Problem Set 4 Exercise #06: Word Game

Reference: Lecture 10 notes

Learning objectives: Characters and Strings

Estimated completion time: 30 minutes

Problem statement:

[CS1010 AY2011/12 Semester 1 Exam, Q3]

In many word games, a letter in a word is scored according to its point, which is inversely proportional to its frequency in English words. In a certain word game, the points are allocated as follows:

Points	Letters
1	A, E, I, L, N, O, R, S, T, U
2	D, G
3	B, C, M, P
4	F, H, V, W, Y
5	K
8	J, X
10	Q, Z

Write a function

```
int compute_score(char word[])
```

that takes in a word which is a string comprising only uppercase letters, and returns its score which is the total points of all the letters in the word.

For example, the word "EXAM" is worth 13 points: 1 for 'E', 8 for 'X', 1 for 'A', and 3 for 'M'.

You may assume that a word contains no more than 20 letters.

Write a program **word_game.c** for the above task.

Sample run #1:

```
Enter a word: EXAM
Total score = 13
```

Sample run #2:

```
Enter a word: WORD
Total score = 8
```