CPP Coding Problem

Contributor：Wen-Kai, Wang

Subject：Combinations

Main testing concept：

Basics		Functions	
■	C++ BASICS 1	☐	SEPARATE COMPILATION AND NAMESPACES
☐	FLOW OF CONTROL	☐	STREAMS AND FILE I/O
☐	FUNCTION BASICS	■	RECURSION
☐	PARAMETERS AND OVERLOADING	☐	INHERITANCE
☐	ARRAYS	☐	POLYMORPHISM AND VIRTUAL FUNCTIONS
☐	STRUCTURES AND CLASSES	☐	TEMPLATES
☐	CONSTRUCTORS AND OTHER TOOLS	☐	LINKED DATA STRUCTURES
☐	OPERATOR OVERLOADING, FRIENDS,AND REFERENCES	☐	EXCEPTION HANDLING
☐	STRINGS	☐	STANDARD TEMPLATE LIBRARY
☐	POINTERS AND DYNAMIC ARRAYS	☐	PATTERNS AND UML

Description：

Please write a recursive function **PrintCombination** in PrintCombination.h to enumerate all combinations of $C(n,r)$. Please copy the following code as your main function and do not change any code of it:

```
#include "PrintCombination.h"

#define ELEMENTS_FOR_COMBINATION 5          //i.e., C(5,4)
#define DLEMENTS_FOR_CHOICE 4

int main(void)
{
        int *arrayPtr = new int[ELEMENTS_FOR_COMBINATION];

        //Get all elements for combination
        for (int i = 0; i < ELEMENTS_FOR_COMBINATION; ++i)
                arrayPtr[i] = i + 1;

        PrintCombination(arrayPtr, ELEMENTS_FOR_COMBINATION, DLEMENTS_FOR_CHOICE);

        if (arrayPtr != NULL)
                delete[] arrayPtr;

        return 0;
}
```

The function, PrintCombination(int *, int, int), is for print all the combination results on console by recursive.

note:The **main()** function in your submission will be replaced when judging.

Input：no input

Output：

Sample input / output：

Sample Input	Sample Output
No input.	1 2 3 4 1 2 3 5 1 2 4 5 1 3 4 5 2 3 4 5

■ Eazy,Only basic programming syntax and structure are required.
□ Medium,Multiple programming grammars and structures are required.
□ Hard,Need to use multiple program structures or complex data types.

Expected solving time:
20 minutes

Other notes: