PROGRAMMING ASSIGNMENT 1

Through this programming assignment, we are going to practice the very basics of C++ such as `cin, cout`, and get familiar with the `ascII` characters and its underlying integer representations and simple type casting.

(1) **(This problem is graded)**
Write a C++ program such that it prompts users for a letter (one of 26 English alphabets either in lower case or uppercase); if it is a lowercase letter, then convert it to uppercase letter; if it is an uppercase letter, then convert it to a lowercase letter. Print the converted letter to the screen. If the input is not a letter, just print out "not a letter". Your program shall run forever until user hits "CTRL-C" to end. For example, when your program is running:

```
> Enter a letter
> a
> a is converted to A.

> Enter a letter
> B
> B is converted to b.

> Enter a letter
> 6
> 6 is not a letter.
```

Note: You cannot use the built-in library function calls namely `toupper` and `tolower`; you must implement it based on the concepts we discussed in class.

(2) **(This problem is not graded)**
Write two functions that convert a string to an integer, and vice versa. The function headers are given as:

```
int str2int(char*);
char* int2str(int);
```

For example, when the function `str2int` is called on input `"123"`, it returns integer `123`; when the function `int2str` is called on input `235`, it returns a string `"235"`.

Turn in instruction:

Save your source file as username_hw1.cpp, where username is your netid. Submit your source file, i.e., username_hw1.cpp, on CLEo, after you fully test it. Note that you don't need to turn in your binary code (i.e., the executable file).