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TS Code Editor

Toran Sahu[1], Bharat Mahajan[2], Tikeshwar [3], Madhavi Kshatri [4]

[1,2,3,] Computer Science and Engineering, Raipur Institute of Technology, Chhattisgarh

[4]Asst. Professor, Computer Science and Engineering, Raipur Institute of Technology, Chhattisgarh

ABSTRACT :

It is an online TS Code Editor that allows you to practice HTML, CSS, and JavaScript for Beginners. It offers a simple interface with syntax highlighting, auto-closing tags, and live previews, allowing learners to write and run code directly in their browsers without complex setups.

This work presents the editor, its main features, and the bridge between learning and performance it creates. The TS Code Editor nurtures a hands-on and approachable atmosphere that allows novices to develop essential programming skills in an effective manner.

1. Introduction :

With the advancement of technology, everyone needs to know programming — not just professionals but also students and amateurs who are curious about technology. As a newbie you will likely be learning about coding languages first such as HTML, CSS or JavaScript. However, traditional coding tools can be scary, because they involve a lot of installations, configurations, and a steep learning curve. TS Code Editor — an online editor created for coding practice, especially for beginners, to overcome these challenges.

A beautiful feature of the TS Code Editor is that it removes all entry barriers; all you need to do is point your browser at TS Code Editor, and your code is ready to be written, edited and executed! It brings together all the must-haves, such as syntax highlighting, auto-closing tags and live previews, resulting in effortless use for beginners in coding.

The TS Code Editor: Making Coding Easier for BeginnersThis research paper focuses on TS Code Editor development and how it works. Its intuitive interface promotes experimentation and learning, making it a valuable resource for those looking to gain practical experience in web development. In addition, this paper assesses the influence of the editor on learning outcomes for users, demonstrating a powerful potential in the value of the editor as an educational resource for coding

2. Problem statement :

Learning to code can be a challenging task for beginners specifically due to the Complicatedly of traditional development environments that often require software installation setup and an understanding of advanced tools. these barriers get admonish learners specifically those green to scheduling from exploring and active coding skills also the miss of available and beginner-friendly platform bespoke specifically for active Web evolution languages care hypertext markup language CSS and JAVASCRIPT foster limits opportunities for hands-on acquisition. Beginners need an intuitive and interactive environment where they can write Check and see the results of their code in real-time without technical hurdles. The absence of such a Answer hinders the learning Encounter making it difficult for individuals to Construct confidence and foundational skills in web development. hence thither is amp take for amp light Operator-friendly online cipher editor program that eliminates these barriers facultative beginners to do coding in effect and centre along their acquisition

3. Literature Survey :

Aditya Kurniawan, Aditya Kurniawan, Joe Erik, and Christine Soesanto Wijaya, Carla (2015) The Internet is expanding quickly, and a lot of desktop programs are starting to migrate to the web. The Internet made it simple to access a wide range of apps at any time and from any location. Code editors are among the tools that developers require in order to design their applications. The goal of this research is to employ web socket technology to design and construct a real-time code editor application that facilitates user collaboration during project development. Users can work together on a project in real time with this application's capability. By sending questionnaires, doing a literature review, and analysing existing code editor software, the authors are employing an analysis methodology. CodeR is an online application that offers a workspace for writing, running, and collaborating with

other users in real time. It also displays the code's results through the terminal. The primary functions of the application are chat, real-time collaboration, terminal building, and a workspace for creating, executing, and building source code. The programming languages C, C++, and Java are supported by this application.

Dr. Harvir Singhr and Dr. Neeta Kumari (2023) — Online code editors are thoroughly reviewed in this review study. Programmers will be able to develop, compile, and run code in real time with this web platform-based project. It examines the various capabilities of editors, such as code sharing, customisable user interfaces, and syntax highlighting. It increases code efficiency, which raises code quality and performance. It provides the ability to run computer languages without being restricted by platform requirements. Convenience and security concerns are only two of the benefits and drawbacks of using live code editors for programming work. The approaches employed in the development of editors and their future work are discussed in this paper. . For academics who want to use live code editors, it provides useful tools. Our project's primary features are real-time results and workspaces for creating, executing, and writing source code. Programming languages supported by this application include JavaScript (JS), Cascading Style Sheets (CSS), and Hyper Text Markup Language (HTML). Index Terms: HTML, CSS, JS, Code Editor, Web Platform

Alaukik Deep Rishi Chopra and Anish Raj (2023) Online code editors are thoroughly reviewed in this review study. Programmers will be able to develop, compile, and run code in real time with this web platform-based project. It examines the various capabilities of editors, such as code sharing, customisable user interfaces, and syntax highlighting. It increases code efficiency, which raises code quality and performance. It provides the ability to run computer languages without being restricted by platform requirements. Convenience and security concerns are only two of the benefits and drawbacks of using live code editors for programming work. The approaches employed in the development of editors and their future work are discussed in this paper. For academics who want to use live code editors, it provides useful tools. Our project's primary features are real-time results and workspaces for creating, executing, and writing source code. Programming languages supported by this application include JavaScript (JS), Cascading Style Sheets (CSS), and Hyper Text Markup Language (HTML).

