Practice Problems: File Handling and Error Handling in Python

1. **Read a File**: Write a Python program to read the contents of a text file and print it.
2. **Write to a File**: Write a program that takes user input and writes it to a file.
3. **Append to a File**: Write a program to append text to an existing file without overwriting its contents.
4. **Copy File Contents**: Write a program to copy contents from one file to another.
5. **Count Lines in a File**: Write a program to count the number of lines in a given file.
6. **Count Words in a File**: Write a program to count the number of words in a given text file.
7. **Count Characters in a File**: Write a program to count the number of characters in a file.
8. **Find and Replace in a File**: Write a program that replaces a specific word in a file with another word.
9. **Read File Line by Line**: Write a program to read a file line by line and print each line.
10. **Check if a File Exists**: Write a program that checks whether a file exists before attempting to read it.
11. **Handle File Not Found Error**: Write a program that handles `FileNotFoundError` when trying to open a non-existing file.
12. **Handle Division by Zero Error**: Write a program that catches a division by zero error and prints an appropriate message.
13. **Handle ValueError in Input**: Write a program that catches a `ValueError` when the user enters a non-numeric input.
14. **Handle Multiple Exceptions**: Write a program that handles both `FileNotFoundError` and `ValueError`.
15. **Using `finally` in Exception Handling**: Write a program that demonstrates the use of the `finally` block in exception handling.

16. **Create and Use Custom Exception**: Write a Python class that defines a custom exception and demonstrates its use.

17. **Read and Write Binary Files**: Write a program to read and write binary data from a file.

18. **Write a CSV File**: Write a program that creates a CSV file and writes data to it.

19. **Read a CSV File**: Write a program that reads data from a CSV file and prints it.

20. **Handle IndexError Exception**: Write a program that catches an `IndexError` when accessing an invalid index in a list.

21. **Handle KeyError Exception**: Write a program that catches a `KeyError` when trying to access a non-existent key in a dictionary.

22. **Read File Using `with` Statement**: Write a program that opens a file using the `with` statement to ensure proper closing.

23. **Count Specific Word Occurrences in a File**: Write a program that counts how many times a specific word appears in a text file.

24. **Merge Two Files**: Write a program that takes two text files and merges their contents into a new file.

25. **Read JSON File**: Write a program that reads and parses a JSON file and prints its contents.