

## Lab 8: Introduction to Templates

**Due: Friday 10/22 at 11:59 PM**

The goal here is to get an initial feel for creating a template class. I have provided a header in a file called `tarray.h` and a main. Notice that at the bottom of the `tarray.h` there is a line that says:

```
#include "tarray.template"
```

You are to write the `tarray.template` file which will implement the following functions for the class:

```
// makes an object with a dynamic array of size 5
Tarray();

// puts the item into the next available spot in the
// array. If the array is full, resize is called.
void add(T item);

// iterator functions
// places current_index at the beginning of the array
void start();

// returns true if the current index is less than used
bool is_item()const;

// moves current index to the next array location
void advance();

// returns the array item referenced by current index
T current()const;

// removes the item at the current index
void remove_current();
private:
    void resize();
```

Once you have implemented all the functions, compile this with the command `g++ *.cc` (even though there is only one `.cc` file) and then run the program, saving your second running of the program to a script file.

Please submit your source code and a script file (or screenshot of the output if you do not have the script command) on Blackboard.