CODE EDITOR

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Abstract

The world of internet is growing rapidly, many applications that previously created on the desktop start moving to the web. Many applications could be accessed anytime and anywhere easily using internet . Developers need tools to create their applications one of them name code editor . The purpose of this research is to design and develop a real time code editor application using web socket technology to help us collaborate while working on the project this application provides feature where users can collaborate on a project in real time . The authors using analysis methodology with conducting on a study of the current code editor applications distributing questionnairies and conducting on literature study. It is web application that provides workspace to writing perform, display the results of the code through the terminal and collaborate with the users in real time .The applications main features are providing workspace to make, execute and build the source code. This application supports Html , Css and Javascript.

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Introduction

What is a code editor? It is a very important tool for a programmer's work. Regardless of whether you are developing your pet project solo, working in a team on a big project, or creating a web or mobile application, you will definitely need a code editor. A code editor can be a standalone application or built into an IDE. It provides a number of useful features that allow programmers to write code faster and easier.

Code editors are **programming language-specific**. Some editors support one or two programming languages whereas some support multiple programming languages. It can give suggestions and highlights based on language support. Structure editor is a type of coding editor or we can say that it is the functionality that is included in the editors.

Typically, code editors have syntax highlighting and allow you to automatically format your code. In addition, they allow you to quickly find and replace text, rename objects in code, and much more

While working on a specific project I realized that for either it is html, css or javascript I need to open different editors and at that time I was learning react so I decided to make one editor or platform for each of them.

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Comparitive study of existing systems

There are many different code editors. You can find both free and paid code editors on the Internet.

All code editors support different platforms and programming languages. Some of them support one or more programming languages, others are universal and allow you to work with almost all programming languages.

Let's list the most popular code editors:

1.UltraEdit is a cross-platform high-performance code editor that provides extensive customization options, as well as a lot of additional features.

2.Sublime Text is a cross-platform editor that supports a large list of programming languages and provides hotkeys and search tools.

3.Visual Studio Code is a cross-platform code text editor that provides many useful features, as well as the ability to install extensions.

4. Notepad++ is an open-source tool that works only on Windows systems. It supports various programming languages, but has limited functionality.

5. Vim is a cross-platform, stable, and reliable source code editor. It has features that help speed up the coding process, including auto-correct, auto-complete, syntax suggestion, and more.

Methodology and requirements

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Code editor is a program designed for writing software in which developers utilize human-readable text to make code easier to parse and understand. They have built-in knowledge of programming languages, allowing different elements of the code (i.e., variables, keywords, functions, etc.) to appear in different colors and improve readability and analysis by developers.

Code editors can compile and run code. In addition to being able to print a code's output, these programs can also identify where and why a particular line of code fails to execute

Dependencies

The major requirement of the resources for designing and developing the proposed smart map is as follows.

- HTML
- CSS
- Javascript
- React
- Code mirror library

HTML: HTML stands for Hyper Text Markup Language. It is the standard markup language for creating web pages. It describes the structure of a web page. HTML consists of a series of elements. HTML elements tell the browser how to display the content.

CSS: CSS stands for Cascading Style Sheets. It describes how HTML elements are to be displayed on the screen, paper, or in other media. It can control the layout of multiple web pages all at once and saves a lot of work. External stylesheets are stored as CSS files.

JAVASCRIPT: Javascript is a scripting language, primarily used on the Web. It is used to enhance HTML pages and is commonly found embedded in HTML code. JavaScript is an interpreted language. Thus, it doesn't need to be compiled. JavaScript renders web pages in an interactive and dynamic fashion.

REACT: React is a JavaScript library for building user interfaces. **React** is used to build single-page applications. **React** allows us to create reusable UI components.

Conclusion

A source-code editor can check syntax while code is being entered and immediately warn of syntax problems. A few source-code editors compress source code, typically converting common keywords into single-byte tokens, removing unnecessary whitespace, and converting numbers to a binary form. Such tokenizing editors later uncompress the source code when viewing it, possibly pretty it with consistent capitalization and spacing.

In this project, we've created a single screen for students to get edit and run their programs in single screen without switching the screen for different languages of front end. We have used HTML, CSS, JS and React.

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