

# Word Counter Development

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## 1. Introduction

The Word Counter project is part of the Python Programming Internship. It involves building a program that counts the number of words from user input. This project covers input handling, string manipulation, functions, control flow, and output display.

## 2. Objectives

- Learn input handling in Python
- Explore string manipulation techniques
- Create functions for modular programming
- Implement basic control flow structures
- Display word count results in a user-friendly format

## 3. Requirements and Features

- User Input: Supports multi-line input from the user
- Word Counting Logic: Uses a regex-based function to count words
- Output Display: Displays word count clearly on the console
- Error Handling: Catches empty input and prompts the user
- Code Comments: Provides clear explanations for each part of the code
- User-Friendly Interface: Includes prompts and outputs for ease of use

## 4. Python Source Code (Final and Corrected)

```
import re

def count_words(text):
    """Counts the number of words in the given text using regex."""
    words = re.findall(r'\b\w+\b', text)
    return len(words)

def main():
    print("Welcome to the Word Counter Program")
```

```

print("Enter your text (press Enter twice to finish):")

# Collect multi-line input
lines = []
while True:
    line = input()
    if line == "":
        break
    lines.append(line)

text = "\n".join(lines).strip()

# Error handling for empty input
if not text:
    print("Error: No input provided. Please enter some text.")
    return

# Count words and display output
word_count = count_words(text)
print(f"Word Count: {word_count}")

if __name__ == "__main__":
    main()

```

## 5. Code Explanation

- Function Creation: `count\_words()` uses regex to identify words and count them
- Multi-line Input: Allows users to input multiple lines until they press Enter twice
- Input Handling: `input()` collects user input, and empty input is managed as an error
- Output Display: Displays results clearly using `print()`
- Error Handling: Checks for empty inputs and prints error messages
- Code Comments: Provides explanations for every function and key step

## 6. Output Verification Examples

Example 1: Counting Words from a Single Line

Input: "Hello world from Python"

Output: "Word Count: 4"

Example 2: Counting Words from Multiple Lines

Input:

Python is fun.

It is easy to learn.

Output: "Word Count: 8"

Example 3: Handling Empty Input

Input: (no text entered)

Output: "Error: No input provided. Please enter some text."

## **7. Conclusion**

- The Word Counter project meets all the internship requirements.
- It demonstrates key concepts such as input handling, string manipulation, and regex usage.
- The project has proper error handling and user-friendly output displays.
- It is structured using functions and comments, ensuring clarity and modularity.
- With added multi-line input and improved error management, it is practical and comprehensive.