

- Write a program to convert a Morse code message to its equivalent series of alphabetic characters. \* and - represent dots and dashes in the Morse code and / is used to delimit the Morse code characters. Repeat the input and the conversion.
- Enter a message (<Enter> to end): \* \* \* / - - - / \* \* \* ↵  
The message is S O S  
Enter a message (<Enter> to end): \* - / \* - - \* / \* - - \* / \* - \* \* / \* ↵  
The message is A P P L E  
Enter a message (<Enter> to end): \* \* \* / - - - - / \* \* \* ↵  
Can't decode this message.  
Enter a message (<Enter> to end): \* \* \* / / - - - ↵  
Can't decode this message.  
Enter a message (<Enter> to end): \* \* \* / - - - / ↵  
Can't decode this message.  
Enter a message (<Enter> to end): / \* \* \* / - - - / \* \* \* ↵  
Can't decode this message.  
Enter a message (<Enter> to end): ↵  
CLIPS>

小考5

A	.-	H	....	O	---	V	...-
B	-...	I	..	P	.-..	W	.-.-
C	-.-.	J	....	Q	---.	X	..--
D	...-	K	-.--	R	..-.	Y	-.--
E	.	L	....	S	...-	Z	--..
F	...-	M	--	T	-		
G	...-	N	..	U	...-		

(deftemplate conversion (slot character) (multislot morse-code))  
(deftemplate translation (multislot string) (multislot code))

(deffacts conversions

```
(conversion (character A) (morse-code * -))
(conversion (character B) (morse-code - * * *))
(conversion (character C) (morse-code - * - *))
(conversion (character D) (morse-code - * * *))
(conversion (character E) (morse-code *))
(conversion (character F) (morse-code * * - *))
(conversion (character G) (morse-code - - * *))
(conversion (character H) (morse-code * * * *))
(conversion (character I) (morse-code * *))
(conversion (character J) (morse-code * - - -))
(conversion (character K) (morse-code - * -))
(conversion (character L) (morse-code * - * *))
(conversion (character M) (morse-code - -))
(conversion (character N) (morse-code - *))
(conversion (character O) (morse-code - - -))
(conversion (character P) (morse-code * - - *))
(conversion (character Q) (morse-code - - * -))
(conversion (character R) (morse-code * - *))
(conversion (character S) (morse-code * * *))
(conversion (character T) (morse-code -))
(conversion (character U) (morse-code * * -))
(conversion (character V) (morse-code * * * -))
(conversion (character W) (morse-code * - -))
(conversion (character X) (morse-code - * * -))
(conversion (character Y) (morse-code - * - -))
(conversion (character Z) (morse-code - - * *)))
```

請到雲端學院下載初始事實資料  
morse-code.txt

<Hint:>

```
(defrule get-message
  (not (translation (string S?) (code S?)))
  =>
  (printout t "Enter a message (<Enter> to end): ")
  (bind ?input (explode$ (readline)))
  (assert (translation (string) (code ?input))))

(defrule end
  (translation (string) (code))
  =>
  (halt))
```

(halt) 指令可以結束CLIPS程式的執行，  
(implode\$ S?m) 可以將一個multifield欄位轉成為字串