Word Counter Website for Instant Messaging Apps Using JavaScript

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Abstract: *This project is used to count the number of words in any paragraph. It also counts the characters present in the paragraph. Additionally it counts number of spaces used in the paragraph. To check word count, simply place your cursor into the text box and start typing. You'll see the number of characters, words, and spaces increase or decrease as you type, delete, and edit them. You can also copy and paste text from another program over into the online editor. The Auto Save feature will make sure you won't lose any changes while editing, even if you leave the site and come back later.You can also use Word Counter to track your text length against common web standards like Twitter's tweet character count (140), Google's meta description (300), and Facebook's average post display length (~250). If your text is longer than 360 characters the counter will show you the number of sentences, paragraphs and pages instead useful metrics for blog posts, articles, papers, essays, dissertations and other longform content. Knowing the word count of a text can be important. For example, if an author has to write a minimum or maximum.*

Keywords: HTML, CSS, JavaScript

I. INTRODUCTION

Whether you are an established writer or just another Internet rambler, we are now all living in the era of word counts. From social media character limits to lengthy document requirements in corporate settings, if you've been writing words, then you've been operating with text counts, whether you are aware of it or not.Twitter used to limit us to 140 characters, but later pushed it to 280.Facebook wouldn't let you post anything that is longer than 63,206 characters or even let you comment using more than 8,000 characters. How about Instagram's 30 hashtags limit? The limited 2,200 characters they allow in your Instagram captions will even get truncated after just 125. We even hear that for your blog post to break into a first page ranking on Google, it may have to stay north of 1800 words.

A. System Overview

Previously, Word counter counts **the number of words and character in a document while you type**. Our Word counter also counts characters and spaces as well. When you need to know how many words, characters and spaces are in a document, check the status bar. For a partial word count, select the words you want to count.To check word count, simply place your cursor into the text box and start typing. You'll see the number of characters and words increase or decrease as you type, delete, and edit them. You can also copy and paste text from another.

II. REALATED WORKS

Jianming Xie & et.al., (2007) gWord: A Tool for Genome-Wide Word Search and Count. Word search and count in whole genome DNA sequence is very important for re-sequencing an organism's genome DNA using the microarray based technology and studying the functional element's function based on genome- wide approach. A stand-alone program named gWord (abbr. of genome Word), which applies a fast algorithm to rapidly map the nmer word into an index in memory, is developed for the task that can fulfill two main functions: counting all possible n-mer short DNA sequences in genome and acquiring the locations of one motif or those words presented only once in genome DNA. In

addition, the search hits of any word will be annotated with gene information. Two examples on human genome are given to demonstrate the application of gWord in genomics research.

S.Berkovich,M.Mack & et.al., (1998) A fast bit-counting algorithm Various information retrieval problems encounter time-consuming bit-counting operations. For example, to choose a rational access strategy it is necessary to repeatedly evaluate the cardinalities of retrieved sets of information items. A straightforward implementation of this procedure involves shifting of data words which makes the time of bit-counting proportional to the length of the machine word. In the suggested implementation, bit-counting is done with machine words as a whole by emulating the summation through some bitwise logical operations. It turns out, that for 32 bits this algorithm runs more than 3 times faster than conventional horizontal methods and is comparable to all other methods for typical random number cases. It is better than all methods in the worst case. In future computers, with 64-bit words and bigger the gain in speed will be correspondingly higher.

Xudong Li & et.al., (2020) New Word Discovery Algorithm Based on N-Gram for Multi-word Internal Solidification Degree and Frequency. For the problems of the low usability of the lexicon constructed by traditional new word discovery methods and the erroneous new word segmentation results that only consider the solidification of adjacent two characters, A new word discovery algorithm based on N-Gram's internal solidification and frequency of multiple characters is proposed. Firstly, select a fixed higher degree of coagulation n, calculate the internal coagulation degree of n under different values, and keep only the fragments higher than a certain threshold to form a set Q. Then combine named entity recognition to construct N-Gram segmentation corpus, and count the frequency. Introduce the backtracking mechanism, filter the candidate words by word frequency and K times of mutual information, use the Trie tree structure to improve the string retrieval speed, and filter the meaningless words in multiple dimensions through the rule stop vocabulary and Chinese stop vocabulary. Finally, compare the words that do not appear in the dictionary to get the new word set. Experiments show that this new word discovery algorithm effectively improves the accuracy of new word recognition, which is significantly faster than other new word discovery algorithms.

