CSE 2010, Term Project, Fall 2016
Due Wed Nov 30 at the start of your lab section; Submit
Server: class = cse2010, assignment = termProjectSi
Initial
Due Wed Dec 7 at the start of your lab section; Submit
Server: class = cse2010, assignment = termProjectSf

Program Files: Among your program files, you will
provide SmartWord.java that supports at least:

• SmartWord(...) // constructor
• void processOldMessages(...) // user’s old messages
• String[] guess(...) // generates 3 guesses
• void feedback(...) // feedback from EvalSmartWord

We will provide EvalSmartWord.java (not to be modified) to help you evaluate your system. EvalSmartWord.java and a template of SmartWord.java with details of the above methods are on the course website.

You may use any program segment/file from the textbook. However, you may *NOT* use program segments/files from other sources. You may borrow ideas on data structures and algorithms from other sources, but you need to clearly cite them at the top of your program files and implement them on your own.

Input: Input is from the command-line arguments for EvalSmartWord.java in this order:

• filename for a list of known words, one word per line
• filename for old messages to simulate old user input, one message per line
• filename for new messages to simulate new user input, one message per line

Sample input files are on the course website.

You may have additional “hardcoded” (not from command line or prompt) input data files for SmartWord.java and/or other program files.

Output: Measured performance by EvalSmartWord.java goes to the standard output (screen).

Presentation: Project presentations (about 15 minutes each) will be during the lab on Dec 7. Create a presentation file following this outline:

1. Title, Group Name, and Members
2. Goal and Motivation
3. Initial Approach/Submission
   (a) Algorithms and supporting data structures
   (b) Additional input data and reasons
   (c) Ideas devised within the group
   (d) Ideas discussed in the course/book, cite them
   (e) Ideas borrowed from other sources, cite them
4. Final Approach/Submission
   (a) Changes in algorithms and supporting data structures
   (b) Changes in additional input data and reasons
   (c) Ideas devised within the group
   (d) Ideas discussed in the course/book, cite them
   (e) Ideas borrowed from other sources, cite them
5. Evaluation: Accuracy, time, memory, and score: initial vs. final approach/submission for each data set
6. Analysis
   (a) Why more/less accurate?
   (b) Why faster/slower (including time complexity—n words, each word has m characters)?
   (c) Why more/less memory?
   (d) Possible further improvements

Evaluation:

• Initial submission (20%) – including performance on accuracy and score
• Final submission (40%) – including performance on accuracy and score
• Presentation (20%, oral and written)
• Teammate evaluation (20%)
• Extra Credit: Final Submission has an average accuracy above 50, using less than 0.4 seconds and 2 × 10^6 bytes (~200 MB), as measured by EvalSmartWord.java on data from multiple users. Average accuracy of at least 51 earns one extra point, at least 52 earns two extra points, ... Late submission is not applicable.

Submission: Initial submission has SmartWord.java, other program files, and additional data files (if any).

Final submission has SmartWord.java, other program files, additional data files (if any), and presentation (preferably in PDF).

Note the late penalty on the syllabus if you submit after the due date and time as specified at the top of the assignment.

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