

- 請寫出一個專題組與指導教授配對的程式
 - 10個專題組的代號為t1~t10，10位指導教授的代號為a1~a10
 - 每個專題組提出包含10位教授的志願序(例如 a5 a2 a9 a1 a4 a8 a3 a6 a10 a7)
 - 每位教授提出包含10個專題組的志願序(例如 t8 t3 t10 t2 t7 t1 t9 t6 t4 t5)
 - 以學生的志願序為主，首先根據每個專題組的第一志願配對，如果某個教授只出現於某一個專題組的第一志願，則配對成功。如果某個教授出現於多個專題組的第一志願，則此時由教授的志願序來從中決定專題組別，這些專題組在教授志願序中排名最前面的配對成功。
 - 依序考慮第二志願、第三志願...，直到所有專題組皆配對到一位教授為止
- 輸出配對結果範例：

```
team t3 match advisor a1
team t6 match advisor a4
team t10 match advisor a8
team t1 match advisor a9
team t7 match advisor a2
team t2 match advisor a5
team t4 match advisor a10
team t5 match advisor a6
team t8 match advisor a7
team t9 match advisor a3
```

小考6

請到雲端學院下載初始事實資料
matching-01.txt 和 matching-02.txt

```
(deftemplate team (slot id)(multislot choice))
(deftemplate advisor (slot id)(multislot choice))
(deftemplate match (slot team)(slot advisor))

(deffacts initial
  (team (id t1)(choice a5 a2 a9 a4 a10 a8 a3 a6 a7 a1))
  (team (id t2)(choice a5 a10 a8 a4 a9 a3 a2 a6 a1 a7))
  (team (id t3)(choice a6 a2 a9 a8 a10 a3 a1 a7 a5 a4))
  (team (id t4)(choice a10 a2 a6 a8 a7 a9 a3 a1 a4 a5))
  (team (id t5)(choice a6 a3 a9 a2 a10 a8 a4 a5 a7 a1))
  (team (id t6)(choice a5 a2 a7 a9 a8 a4 a1 a6 a3 a10))
  (team (id t7)(choice a10 a2 a7 a4 a5 a8 a3 a6 a9 a1))
  (team (id t8)(choice a7 a3 a9 a8 a10 a2 a1 a6 a5 a4))
  (team (id t9)(choice a3 a2 a6 a8 a7 a9 a10 a1 a4 a5))
  (team (id t10)(choice a6 a2 a9 a8 a10 a3 a4 a5 a7 a1))
  (advisor (id a1)(choice t1 t2 t7 t6 t3 t8 t10 t9 t4 t5))
  (advisor (id a2)(choice t2 t7 t3 t6 t10 t9 t1 t5 t4 t8))
  (advisor (id a3)(choice t8 t5 t1 t9 t10 t7 t3 t2 t4 t6))
  (advisor (id a4)(choice t7 t10 t3 t6 t2 t8 t9 t4 t5 t1))
  (advisor (id a5)(choice t7 t2 t1 t6 t10 t8 t3 t5 t4 t9))
  (advisor (id a6)(choice t5 t3 t1 t4 t10 t8 t2 t7 t9 t6))
  (advisor (id a7)(choice t7 t2 t1 t5 t8 t10 t3 t6 t9 t4))
  (advisor (id a8)(choice t1 t2 t6 t10 t7 t8 t3 t9 t4 t5))
  (advisor (id a9)(choice t6 t4 t1 t10 t3 t8 t7 t5 t2 t9))
  (advisor (id a10)(choice t2 t9 t4 t5 t10 t8 t1 t6 t3 t7))
  (current-level 1)
  (last-level 10)
)
```

提示: (length\$ \$?multi) 可以傳回
\$?multi 變數中值的個數

```
(defrule team-match-advisor
  (current-level ?c)
  .....
=>
  (assert (match (team ?t)(advisor ?a))))

(defrule change-level
  (declare (salience -10))
  ?f1 <- (current-level ?c)
=>
  (retract ?f1)
  (assert (current-level (+ ?c 1))))

(defrule level-finish
  (declare (salience 10))
  ?f1 <- (current-level ?c)
  ?f2 <- (last-level ?l)
  (test (> ?c ?l))
=>
  (retract ?f1 ?f2))

(defrule print
  (declare (salience -20))
  (match (team ?t)(advisor ?a))
=>
  (printout t "team " ?t " match advisor " ?a crlf))
```