### 5. HMS ACSL

PROBLEM: The Semaphore flag signaling system is an alphabet signaling system based on waving a pair of hand-held flags in a particular pattern. The flags are held, arms extended, in various positions representing each of the letters of the alphabet. The pattern resembles a clock face divided into eight positions: up (U), down (D), out (O), high (H) and low (L), for each hand. The left hand signal is always read first. Six letters require a hand to be brought across the body so that both flags are on the same side. As an example the letter H requires the left hand to be brought across the body and held low (AL).
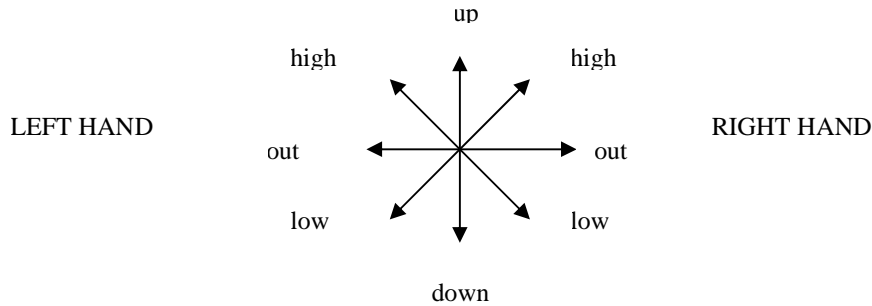
ALPHA	LEFT	RIGHT	ALPHA	LEFT	RIGHT
A	**D**	**L**	N	**L**	**L**
B	**D**	**O**	O	**AH**	**O**
C	**D**	**H**	P	**U**	**O**
D	**D**	**U**	Q	**H**	**O**
E	**H**	**D**	R	**O**	**O**
F	**O**	**D**	S	**L**	**O**
G	**L**	**D**	T	**U**	**H**
H	**AL**	**O**	U	**H**	**H**
I	**AL**	**U**	V	**L**	**U**
J	**O**	**U**	W	**O**	**AH**
K	**U**	**L**	X	**L**	**AH**
L	**H**	**L**	Y	**O**	**H**
M	**O**	**L**	Z	**O**	**AL**

INPUT: There will be 10 inputs. The first 5 will contain flag arrangements that must be converted to English. The last 5 will be strings in English that must be converted to flag arrangements. Each input line must be read in as a string. Each flag string will consist of a series of letters from the table above. Words will be separated by the ' # ' symbol.

OUTPUT: Print the message in the converted language according to the rules above.

SAMPLE INPUT
1. DLDHLOHL
2. UHOOAHOOH#ALOLO
.
.
.
5. ACSL
6. TROY HS

SAMPLE OUTPUT
1. ACSL
2. TROY HS
.
.
.
5. DLDHLOHL
6. UHOOAHOOH#ALOLO