

8.23

(P491)

小考9

## • Input

Please input an integer set s1: 1 9 7 5 9 3 11

Please input an integer set s2: 2 6 5 4 5 3 7

Input error!! Duplicate elements are not allowed in sets!!

Please input an integer set s1: 11 a 7 5 3 1

Please input an integer set s2: 7 6 5 4 b 2

Input error!! Some elements are not integers!!

Please input an integer set s1: 9 11 7 3 5 1

Please input an integer set s2: 2 6 5 4 3 7

## • Output:

– printout to a file: set.txt

(set (name s1) (members 1 3 5 7 9 11))

(set (name s2) (members 2 3 4 5 6 7))

(set (name s1 union s2) (members 1 2 3 4 5 6 7 9 11))

(set (name s1 intersect s2) (members 3 5 7))

提示: (integerp ?x) 可以測試一個變數值是否為整數,回傳true或false  
 (implode\$ \$?m) 可以將一個multifield欄位轉成為字串  
 (explode\$ ?s) 可以將一個字串欄位轉成為multifield

(deftemplate set (multislot name) (multislot members))

(deffacts initial (phase input))

(defrule input-number

(phase input)

=&gt;

(printout t "Please input a set s1: ")

(assert (set (name s1) (members (explode\$ (readline))))))

(printout t "Please input a set s2: ")

(assert (set (name s2) (members (explode\$ (readline))))))

(defrule check-input-error-1

?f1 &lt;- (phase input)

?f2 &lt;- (set (name ?t1) (members \$? ?a \$? ?a \$?))

?f3 &lt;- (set (name ?t2&amp;~?t1) (members \$?))

=&gt;

(retract ?f1 ?f2 ?f3)

(printout t "Input error!! Duplicate elements are not allowed in sets!!" crlf)

(assert (phase input)))

(defrule check-input-error-2

?f1 &lt;- (phase input)

?f2 &lt;- (set (name ?t1) (members \$? ?a \$?))

?f3 &lt;- (set (name ?t2&amp;~?t1) (members \$?))

(test (not (integerp ?a)))

=&gt;

(retract ?f1 ?f2 ?f3)

(printout t "Input error!! Some elements are not integers!!" crlf)

(assert (phase input)))

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(defrule input-no-error
  (declare (salience -10))
  ?f <- (phase input)
  =>
  (retract ?f)
  (assert (phase compute)))
```