graph non - isomorphism problem

time
space

P_1 P_2
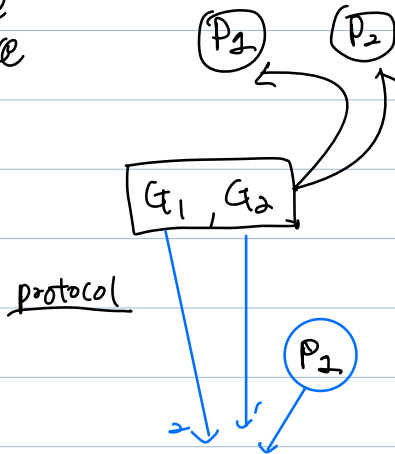
G_1 , G_2

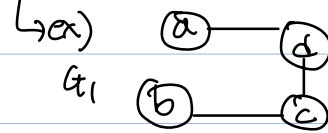G_1 , G_2 are non-isomorphic

protocol

P_2

1. P_2 selects one of $\underline{G_1, G_2}$ $\frac{1}{2}$

2. G_i, $i = 1$ or 2
   → reorder nodes of Graph
      → ex) G_1

      $\{ a, b, c, d \}$ Reorder

Sent to
P_2
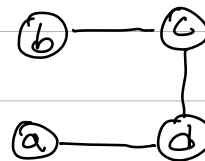
two possibilities

t_2 to make than right
1 G_1, G_2 isomorphic
2 G_1, G_2 non-isomorphic

easy for P_1

For P_2 → a lot of Resources (time, space) G_1'

$O(2^{2n})$ → G_1, G_2, G'
$O(2^{2n})$ from P_2

1. P_2는 reorder 연결해주고 그 structure를 P_1으로 보낸다.

2. P_1는 많은 양의 Resources를 활용하여, G_1, G_2, G' 세개가 같은 경우를 모두 구한다.

3. 찾을때까지 많은 횟수를 반복한다.

   찾으면 isomorphic, 못찾으면 (정한 횟수 ex)100번) non-isomorphic