

```
1 // 455B - A Lot Of Games
2 #include<bits/stdc++.h>
3 using namespace std;
4 string s;
5 int cnt,win[100005],lose[100005];
6 struct node{
7     int state,next[26];
8     node(){ state=0; memset(next,-1,sizeof(next)); }
9 }tree[100005];
10
11 void Insert(){
12     int cur = 0;
13     for(int i=0; i<s.size(); i++){
14         int id = s[i]-'a';
15         if(tree[cur].next[id]==-1){
16             tree[cur].next[id] = ++cnt;
17             tree[cnt] = node();
18         }
19         cur = tree[cur].next[id];
20     }
21 }
22
23 void fun(int u){
24     win[u]=0; lose[u]=0; int isleaf = 1;
25     for(int i=0; i<26; i++){
26         int v = tree[u].next[i];
27         if(v!=-1){
28             isleaf = 0;
29             fun(v);
30             win[u] |= !win[v];
31             lose[u] |= !lose[v];
32         }
33     }
34     if(isleaf==1)lose[u]=1;
35 }
36
37 int main(){
38     ios::sync_with_stdio(false); cin.tie(0);
39
40     int n,k; cin>>n>>k;
41     for(int i=1; i<=n; i++){
42         cin>>s;
43         Insert();
44     }
45
46     fun(0);
47
48     if(win[0]==0) printf("Second\n");
49     else if(win[0]==1&&lose[0]==1) printf("First\n");
50     else{
51         if(k&1) printf("First\n");
52         else printf("Second\n");
53     }
54
55     return 0;
56 }
```