G - Slurpys
Input: `standard input`
Output: `standard output`

Recognizing strings based on a set of restrictions is a common computational problem.

A Slurpy is a string of characters that has certain properties. Your program will read in strings of characters and output whether or not they are Slurpys.

A Slump is a character string that has the following properties:

1. Its first character is either a 'D' or an 'E'.

2. The first character is followed by a string of one or more 'F's.

3. The string of one or more 'F's is followed by either a Slump or a 'G'. The Slump or 'G' that follows the 'F's ends the Slump. For example `DFFEFFFG` is a Slump since it has a 'D' for its first character, followed by a string of two F's, and ended by the Slump 'EFFFG'.

4. Nothing else is a Slump.

A Slimp is a character string that has the following properties:

1. Its first character is an 'A'.

2. If it is a two character Slimp then its second and last character is an 'H'.

3. If it is not a two character Slimp then it is in one of these two forms:

   a) 'A' followed by 'B' followed by a Slimp followed by a 'C'.

   b) 'A' followed by a Slump (see above) followed by a 'C'.

4. Nothing else is a Slimp.

A Slurpy is a character string that consists of a Slimp followed by a Slump.

Examples:

```
Slumps:       DFG, EFG, DFFFFFG, DFDFDFDFG, DFEFFFFFG
Not Slumps:   DFEFF, EFAHG, DEFG, DG, EFFFFDG
Slimps:       AH, ABAHC, ABABAHCC, ADFGC, ADFFFGC, ABAEFGCC, ADFDFGC
Not Slimps:   ABC, ABAH, DFGC, ABABAHC, SLIMP, ADGC
Slurpys:      AHDFG, ADFGCDFFFFFG, ABAEFGCCDFEFFFFFG
Not Slurpys:  AHDFGA, DFGAH, ABABCC
```

Input

The first line contains an integer N between 1 and 10 describing how many strings of characters are represented. The next N lines each contain a string of 1 to 60 alpha characters.

Output

The first line of output should read "`SLURPYS OUTPUT`". Each of the next N lines of output should consist of either "`YES`" or "`NO`" depending on whether or not the corresponding input line is a Slurpy. The last line of output should read "`END OF OUTPUT`".

Sample Input

```
2
AHDFG
DFGAH
```

Sample Output

```
SLURPYS OUTPUT
YES
NO
END OF OUTPUT
```