

Top-Trading Cycle Procedure (TTCP)

↳ n players

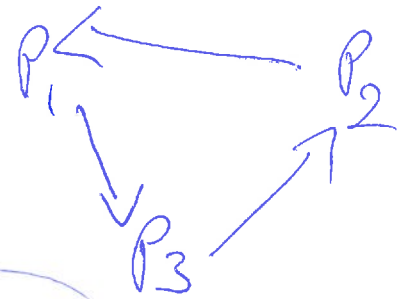
↳ Each player starts with a house (h_i is player i 's house)

↳ Each player has strict and total preferences over all the houses.

Ex

P_1	P_2	P_3
h_3	h_1	h_2
h_2	h_2	h_3
h_1	h_3	h_1

Iteration 1



P_1	h_3
P_2	h_1
P_3	h_2

Ex

P_1	P_2	P_3	P_4	P_5
h_4	h_4	h_1	h_3	h_1
h_3	h_1	h_4	h_2	h_5
h_2	h_2	h_3	h_1	h_2
h_1	h_3	h_2	h_4	h_4
h_5	h_5	h_5	h_5	h_3

Iter 1



$P_1: h_4$

$P_4: h_3$

$P_3: h_1$

Iter 2

P_2	P_5
h_2	h_5
h_5	h_2

\swarrow
 P_2

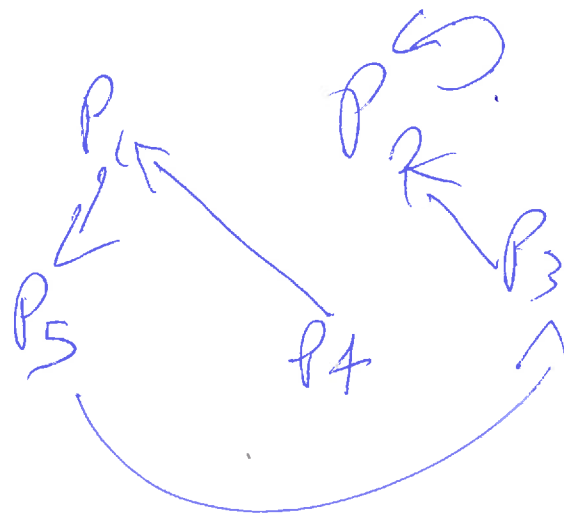
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 P_5

Final Allocation:

$P_1: h_4$
 $P_2: h_2$
 $P_3: h_1$
 $P_4: h_3$
 $P_5: h_5$

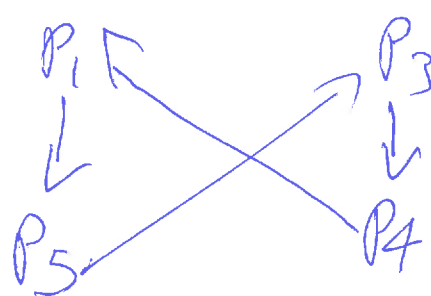
<u>Ex</u>	P_1	P_2	P_3	P_4	P_5
	h_5	h_2	h_2	h_1	h_3
	h_3	h_3	h_4	h_2	h_4
	h_2	h_4	h_3	h_3	h_2
	h_4	h_5	h_5	h_5	h_1
	h_1	h_1	h_1	h_4	h_5

Iter 1



$P_2: h_2$

Iter 2



$P_1: h_5$
 $P_3: h_4$
 $P_4: h_2$
 $P_5: h_3$

Final Allocation

$P_1: h_5$	$P_2: h_2$	
$P_3: h_4$	$P_4: h_1$	$P_5: h_3$