Northern Michigan University (Marquette Co, MI)
CS222-61-21W Computer Science I (Andrew A. Poe)
Quiz 5
Friday 26 February 2021 10:00 A.M. EST
Time: 10 minutes

Given the following classes:

```
class LL {
 private:
  LLN *head;
};
```

```
class LLN {
 private:
  string data;
  LLN *next;
};
```

write the method

```
string LL::LongestVowelEnd ();
```

This method returns the longest word in the linked list of all those words ending in a capital vowel (A,E,I,O,U,W,Y). If there is no such word in the list, the method should return an empty string. If there is a tie, you should return the word closest to the head of the list. For example, if the list were I-->SAW-->A-->MONKEY-->AND-->A-->TURKEY-->AND-->A-->WATERMELON, the method would return MONKEY since MONKEY and TURKEY have six letters each and MONKEY is closest to the head.

Do not use loops; use recursion only. You may write additional methods in LL and LLN if you wish. You may assume that standard constructors, destructors, accessors, and mutators have already been written.

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```
string LL::LongestVowelEnd () {

 if (!head) return "";
 return head->LongestVowelEnd ();
}

string LLN::LongestVowelEnd () {

 string s = "";
 if (next) s = next->LongestVowelEnd ();
 if (data=="" || data[data.length()-1] != 'A' &&
     data[data.length()-1] != 'E' && data[data.length()-1] != 'I' &&
     data[data.length()-1] != 'O' && data[data.length()-1] != 'U' &&
     data[data.length()-1] != 'W' &&data[data.length()-1] != 'Y')
  return s;
 if (s=="") return data;
 if (data.length() >= s.length()) return data;
 return s;
}
```