George Sterpu & et.al.,(2021) Learning to Count Words in Fluent Speech Enables Online Speech Recognition. Sequence to Sequence models, in particular the Transformer, achieve state of the art results in Automatic Speech Recognition. Practical usage is however limited to cases where full utterance latency is acceptable. In this work we introduce Taris, a Transformer-based online speech recognition system aided by an auxiliary task of incremental word counting. We use the cumulative word sum to dynamically segment speech and enable its eager decoding into words. Experiments performed on the LRS2, LibriSpeech, and Aishell-1 datasets of English and Mandarin speech show that the online system performs comparable with the offline one when having a dynamic algorithmic delay of 5 segments. Furthermore, we show that the estimated segment length distribution resembles the word length distribution obtained with forced alignment, although our system does not require an exact segment-to-word equivalence. Taris introduces a negligible overhead compared to a standard Transformer, while the local relationship modelling between inputs and outputs grants invariance to sequence length by design..

Danushka Bollegala, Mitsuru Ishizuka & et.al., (2010) A Web Search Engine-Based Approach to Measure Semantic Similarity between Words

Measuring the semantic similarity between words is an important component in various tasks on the web such as relation extraction, community mining, document clustering, and automatic metadata extraction. Despite the usefulness of semantic similarity measures in these applications, accurately measuring semantic similarity between two words (or entities) remains a challenging task. We propose an empirical method to estimate semantic similarity using page counts and text snippets retrieved from a web search engine for two words. Specifically, we define various word co-occurrence measures using page counts and integrate those with lexical patterns extracted from text snippets. To identify the numerous semantic relations that exist between two given words, we propose a novel pattern extraction algorithm and a pattern clustering algorithm. The optimal combination of page countsbased co-occurrence measures and lexical pattern clusters is learned using support vector machines. The proposed method outperforms various baselines and previously proposed web-based semantic similarity measures on three benchmark data sets showing a high correlation with human ratings.

III. EXISTING SYSTEM

Word counts **the number of words in a document while you type**. Word also counts characters. When you need to know how many words, characters are in a document, check the status bar. For a partial word count, select the words you want to count. Knowing the word count of a text can be important. For example, if an author has to write a minimum or maximum amount of words for an article, essay, report, story, book, paper, you name it.

IV. PROPOSED SYSTEM

Previously, Word counter counts **the number of words and character in a document while you type**. Our Word counter also counts characters and spaces as well. When you need to know how many words, characters and spaces are in a document, check the status bar. For a partial word count, select the words you want to count.To check word count, simply place your cursor into the text box and start typing. You'll see the number of characters and words increase or decrease as you type, delete, and edit them. You can also copy and paste text from another program over into the online editor.

V. METHODOLOGY

The proposed system consists of six modules that work together to build an efficient system

1. Home Page
2. Options
3. Word Count
4. Character Count
5. Space Count
6. Display

5.1 Module Description

A. Home Page

Home page is the page typically encounted first on a website that usually links to the other pages of the site.

B. Options

Option is for selecting the desired location and website. Option helps the user to locate them to whenever they need to be.

C. Word Count

Word Count is one of the options in the "option". Here this redirects to the word counter where the number of words are counted. Figure 1 shows the word count page.
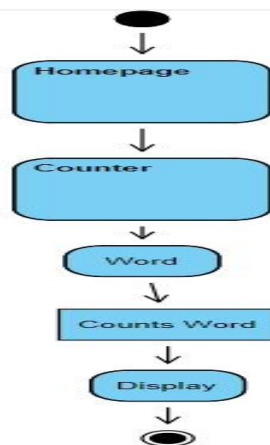

Figure.1 Word Count Page

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D. Character Count

Character count is also one of the options in the "option". Here this redirects to the character counter where the number of characters are counted.Figure.2 shows the Character count page.
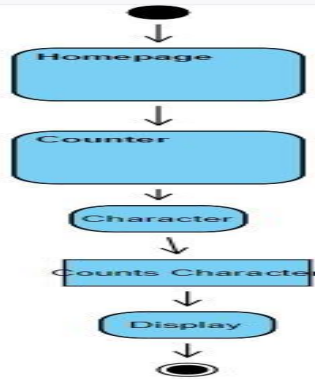

