Problem E
Binary Strings

Time Limit: 1 seconds

Memory Limit: 512 megabytes

Binh has N binary strings S of length M. The teacher asks Binh to choose a set of binary strings and keep the original order so that two consecutive strings do not have the same value at the same position ($S_{i,j} \neq S_{i+1,j}$).

Count the number of ways to choose a valid set. Since the number of possible choices is very large, print the number of possible choices modulo $10^9 + 7$.

Input

The first line contains T - the number of test cases.

For each test case,

- The first line contains 2 numbers N and M, which are the number of strings and length of the strings, respectively.
- The next N lines contain strings consisting only of 0 and 1.

Constrains:

- $T \leq 10$
- $N \leq 10\text{^}5$
- $M \leq 16$
- The sum of N over test cases does not exceed 5×10^5

Output

The output contains a single integer – The number of choices modulo $10^9 + 7$.

Sample Input	Sample Output
1 4 2 10 01 11 10	7