

Prac: Exceptions and Text Files

Text files

1. Copy the program DemoFileTextRead.cs.txt (rename to drop the .txt or copy directly into a new file). Create a small text file using Notepad (or use an existing Notepad file) and ensure it is located in the 'Debug' directory of the project. Ideally, use a try/catch block for safer processing. Compile and run the program to verify it works correctly.
2. Copy and rename DemoFileTextRead.cs to DemoFileTextWrite.cs and modify the code so that a sentence entered at the keyboard is written to a text file. Again include a try/catch block for safer processing. Open the file your program writes to in Notepad to check the data has been correctly written and is readable.

Exceptions

1. Copy the file ArrayExceptiontest.cs.txt (rename without the .txt extension). This program declares an integer array of 10 values and then attempts to read and display the values stored at three locations in the array. The program should compile, but on execution should issue a *runtime exception*. Study the code to determine exactly where and why the exception is being thrown (i.e. why is an error being generated?).
2. Ideally, you want the program not to crash but to cleanly proceed to completion. The problem in *could* be corrected by editing the index values to ensure they are valid. Instead, correct the problem by enclosing *all* the code *within* the processarray method inside a try/catch block where the catch argument is an IndexOutOfRangeException and prints a message 'skipping index'. If correctly implemented, the program should display the final statement defined in main, 'Program executed to completion'.
3. You will probably find that whilst the first value is correctly printed and the second has been skipped due the thrown exception, the third has not printed out at all – even though the program proceeded to completion and it was a valid line. Further modify the program so that any of the three attempts at array access would result in a value display if they were valid. Hint: your program can have more than one try/catch block. If you get this working, can you rewrite the code using a loop to make the code more succinct?