

Greater New York Regional 2012 - Mystery

Input

The first line of input contains a single integer P ($1 \leq P \leq 1000$), which is the number of data sets that follow. Each data set consists of several lines. Each data set should be processed identically and independently.

The first line of each data set contains an integer D which is the data set number. The second line contains no more than the 93 distinct printable ASCII characters. The third line contains an integer N ($1 \leq N \leq 512$), which is the number of integers on the next (fourth) line of the dataset. Each integer on the fourth line is in the range $-X$ to X where X is the number of characters on the second line minus 1.

Output

For each data set there is one correct line of output. It contains the data set number (D) followed by a single space, followed by a string of length N made of the characters on the second line of the input data set.

Sample Input

```
7
1
MAC
3
1 1 1
2
IW2C0NP30S 1RLDFA
22
0 3 3 -3 7 -8 2 7 -4 3 8 7 4 1 1 -4 5 2 5 -6 -3 -4
3
G.IETSNPRBU
17
2 4 5 -6 -1 -3 -2 -4 -4 1 -1 5 -3 4 1 -2 4
4
PIBN MRDSYEO
16
-4 4 -1 4 5 3 -5 4 -3 -3 -2 -5 -5 -3 1 3
5
D^obV@k"W*B&#]4!NcF$'lj%(d6XG5fi<Hxz7)2Lt~==8aQuvh}r_m+C9eI`-.>EwYyngZRsJKpq0{[\U|MPS,;T?
031/A
93
-1 11 44 39 -31 -44 10 5 24 14 1 -33 42 28 -34 7 -37 24 14 3 -7 18 4 19 37 4 20 2 41 -42
18 15 -3 10 7 12 -11 -41 14 8 31 -26 37 -19 -17 -9 -16 15 31 14 29 -22 1 -24 20 -30 6 1
16 -29 31 -30 6 17 -43 -10 7 7 4 -22 10 -2 15 13 14 2 6 -17 34 -27 28 29 -28 2 33 -13
-15 6 -31 24 41 29 26
6
I
1
0
7
I
13
0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

Sample Output

```
1 ACM
2 ICPC 2013 WORLD FINALS
3 IN ST. PETERSBURG
4 SPONSORED BY IBM
5 ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789abcdefghijklmnopqrstuvwxyz~`!@#$%^&*()_+={}
[]\|'";/.,<>?
6 I
7 IIIIIIIIIIIIIII
```