Lab 1 - Function, Pointer, Recursion (C/C++)

Problem 1. Write a program to manage a random integer array A with size of n using pointers (no array indexing). The program consists of the following functions:

a) Input data (random numbers). void inputData(int *a; int n)
b) Print out the array. void outputData(int *a; int n)
c) Remove all odd numbers.

void remove(int *a; int *n, int k) //remove an item

void removeOdd(int *a; int *n) remove all odd items

Problem 2. You want to develop an application managing a list of students. The information of a student is defined as follows:

```
typedef struct Student{
        char name[30];
        char class[10];
        float mMath;
        float mPhysical;
};
Student s[100];
```

Write a program including the following functions:

a) Add a new student.
b) Search a student by name.
c) Search a student by name and edit class of the student.

Suggestion:

You should use malloc or calloc function (in C) or operator new (in C++) to allocate memory.

Problem 3. Write a program to find GCD (Greatest Common Divisor) and LCM (Lowest Common Multiple) of two integer numbers using recursion.

Problem 4. Write a program to store an array of integers (multi size) by using a dynamic array and pointers. Your program consists of the following functions:

a) Input data randomly.
b) Print out the array.