

```

1  #pragma comment(linker, "/stack:640000000")
2
3  #include <algorithm>
4  #include <bitset>
5  #include <cassert>
6  #include <cctype>
7  #include <climits>
8  #include <cmath>
9  #include <cstdio>
10 #include <cstdlib>
11 #include <cstring>
12 #include <fstream>
13 #include <iostream>
14 #include <iomanip>
15 #include <iterator>
16 #include <list>
17 #include <map>
18 #include <numeric>
19 #include <queue>
20 #include <set>
21 #include <sstream>
22 #include <stack>
23 #include <string>
24 #include <utility>
25 #include <vector>
26 using namespace std;
27
28 const double EPS = 1e-9;
29 const int INF = 0x7f7f7f7f;
30 const double PI=acos(-1.0);
31
32 #define READ(f) freopen(f, "r", stdin)
33 #define WRITE(f) freopen(f, "w", stdout)
34 #define MP(x, y) make_pair(x, y)
35 #define PB(x) push_back(x)
36 #define rep(i,n) for(int i = 1 ; i<=(n) ; i++)
37 #define repI(i,n) for(int i = 0 ; i<(n) ; i++)
38 #define FOR(i,L,R) for (int i = (int)(L); i <= (int)(R); i++)
39 #define ROF(i,L,R) for (int i = (int)(L); i >= (int)(R); i--)
40 #define FOREACH(i,t) for (typeof(t.begin()) i=t.begin(); i!=t.end(); i++)
41 #define ALL(p) p.begin(),p.end()
42 #define ALLR(p) p.rbegin(),p.rend()
43 #define SET(p) memset(p, -1, sizeof(p))
44 #define CLR(p) memset(p, 0, sizeof(p))
45 #define MEM(p, v) memset(p, v, sizeof(p))
46 #define getI(a) scanf("%d", &a)
47 #define getII(a,b) scanf("%d%d", &a, &b)
48 #define getIII(a,b,c) scanf("%d%d%d", &a, &b, &c)
49 #define getL(a) scanf("%lld", &a)
50 #define getLL(a,b) scanf("%lld%lld", &a, &b)
51 #define getLLL(a,b,c) scanf("%lld%lld%lld", &a, &b, &c)
52 #define getC(n) scanf("%c", &n)
53 #define getF(n) scanf("%lf", &n)
54 #define getS(n) scanf("%s", n)
55 #define bitCheck(N,in) ((bool)(N&(1<<(in))))
56 #define bitOff(N,in) (N&(~(1<<(in))))
57 #define bitOn(N,in) (N|(1<<(in)))
58 #define bitCount(a) __builtin_popcount(a)
59 #define iseq(a,b) (fabs(a-b)<EPS)
60 #define UNIQUE(V) (V).erase(unique((V).begin(), (V).end()), (V).end())
61 #define vi vector<int>
62 #define vii vector<vector<int>>
63 #define pii pair<int, int>
64 #define ff first
65 #define ss second
66 #define ll long long
67 #define ull unsigned long long
68
69 template<class T> inline T _abs(T n) { return ((n) < 0 ? -(n) : (n)); }
70 template<class T> inline T _max(T a, T b) { return (!((a)<(b))?(a):(b)); }
71 template<class T> inline T _min(T a, T b) { return (((a)<(b))?(a):(b)); }
72 template<class T> inline T _swap(T &a, T &b) { a=a^b;b=a^b;a=a^b;}
73 template<class T> inline T gcd(T a, T b) { return (b) == 0 ? (a) : gcd((b), ((a) % (b))); }
74 template<class T> inline T lcm(T a, T b) { return ((a) / gcd((a), (b)) * (b)); }
75 template<typename T> string NumberToString ( T Number ) { ostringstream ss; ss << Number;
return ss.str(); }
76
77 #ifndef dipta007
78 #define debug(args...) {cerr<<"Debug: "; dbg,args; cerr<<endl;}

```

```

79  #else
80      #define debug(args...) // Just strip off all debug tokens
81  #endif
82
83  struct debugger{
84      template<typename T> debugger& operator , (const T& v){
85          cerr<<v<<" ";
86          return *this;
87      }
88  }dbg;
89
90  int n,m,k;
91  pii arr[2004];
92  int tot;
93  int dp[2004][2004];
94
95  int call(int in, int baki)
96  {
97      if(in >= tot) return 0;
98      if(baki<=0) return 0;
99      if(baki <= arr[in].ss) return 1;
100
101      int &ret = dp[in][baki];
102      if(ret!=-1) return ret;
103
104      FOR(i,1, arr[in].ss)
105      {
106          if(baki - i >= 0)
107          {
108              if(call(in+1, baki-i) == 0) return ret = 1;
109          }
110          else break;
111      }
112      return ret = 0;
113  }
114
115  int main() {
116      #ifdef dipta007
117          //READ("in.txt");
118          //WRITE("out.txt");
119      #endif // dipta007
120      ios_base::sync_with_stdio(0);cin.tie(0);
121
122      int t;
123      cin >> t;
124      FOR(ci,1,t)
125      {
126          cin >> n >> m >> k;
127          string st;
128          cin >> st;
129
130          int in = 0;
131          arr[0].ff = 1;
132          arr[0].ss = k;
133          char ch = st[0];
134          FOR(i,1,n+n-1)
135          {
136              if(st[i]==st[i-1])
137              {
138                  arr[in].ff++;
139                  arr[in].ss += k;
140              }
141              else
142              {
143                  in++;
144                  arr[in].ff = 1;
145                  arr[in].ss = k;
146              }
147          }
148
149          //      FOR(i,0,in)
150          //      {
151          //          debug(i, arr[i].ff, arr[i].ss);
152          //      }
153
154          tot = in+1;
155          SET(dp);
156          int kk = call(0,m);
157

```

```
158     cout << "Case #" << ci << ": ";
159     if(kk==0)
160     {
161         if(ch == 'A') cout << "B";
162         else cout << "A";
163     }
164     else
165     {
166         if(ch == 'B') cout << "B";
167         else cout << "A";
168     }
169     cout << endl;
170
171 }
172
173 return 0;
174 }
175
176
177
178
```