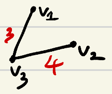
① Cover the all the chapter => counting, relation, halting problem

=>

② HW5 .. 기말 이후까지 내는 과제 ... 알고리즘.

③ book credit homework (optional)

Topic: weight graph

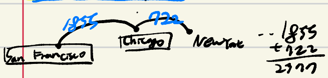


$V = \{v_1, v_2, v_3\}$

$E = \{(v_1, v_2), (v_2, v_3)\}$

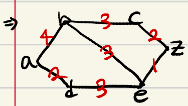
→ edge를 Natural number로 mapping 시켜서,
edge에 더 많은 정보를 부여한다.

이때, length of a path 는 sum of weights로 표현된다.



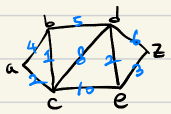
.. 1855 + 722 = 2577

- Dijkstra's Algorithm => 그리디 알고리즘 .. 순간순간 최적의 알고리즘을 select하여 최단거리를 찾아냄

=> 

a→z로 가는 가장 total weight이 작은 path는?
a→d→e→z

=> Greedy 알고리즘 : 스타트 포인트부터 가장 weight값이 작은 값을 취하기 시작한다.

=> 

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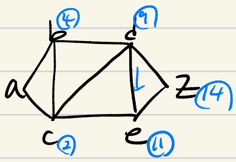

$G = (V, E, w)$
$a \in V$, starting point
$z \in V$, destination point

Procedure $v \in V$:
    $L(v) \leftarrow \infty$ ... total minimum length for a
    $L(a) \leftarrow 0$
    $S \leftarrow \phi$
    while $z \notin S$:
        $u \leftarrow$ a vertex $\in V \setminus S$ with a minimal $L(u)$
        $S \leftarrow S \cup \{u\}$
        foreach $v \in V \setminus S$
            if $L(u) + w(u,v) < L(v)$:
                $L(v) \leftarrow L(u) + w(u,v)$
    return $L(z)$

=>