```cpp
#include <iostream>
#include <vector>

using namespace std;

void escriu(int f, int c, const vector<int>& col) {
  for (int i = 0; i < f; ++i) {
    for (int j = 0; j < c; ++j)
      if (col[i] == j) cout << "R";
      else             cout << ".";
    cout << endl;
  }
  cout << endl;
}

void torres(int f, int c, int i, vector<int>& col, vector<bool>& marked) {
  if (i == f) escriu(f, c, col);
  else
    for (int j = 0; j < c; ++j)
      if (not marked[j]) {
        col[i] = j;
        marked[j] = true;
        torres(f, c, i+1, col, marked);
        marked[j] = false;
      }
}

int main() {
  int f, c;
  cin >> f >> c;
  vector<int>  col(f);
  vector<bool> marked(c, false);
  torres(f, c, 0, col, marked);
}
```