File Handling Problems

1. **File Content Analysis**
   * Write a Python script that opens a file named **data.txt**, counts the number of lines in the file, and prints the result. Handle the case where the file does not exist.
2. **Updating File Content**
   * Create a script that appends the current date and time to a file named **log.txt** every time it is run.
3. **Reading Specific Lines**
   * Write a function that takes a filename and a list of line numbers as arguments. The function should return the contents of the specified lines from the file.
4. **Search for a Word**
   * Develop a Python script that reads a file and searches for a specific word provided by the user. The script should print each line that contains the word, along with the line number.
5. **File Conversion**
   * Write a program to read a file **input.txt** containing one word per line, and write to a new file **output.txt** where each word is in uppercase.

Exception Handling Problems

1. **Division Calculator with Error Handling**
   * Create a program that asks the user for two numbers and then divides them. The program should handle ZeroDivisionError and ValueError appropriately.
2. **Custom Exception for User Age**
   * Write a Python class for a custom exception called **AgeError**. Then, write a function that asks for the user's age and raises an **AgeError** if the age is negative.
3. **File Processing with Exception Handling**
   * Modify the file reading script from the first section to handle exceptions. It should handle cases where the file is missing, and also catch and print any other exceptions.
4. **Assertive Input Validation**
   * Write a function that uses assertions to validate that an input number is positive. If the assertion fails, handle the AssertionError by printing an error message.
5. **Handling Multiple Exceptions**
   * Write a script that asks the user to input a file name and then attempts to print the contents of the file. The script should handle FileNotFoundError and IsADirectoryError.