Figure 2: Character Count page

E. Space Count

Space Count is another one of the options present in the home page. This helps the user to count the number of spaces. After checking this option, it automatically redirects to the space counter. Figure.3 shows the space count page.
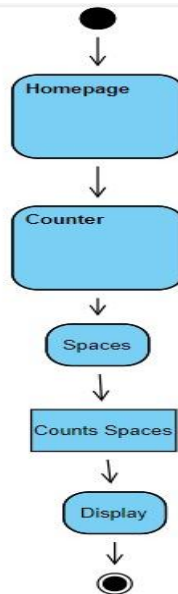

Figure.3 Space Count Page

F. Display

Display is the phase where the number of words, characters or spaces are displayed after counted.

VI. IMPLEMENTATION

The VS code editor and chrome web browser is used to implement the code. It provides millions of extensions for the developers to make the development process simple and enjoyable.

This system uses 6 modules.

1. Home page
2. Options

3. Word count page
4. Character count page
5. Space count page
6. Display

These modules collaborate together and makes the system work efficiently. Each module does a significant job to ensure the perfect data flow and user experience.

A. HTML

HTML or Hypertext Markup Language defines the structure of a webpage with the use of various tags. A hypertext is a piece of text that contains a hyperlink. HyperText is a method of linking two or more web pages together. A markup language is a computer language that allows you to format and arrange text documents. It also enhances the dynamic and interactive nature of text. Some of the basic tags used in HTML is mention below, in the table 1

Tags	Description
<html>	Defines an HTML document
<head>	Contains metadata for the document
<title>	Defines a title for the document
<body>	Defines the document body
<h1>…<h6>	Defines HTML headings
<p>	Defines the paragraph
<input>	Defines an input control
<button>	Defines a clickable button
<select>	Define a drop-down list

Table 1. Basic HTML tags

B. CSS

CSS (Cascading Style Sheets) is a simple design language designed to make the process of making web pages presentable easier. The style and feel of a web page is handled by CSS. You can use CSS to change the text colour, font style, paragraph spacing, how columns are scaled and laid out, what background pictures or colours are used, layout designs, display variants for different devices and screen sizes, and a range of other effects. HTML and CSS design is a must-have talent if you wish to pursue a career as a professional web designer. CSS is simple to learn and understand, but it gives you a lot of power over how an HTML document looks. CSS is frequently used in conjunction with the markup languages HTML or XHTML.

CSS saves time - Since it allows you to code CSS once and then reuse it across various HTML pages. Each HTML element has its own style that you can apply to as many Web pages as you desire.

Pages load faster - Since you don't have to write HTML tag attributes every time you use CSS. Simply write a single CSS rule for a tag and apply it to all instances of that tag. As a result, less code implies faster downloads.

Simple to maintain - To make a global change, simply alter the style, and all elements across all web pages will be immediately updated.

C. JavaScript

JavaScript is considered to be the world's most popular programming language, which is considered as easy to understand and learn. It is a lightweight and interpreted language. The single most important feature of JavaScript is that the functions are objects. Understanding this feature will open up a whole new understanding of this programming language. Because a JavaScript program is built using functions. This is why JavaScript is called as Functional Language.

It was developed primarily as a client-side language that can only run on a browser because of the inbuilt existence of JavaScript V8 engine. The community of developers grew big and the idea to implement JavaScript not only in a browser but in every platform that is available is born.

VII. CONCLUSION

As a conclusion, in our suggested project, Word counter counts the number of words and character in a document while you type. Our Word counter also counts characters and spaces as well. When you need to know how many words, characters and spaces are in a document, check the status bar. For a partial word count, select the words you want to count. To check word count, simply place your cursor into the text box and start typing. You'll see the number of characters and words increase or decrease as you type, delete, and edit them. You can also copy and paste text from another program over into the online editor. The Auto-Save feature will make sure you won't lose any changes while editing, even if you leave the site and come back later

VIII. FUTURE SCOPE

Plugins are software extensions that can be loaded on a program to improve its functionality. For instance, you may require a plugin if you want to watch videos. Your browser will be unable to grasp how to play the video without plugins. Another example, a Photoshop plug-in like Eye Candy helps you to manipulate images with extra filters. Plugins allow you to customize website content, as well as computer programmes, web browsers, and apps in general. The browser plug-in like Apple QuickTime or Macromedia Flash provides users the ability to play particular multimedia files within their Internet browser.

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