```python
# ============================
# TASK 4: Sentiment Analysis (No External Modules)
# ============================

import pandas as pd
import matplotlib.pyplot as plt

plt.style.use('seaborn-v0_8')

# 1. Sample Text Data (Simulating Reviews, Social Media, News)
data = {
    'Text': [
        "I love this product! It's amazing and works perfectly.",
        "Terrible service. I am very disappointed.",
        "Not bad, could be better but okay overall.",
        "Absolutely fantastic experience, highly recommend!",
        "Worst purchase ever. Do not buy this.",
        "It's okay, neither good nor bad.",
        "I am so happy with the quality and delivery.",
        "The product broke after a week. Very unhappy.",
        "Average experience. Nothing special.",
        "Excellent! Exceeded my expectations."
    ]
}

df = pd.DataFrame(data)
print("Sample Text Data:")
print(df)

# 2. Simple Keyword-Based Sentiment Analysis
positive_words = ['love','amazing','fantastic','excellent','happy','recommend','perfect'
negative_words = ['terrible','worst','disappointed','unhappy','bad','broke','poor']

def get_sentiment(text):
    text_lower = text.lower()
    pos_count = sum(word in text_lower for word in positive_words)
    neg_count = sum(word in text_lower for word in negative_words)
    if pos_count > neg_count:
        return 'Positive'
    elif neg_count > pos_count:
        return 'Negative'
    else:
        return 'Neutral'

df['Sentiment'] = df['Text'].apply(get_sentiment)
print("\nSentiment Classification:")
print(df)

# 3. Count of Sentiments
sentiment_counts = df['Sentiment'].value_counts()
print("\nSentiment Counts:")
print(sentiment_counts)

# 4. Visualization of Sentiments
plt.figure(figsize=(6,4))
plt.bar(sentiment_counts.index, sentiment_counts.values, color=['green','red','gray'])
plt.title("Sentiment Analysis Results")
```

```
plt.xlabel("Sentiment")
plt.ylabel("Number of Reviews")
plt.tight_layout()
plt.show()
```

Sample Text Data:
```
                                                Text
0  I love this product! It's amazing and works pe...
1          Terrible service. I am very disappointed.
2          Not bad, could be better but okay overall.
3  Absolutely fantastic experience, highly recomm...
4              Worst purchase ever. Do not buy this.
5                  It's okay, neither good nor bad.
6      I am so happy with the quality and delivery.
7      The product broke after a week. Very unhappy.
8              Average experience. Nothing special.
9              Excellent! Exceeded my expectations.
```
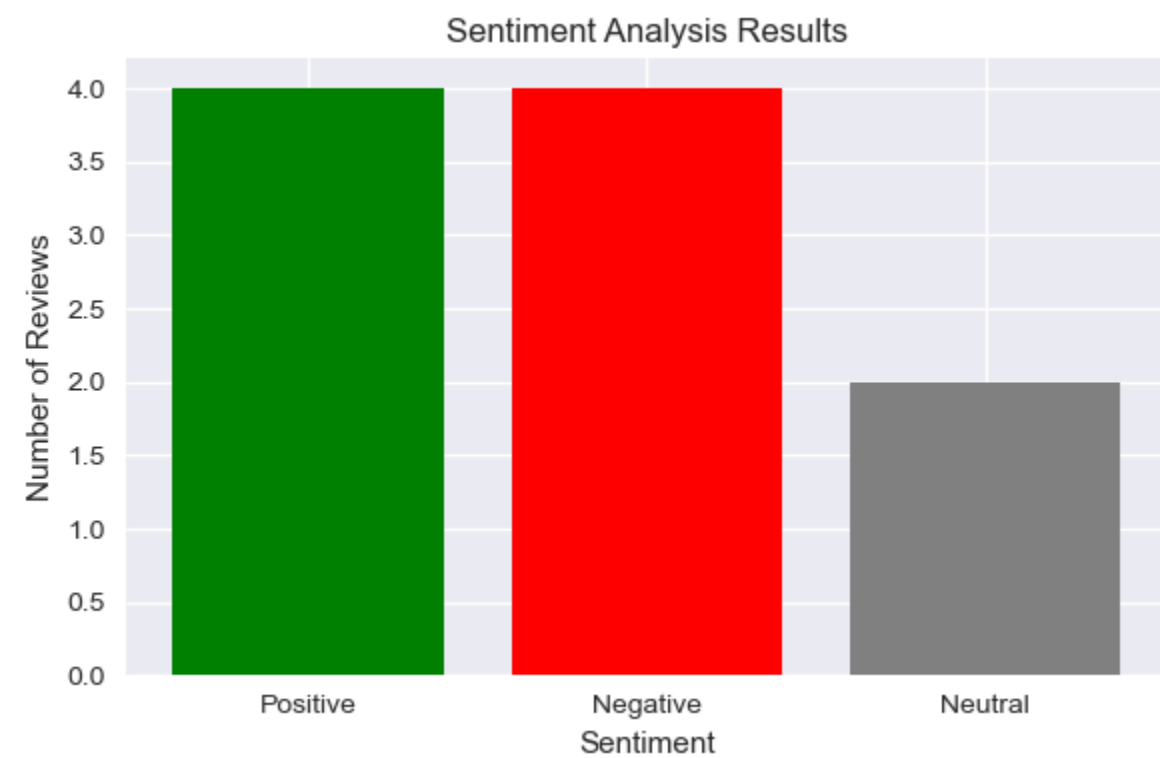
Sentiment Classification:
```
                                                Text Sentiment
0  I love this product! It's amazing and works pe...  Positive
1          Terrible service. I am very disappointed.  Negative
2          Not bad, could be better but okay overall.  Negative
3  Absolutely fantastic experience, highly recomm...  Positive
4              Worst purchase ever. Do not buy this.  Negative
5                  It's okay, neither good nor bad.   Neutral
6      I am so happy with the quality and delivery.  Positive
7      The product broke after a week. Very unhappy.  Negative
8              Average experience. Nothing special.   Neutral
9              Excellent! Exceeded my expectations.  Positive
```

Sentiment Counts:
```
Sentiment
Positive    4
Negative    4
Neutral     2
Name: count, dtype: int64
```

Sentiment Analysis Results

In [ ]: