

Homework #3 Introduction to Computing

Due: Sept. 29, 2009 (Tuesday at 11:59 PM)

For homework #3 you are to write a program to play a random number guessing game. Your program should generate a random number between 1 and 1000 and ask the user to guess what the number is. If the user's guess is higher than the random number, the program should display "Too high, try again." If the user's guess is lower than the random number, the program should display "Too low, try again." If the user's guess is equal to the random number, then an appropriate message should be displayed. The program should use a loop that repeats until the user correctly guesses the random number.

Extra credit features: (You don't need to do the extra credit)

- Maintain a top 10 best scores file with the names and fewest number of guesses required. If fewer than 10 plays have been done, then the file will contain less than 10 names.

When you write your program, be sure to use general conventions of good style:

- use meaningful variable names with good style, i.e., use CamelCase (or use underscores) (I like to declare them one per line with a following comment if necessary)
- use meaningful named constants (e.g, PI, STATE_SALES_TAX) where appropriate with good style (ALL_CAPS_AND_UNDERSCORES). Put your global constants where they can be found and changed easily in future versions of your program, e.g, after your initial comments describing the program and before your main function definition.
- use comments at the start of the program, before each function, and before any especially difficult section of code to understand (I like to label the closing set bracket, '}', with some indication of what's being closed)
- place the `main` function near the top of the program with user-defined functions below it
- use *white space* (spaces, indentation, blank lines) to make you program more readable by:
 - aligning the opening set/curly brace, '{', with the corresponding closing '}' one (I like to put the '{' on the same line with the programming construct (e.g., main function definition) with the closing '}' aligned with the start of the construct)
 - indent all the lines inside a set of braces
 - you blank lines to separate logical units of the code, e.g., between variable declarations and executable statements

Submit your homework electronically at http://math-cs.cns.uni.edu/~schafer/submit/which_course.cgi

The steps for the homework submission system are:

1. Zip your project folder, say hw3, by right-clicking on it and selecting Send To | Compressed Zipped Folder which will create a file called hw3.zip. This hw3.zip file is what you want to submit via the on-line submission system.
2. Log on to the submission system at: http://www.cs.uni.edu/~schafer/submit/which_course.cgi
Use the same AD-ITS User name and password you use to log on the lab computers.
3. Select the course and section number of "810:051, Intro to Computer, Fienup". Click the "Continue" button.
4. Select the homework that you wish to submit: "HW 3 Guessing Game". Click the "Continue" button.
5. Specify how many extra files you want to submit. Just leave it at 0. Click the "Continue" button.
6. Upload the hw3.zip file containing your project by Browsing and selecting hw3.zip. Click the "Continue" button.
7. The next page reports on the status of the upload(s). You can always continue to upload a newer version until the deadline. A newer file of the same name will replacing the older one.