Pointers

Homework

teacher: Katja Mankinen, katja.mankinen@hep.lu.se

Handed out: 3 October 2018
Due: 14 October 2018

Description

This week your homework is to modify the file `HW7.cpp` which contains a couple of functions that manipulate pointers. Your task is to edit the body (not the signature) of these functions so that printed output in the main function is correct.

After doing this homework, you can handle pointers and understand what is the difference between passing by reference and passing by value.

```cpp
#include <iostream>

using namespace std;

int add(int a, int b) // passing to a function by value
{
// Modify so that the function returns sum of two integers
}

void increaseByOne(int *a, int *b)
{
// Modify so that the function adds one to each value (a -> a+1, b -> b+1)
}

void swap(int &a, int &b)
{
// Modify so that the function swaps values a and b
}

// Bonus points:
void convertToUpperCase(char *strPtr)
{
  // Modify so that the function converts lowercase letters to uppercase letters.
  // You may find this helpful: http://www.cplusplus.com/reference/cctype/
}

int main()
{
  int a = 3;
```

```cpp
    int b = 5;

    cout << "add() function\n";
    cout << add(a,b) << endl; // a+b=8

    cout << "increaseByOne() function\n";
    //call increaseByOne() function
    cout << "a = " << a << "\tb = " << b << endl; // a  = 4 b = 6

    cout << "swap() function\n";
    //call swap() function
    cout << "a = " << a << "\tb = " << b << endl; // b = 6 a = 4

    // bonus:
    char text[] = "mnxb01/nafy018 is the best course";
    convertToUpperCase(text);
    cout << text << endl; // MNXB01/NAFY018 IS THE BEST COURSE


return 0;
}
```

Hand-in procedure

Submit your solution to Live@Lund by 14 October 2018!

At the beginning of the file, write down the time (approximately) you spent on this homework, and the names of students you may have collaborated with. You need to complete the homework independently but of course you may discuss and think about the problems together.

Note: Homework is mandatory! Don't hesitate to ask help from teachers if you get stuck.