3번
Ex2. [0-9]{1, 3} - 0부터 9까지의 수가 1~3번 반복
: 여기서, [0-9]대신 \d를 쓸 수 있다. \d{1, 3} 이렇게!

5. ?: {0, 1}의 의미와 동일하다

6. |: or

(0|1)

7. ^: not

City of stars,

Are you shining just for me?

City of stars,

There's so much that i can't see.

Who knows

I felt it from the first embrace

I shared with you.

That now, Our dreams,

They've finally come true.

City of stars,

Just one thing everybody wants.

There in the bars

and through the smokescreen of the crowded restaurants.

It's love

Yes, all we're looking for

is love from someone else

A rush

A glance

A touch

A dance

Tooo look in somebody's eyes,

To light up the skies,

Tto open the world and send me reeling,

A voice that says i'll be here

and you'll be alright

I don't care if I know just where I will go

Cause all that I need is this crazy feeling

And rat-a-tat of my heart

I think I want it to stay

City of stars,

Are you shinning just for me?

City of stars,

You never shined so brightly

1. "to", "To"

[Tt]o+: (대소문자를 인식)t나 T로 시작하고, o가 반복되는 경우 (1..*)

[Tt]o*: t나 T로 시작하고, o가 반복되는 경우 (0..*)

[Tt]o.: to나 To로 시작하고, o뒤에 어떤 문자가 나오는 경우

2. "where", "we're"

w...e : w와 e사이에 3개의 어떠한 문자가 들어가도 무관

3. IP주소 찾기

1	138.68.67.246 Digital Ocean Germany Hesse Frankfurt Am Main Europe/Berlin --- --- No
2	176.227.61.92 Turkcell Turkey Istanbul Istanbul Europe/Istanbul Chrome 69.0.3497.100 Android, 7.1.1 No
3	136.243.73.74 Hetzner Germany --- --- --- --- --- No
4	2a01:cb19:8b12:d800:4429:95ca:cf44:e449 Orange France Occitanie Cahors Europe/Paris Chrome 69.0.3497.100 Android, 8.0.0 No
5	162.254.188.50 Hostiserver United States Arizona Phoenix America/Phoenix --- --- No
6	2600:9000:2025:f000:1f:1880:3f00:93a1 Amazon.com United States --- - - - --- --- --- Yes
7	109.177.92.226 Emirates Telecommunications Corporation United Arab Emirates Ajman Ajman Asia/Dubai Chrome 69.0.3497.100 Android, 8.0.0 No
8	197.21.149.145 Ooredoo Tunisia Tunisia --- --- Africa/Tunis Chrome 69.0.3497.100 Android, 6.0.1 No
9	104.24.124.81 CloudFlare United States --- --- --- --- --- Yes
10	8.40.145.39 Level 3 Communications United States Texas Flynn America/Chicago --- --- No

메타문자가 아닌 진짜 문자로 사용하고 싶으면 앞에 \를 추가!

[0-9]{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}

4. 전화번호 찾기, 앞에 9나 8이 들어간 문자를 제외하자

(367) 848-2179
(436) 232-0684
(786) 564-0084
(599) 988-1216
(580) 730-5790
(539) 905-5991

\(\d{3}\) [^9|^8]\d{2}-\d{4}