Word Counter Project

Code: Word Counter

```python
# Word Counter Program
# This program counts the number of words in a given text input by the user

def count_words(text):
    """
    Function to count the number of words in the input text.
    Words are separated by spaces.
    """
    words = text.split()  # Split the text by spaces to get a list of words
    return len(words)      # Return the number of words

def main():
    print("Welcome to the Word Counter Program!")
    print("Enter a sentence or paragraph to count the number of words.\n")

    # Prompt the user for input
    user_input = input("Please enter your text: ")

    # Error Handling: Check for empty input
    if not user_input.strip():
        print("Error: No text entered. Please provide some input.")
    else:
        # Call the function to count words
        word_count = count_words(user_input)

        # Display the result
        print(f"\nWord Count: {word_count} words")

    print("\nThank you for using the Word Counter Program!")

# Entry point of the program
if __name__ == "__main__":
    main()
```

Explanation of the Code:

1. Function Definition:
   - count_words(text): This function splits the input text by spaces and counts the number of words.
   - The split() method is used, which automatically handles multiple spaces and trims leading/trailing spaces.

2. User Input and Error Handling:
   - The user is prompted to enter a sentence or paragraph.
   - The input is checked for emptiness using strip() to avoid counting empty strings as words.
   - If the input is empty, an error message is displayed.

3. Output Display:
   - The total word count is displayed in a clear and user-friendly format.

4. Code Comments and User-Friendly Interface:
   - The code includes comments explaining the purpose of each section.
   - A welcoming message and a thank-you note are added to enhance the user experience.

Example Output:

```
Welcome to the Word Counter Program!
Enter a sentence or paragraph to count the number of words.

Please enter your text: Hello, this is a test sentence.

Word Count: 6 words

Thank you for using the Word Counter Program!

Empty Input Case:

Welcome to the Word Counter Program!
Enter a sentence or paragraph to count the number of words.

Please enter your text:

Error: No text entered. Please provide some input.

Thank you for using the Word Counter Program!
```