

Project 8

due at midnight on Mon 17 Nov (60 points)

The goal of this assignment is to apply loops to string processing, treating strings as an array of characters. We will also revisit the full-line input technique:

```
string input; // declare variable
getline(cin, input); // get one line of text from user
```

Your program should repeatedly ask the user to type a one-line word or phrase. If they type end, then the program should stop. After they enter their phrase, your program:

- prints the same phrase backwards
- counts the number of vowels (A, E, I, O, U) in the phrase
- if the phrase reads the same backwards as forwards, the program notes that it is a [palindrome](#).

Here is a sample run:

```
Enter your text (or end): 2013
Backwards: 3102
Your input has 0 vowels.
Enter your text (or end): caravan
Backwards: navarac
Your input has 3 vowels.
Enter your text (or end): 1991
Backwards: 1991
Your input has 0 vowels.
Palindrome!
Enter your text (or end): ABBA
Backwards: ABBA
Your input has 2 vowels.
Palindrome!
Enter your text (or end): balloollab
Backwards: balloollab
Your input has 4 vowels.
Palindrome!
Enter your text (or end): balloon
Backwards: noollab
Your input has 3 vowels.
Enter your text (or end): end
```