

Specification: For this assignment you will produce a design outline for Programming Assignment 10 — the `struct` version of the simple city database program. Your outline must be typed either as a plain text file (Notepad, or PFE, or even the Visual C++ editor) or as an MS Word document. Your design must satisfy the following requirements:

- Start with a brief header comment listing your name, section, and date completed. You do not have to describe the purpose of the program.
- You must include your planned declaration for the required `struct` type, and any other global declarations you plan to use. These should be listed right after the header comment.

Plan your design around user-defined functions, and be sure to explain what each function does. The function explanations should be clear and be given after the design outline for the main program — these explanations should include a header comment and a design outline for the function implementation.

In general:

- You must indicate what major local variables (function parameters count as local) you plan to use in each function. You do not have to include loop counters or other minor variables.
- You must indicate when input data values are read and specify associated variable names.
- You must indicate when output values are written.
- You must indicate when input and output files will be opened/closed and specify the file names.
- You must indicate what comparisons or decisions are made (like “numRock is greater than 0”), but you do not have to indicate details of how that comparison or decision will be carried out.
- You must indicate when iteration is used, exactly which steps are within the loop, and exactly what condition(s) will cause the loop to terminate.
- Use the pseudocode notation, for `while` loops and `if . . . else` statements, discussed in Appendix 3 to the course notes. Be careful to indicate clearly in your design where logical blocks, like the body of a loop, begin and end.

Example: Take a look at the posted example of a design outline (for an old project from this course). I’ve illustrated one fairly thorough approach there, and invented some additional notation that may be useful.

Grades: Your grade on this assignment will reflect both how well you’ve conformed to the requirements above and how complete your design is. It will not be possible to return your grade on this design more than a few days before the project is due. There will be some in-class discussion of the characteristics of a good design. **You should incorporate a revised design outline in the header comment for your Project 10 submissions.**