APC++ Class
APStrings

1. Download the apstring class (apstring.cpp and apstring.h) from the web site and add a function called ApTrim() to the class. Use the main program below to exercise your function.

```cpp
#include<iostream>
#include "apstring.h"
#include <cstdlib>
#include <cstring>
using namespace std;

int main()
{
apstring aStr = "  Hello Mom  ";
cout << aStr << endl;
cout << "The length of the string is " << aStr.length() << endl;
aStr.apTrim();
cout << aStr << endl;
cout << "The length of the string is " << aStr.length() << endl;
aStr += "Add some more";
cout << aStr << endl;
cout << "The length of the string is " << aStr.length() << endl;
return 0;
}
```

The correct printed output should be
Hello Mom
The length of the string is 13
Hello Mom
The length of the string is 9
Hello MomAdd some more
The length of the string is 22
Press any key to continue

2. Add two more functions to the apstring class to be used to pad blanks onto the right or left of a given string. Call these two functions ApPadR(n) and ApPadL(n) respectively. ApPadR(n) adds n spaces to the right side of the string and ApPadL(n) adds n spaces to the left side of a string. Note that since the concatenation operator is already defined the easiest way to write this function is to make use of it.

3. Add a remove function to the apstring class which is used to remove the first instance of an argument string from a given string. An example is given in the following code:

```cpp
apstring aStr = "Hello Mom!";
apstring bStr = "Hello";
cout << aStr.Remove(bStr) << endl;
```

This sequence should print  Mom! since Hello has been removed.