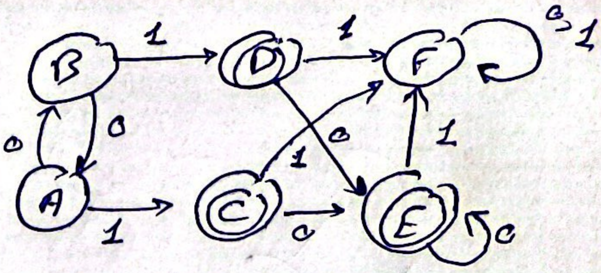
Steps:

1: Build n×n matrix, where n = # states

	A	B	C	D	E	F
A	T					
B		T				
C			T			
D				T		
E					T	
F						T



T → Represent

F → for sure they're not the same

2. iterate for i = 0 to n
   2.1. iterate for j = 0 to i
      1. if ~~m[i][j]~~ state[i] .is Terminal != state[j]. is Terminal

لو واحد Terminal والتاني لأ يبقى نحطهم انهم اكيد مش زي بعض

         1. m[i][j] = 'F' // initialization step
            m[j][i] = F

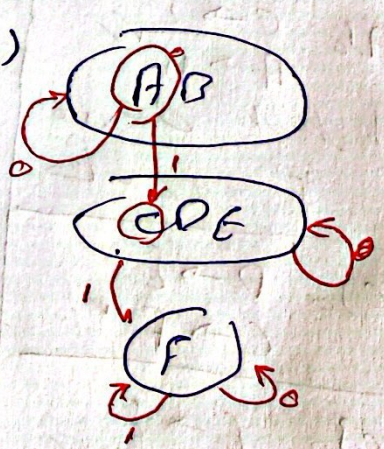
3. bool nothing changed is initialized to False

4. repeat until nothing changed = True.
   4.1. for i = 0 to n
      4.1.1. for j = 0 to i — if(m[i][j] != 'F' || m[j][i] != 'F')
         4.1.1.1. for all possible transition. (trans in transitions)
            1. S1T = states[i].[trans]
            2. S2T = states[j] (Trans)
            3. if m[S1T][S2T] == 'F'
               1. m[i][j] = m[j][i] = 'F'
               2. break no need to continue
               2. nothing changed = False

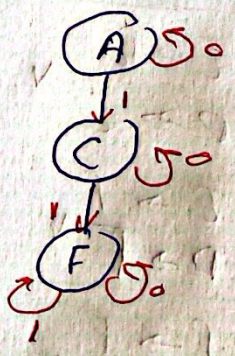
5. list of list = [] to hold super groups

6. list of bool to mark inserted nodes

7. for i = n-1 to 0
   1. if ! inserted[i]
   ~~2. if m[i][j] != ~~
      1. list = [state[i]]
      2. for j=0 to i
         1. if ! inserted[j]
            1. if m[i][j] != 'F'
               1. list.append [states[j]]
8. // Now we need to connect states together.
9. for transition in transitions.
   1. for i=0 to list.size() # of super nodes.
      1. Dest = list[i][0][transition]
      2. search for Dest in all list components
      3. Connect them together
      4.



10. final Min DFA
    ↳ Extract only one character from each supernode



Tracing my Algo:

~~{A,B}~~ ~~A→B, B→A~~

1. Initialization

~~(A,B)~~, (C,A) ✓
(B,A) (C,B) ✓
(D,A), (D,B)
(E,A) ✓, (E,B) ✓
(F, E)

	A	B	C	D	E	F
A			'F'	'F'	'F'	'F'
B			'F'	'F'	'F'	'F'
C	'F'	'F'		'F'	'F'	'F'
D	'F'	'F'	'F'	~~F~~	~~F~~	'F'
E	'F'	'F'	'F'			'F'
F	'F'	'F'	'F'	'F'	'F'	

{B,A}₀ A→B, B→A ✗

{B,A}₁ A→C, B→D ✗

{C,A}₀ C→E, A→B ✓✓
i do check dear so F = O. only

{D,C}₀ D→E, C→F ✓

{E,C}₀ E→E, C→F ✓✓

{E,D}₀ E→E, D→E ✗

{E,D}₁ E→F, D→F ✗

{F,A}₀ F→F, A→D ✗

{F,A}₁ F→F, A→C ✓✓

{F,B}₀ F→F, B→A ✗

F→F, B→F ✓✓

∴ there are changes
Repeat

{A,B}₀ A→B, B→A

{B,A}₁ → A→C, B→D ✗

{E,D}₀ → E→E, D→E ✗

E→F, D→F ✗

No others changed.