



Object-Oriented Programming in C++

Lab Exercise 6 (2%)

Objective

The objective of this exercise is to get hands on experience using the STL. You can work on the exercise in a group of two. In *MySchool* form the groups under *Lab Exercise 6* if you have not already done so. You will submit your solution using *Mooshak* (make sure both parties become familiar with how to use it).

Description

Create a simple word game, where the user tries to construct as many legitimate words as possible from a given set of tiles. The game uses a dictionary to verify the correctness of the words. The program takes two optional command-line arguments: a seed for the random generator and the name of the dictionary file:

```
./wordgame 0 dictionary.txt
```

An example output is as follows:

```
Welcome to word-puzzle!
Reading dictionary ... size = 45424
Number of tiles to use: 12
Tiles:  a d d e h j m p s t v v
Enter word ('*' to exit): dead
dead
Good job! Score = 1
Enter word ('*' to exit): add
add
Good job! Score = 2
Enter word ('*' to exit): pee
pee
Word not legitimately constructed from tiles.
Enter word ('*' to exit): head
head
Good job! Score = 3
Enter word ('*' to exit): jep
jep
Word not found in dictionary.
Enter word ('*' to exit): add
add
Word already found.
Enter word ('*' to exit): *

Words found:
    add
    dead
    head
Final score = 3

List of attempts:
    add:2
    dead:1
    head:1
    jep:1
    pee:1
```

A skeleton of the program is provided in file *wordgame.cpp*. Fill in the missing parts. While developing and testing your program (outside Mooshak) use a small homemade dictionary. Once you are confident that your code is working correctly use the provided large dictionary (which Mooshak uses too). Hand in the code in Mooshak. Submission are open until 11pm.