Online Code Editor

A PROJECT REPORT

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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 named code editor. The purpose of this research is to design and develop a real-time code editor application using web socket technology to help users collaborate while working on the project. This application provides a feature where users can collaborate on a project in real-time.

The authors using analysis methodology which conducting on a study of the current code editor applications, distributing questionnaires and conducting on literature study. Coder is a web application that provides workspace to writing, perform, display the results of the code through the terminal, and collaborate with other users in real-time.

The application main features are providing workspace to make, execute and build the source code, real-time collaboration, chat, and build the terminal. This application supports C, C++, and Java programming languages.

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INTRODUCTION

A **online-code editor** is a text editor program designed specifically for editing source code of computer programs. It may be a standalone application or it may be built into an integrated development environment (IDE) or web browser. Source-code editors are a fundamental programming tool, as the fundamental job of programmers is to write and edit source code.

Source-code editors have characteristics specifically designed to simplify and speed up typing of source code, such as syntax highlighting, indentation, autocomplete and brace matching functionality. These editors also provide a convenient way to run a compiler, interpreter, debugger, or other program relevant for the software-development process. So, while many text editors like Notepad can be used to edit source code, if they don't enhance, automate or ease the editing of code, they are not *source-code editors*.

Hardware and Software requirement

Hardware Requirement

Processor : Intel Core Duo 2.0 GHz or more
RAM : 1 GB or More
Hard disk : 80GB or more
Monitor : 15” CRT, or LCD monitor
Keyboard : Normal or Multimedia
Mouse : Compatible mouse

Software Requirement

Front End : Visual Studio

Back End : HTML

CSS
JAVASCRIPT
TYPESCRIPT
REACT
BOOTSTRAP

LIBRARY: CODEMON

2.WORKING

The proposed system work as follow :

A text editor that is specialized for writing software. A source code editor may be a stand-alone program or part of an integrated development environment (IDE). They make writing and reading the source code easier by differentiating the elements and routines so programmers can more easily look at their code.

An online code editor is a tool that resides on a remote server and is accessible via browsers. Some online code editors have basic features more similar to text editors while others are like complete IDEs. In this article, we will review both types. Some online code editors focus on one language or even a framework.

3. METHODOLOGY

3.1 Front End development

1. API running on the backend server, which will take a piece of code and language as input and output the answer after running the code on the server
2. Frontend code editor, we can choose the language and edit and modify the code here. Then we make a post request to the backend API and show output on the website

3.2 Back End development

React allows user to create reusable and good-looking components, which can be used again. Using this component for creating pages for each state in your application, and React will efficiently update and render just when your data or state changes. Some of the key features of React are as follows: 1. Declarative views make your code more predictable and easier to debug. 2. Since component logic is written in JavaScript instead of templates, you can easily pass rich data through your app and keep the state out of the DOM.