CPP 程式設計題

命題者:Wen-Kai, Wang										
題目名稱(中文/英文): Combinations										
主要	主要測試觀念:									
	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							
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題目說明:Please write a recursive function to enumerate all combinations of C(n,r). Note that we will use the following code snippets to test your program:

```
#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;
}</pre>
```

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

輸入說明:no input

輸出說明:

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	Sample Input	Sample Output
		1 2 3 4
		1235
測資與輸出	sample.cpp	1245
		1345
		2 3 4 5

附屬資料:

☑解答程式:Combinations.cpp(檔名)

☑測試資料: input-main1.cpp, output1.txt, input-main2.cpp, output2.txt, input-main3.cpp, output3.txt

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١	一中	,	雲用	到:	多項	程士	计設	計語	法目	姐结	榼

□難,需用到多項程式結構或較為複雜之資料型態或結構

解題時間:30分鐘。