2m 44s
left

ALL

3. Odd Strings

We have an array of strings. Consider each string as a zero-indexed array of characters. All of the characters will be in the range *ascii[a-z]* which have decimal values in the range *[97-122]*. These decimal values are called *ordinal* values and will be referred to as *ord[a]=97* for example.

Given an array of strings *s = [s[0],s[1],...s[n-1]]*, and an integer *m*, we calculate a *value* of each *s[i]* of length *len(s[i])* as:

$$value[i] = ord[s[i][0]]^m \times ord[s[i][1]]^m \times ... \times ord[s[i][len(s[i])-1]]^m$$

Perform the calculation on each string, sum them up and print whether their sum is *EVEN* or *ODD*.

For example, your array *s = ['abc', 'abcd']*. It has *k=2* strings. Rewritten as a two-dimensional array of decimal ordinals, we have *s' = [[97,98,99],[97,98,99,100]]*. If our exponent *m=2* we perform the following:

```
c   ord   pwr    value
-   ---   -----  ------------
sum = 0
a   97    9409   9409
b   98    9604   90364036
c   99    9801   885657916836
***
sum = 885657916836
***
a   97    9409   9409
b   98    9604   90364036
c   99    9801   885657916836
d  100   10000   8856579168360000
***
sum = 8857464826276836
***
EVEN
```

Constraints

- $1 \le t \le 50$
- $2 \le k \le 20$
- $2 \le m \le 10^9$
- $1 \le |s[i]| \le 10^5$