Our Solution(s)                                    Run Code

Solution 1    Solution 2

```cpp
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#include <vector>
using namespace std;

void permutationsHelper(int i, vector<int> *array,
                        vector<vector<int>> *permutations);
void swap(vector<int> *array, int i, int j);

// O(n*n!) time | O(n*n!) space
vector<vector<int>> getPermutations(vector<int> array) {
  vector<vector<int>> permutations;
  permutationsHelper(0, &array, &permutations);
  return permutations;
}

void permutationsHelper(int i, vector<int> *array,
                        vector<vector<int>> *permutations) {
  if (i == array->size() - 1) {
    permutations->push_back(*array);
  } else {
    for (int j = i; j < array->size(); j++) {
      swap(array, i, j);
      permutationsHelper(i + 1, array, permutations);
      swap(array, i, j);
    }
  }
}

void swap(vector<int> *array, int i, int j) {
  int tmp = array->at(i);
  array->at(i) = array->at(j);
  array->at(j) = tmp;
```

Your Solutions                                    Run Code

Solution 1    Solution 2    Solution 3

```cpp
#include <vector>
using namespace std;

vector<vector<int>> getPermutations(vector<int> array) {
  // Write your code here.
  return {};
}
```

Our Tests                                    Custom Output                                    Submit Code

Run or submit code when you're ready.