

Introduction to Computers and Programming

Homework 6 (Week 7)

Due date: 2020/11/12 (Thu.) 23:55

1. Write a program that finds the **largest** words (no longer than 20 characters). The program will determine which word would come first and last in dictionary order. The program stops accepting input when the user enters a three-letter word.

Input:

```
Enter word: zero
Enter word: zebra
Enter word: catfish
Enter word: cat
```

Output:

```
The largest word is zero.
```

Hint: Use a string name `largest_word` to keep track of the largest word. Each time the user enters a new word, use `strcmp` to compare it with `largest_word`; if the new word is larger, use `strcpy` to save it in `largest_word`. Use `strlen` to determine when the user has entered a three-letter word.

2. In the SCRABBLE Crossword Game, players form words using small tiles, each containing a letter and a face value. The face value varies from one letter to another, based on the letter's rarity. (Here are the face values: 1:AEILNORSTU, 2:DG, 3:BCMP, 4:FHVWY, 5:K, 8:JX, 10:QZ.)

Write a program that must include the following function:

```
int compute_scrabble_value(const char *word);
```

The function `compute_scrabble_value` will return the value of a word by summing the values of its letters. The parameter `char *word` points to the string entered by the user:

```
Enter a word: pitfall
Scrabble value: 12
```

Your program should allow any mixture of lower-case and upper-case letters in the word.