Fiala, J.; Grimerson, Mick; and Yee-King, Matthew. (2016) Recent advancements in Web technologies, including as client-side audiovisual APIs, peer-to-peer communication, and full-stack reactive application frameworks, have made creative collaboration possible in a variety of settings. Internet users' interactions with code could be revolutionised by such technology. In order to address the problems of interactive rendering, user-platform interaction, and collaboration, this paper presents a theoretical and technical technique for creating collaborative coding interfaces as web apps. After reviewing many current interactive programming environments, a technical description and assessment of C odeCircle—a collaborative coding web platform created at Goldsmiths, University of London—are presented.

4. Hardware and software requirements :

Software Requirements

☐ **Client-Side:**

- Web Browser: Latest version of Chrome, Firefox, Edge, or Safari

- Operating System: Windows, macOS, Linux, Android, or iOS

☐ **Server-Side:**

- Web Server: Apache

- Programming Language: JavaScript (Node.js)

- Framework: Express.js for backend

- Database: MY SQL for storing user data (if required)

- Frontend Technologies: HTML5, CSS3, JavaScript

- Editor Features: CodeMirror library for syntax highlighting and interactive features

Hardware Requirements

☐ **Client-Side (User Device):**

- Processor: Minimum 1 GHz or higher

- RAM: 2 GB or higher

- Storage: 100 MB of free space for temporary cache

- Display: 1024x768 resolution or higher

- Internet Connection: Stable broadband or mobile network

☐ **Server-Side (Hosting Server):**

- Processor: Dual-core or higher

- RAM: 4 GB or higher

- Storage: 10 GB for application files, logs, and database storage

- Network: High-speed internet with low latency

- Operating System: Linux or Windows Server

5. Result :

The TS Code Editor successfully provides a beginner-friendly online platform for practicing HTML CSS and JavaScript enabling Operators to write edit and Run code directly in their browsers without Complicated setups. Characteristics care sentence structure highlight auto-closing tags and be pre Examinations reduce the coding work up acquisition outcomes and nurture employment. The platform is accessible across devices and offers real-time feedback helping Operators experiment and correct errors effectively. feedback from new adopters highlights its Role inch reduction barriers to coding devising it associate in nursing abstract drive for self-paced acquisition and foundational science evolution

Fig 5.1 homepage diagram

Welcome to the Online Code Editor

Sign in
Log in
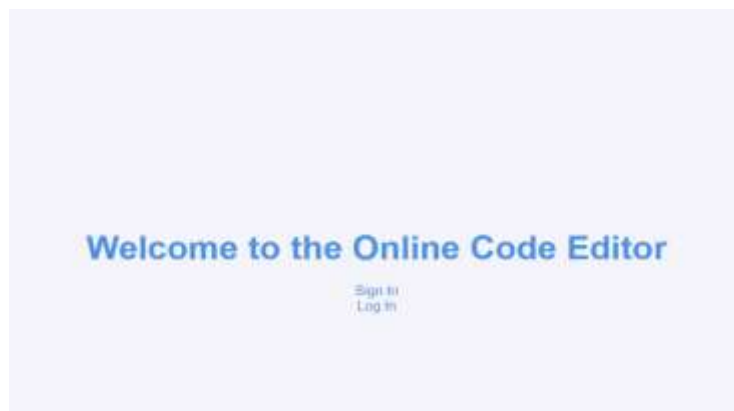
Fig 5.2 :- loginpage

Username:

Password:

Login

Fig 5.3 :- sing up page

Username:

Password:

Sign Up

6. Conclusion :

The TS Code Editor demonstrates its effectiveness as a beginner-friendly platform for learning and practicing web development. away provision associate in nursing visceral and available online surround the editor program eliminates conventional barriers to debut allowing Operators to centre along construction foundational skills inch hypertext markup language css and javascript. Characteristics like real-time feedback syntax highlighting and live

pExaminations Improve the learning Encounter fostering confidence and engagement among beginners. the platform availability over devices and Ease of employ get it amp important drive for self-paced coding do. In conclusion the TS Code Editor serves as a stepping stone for aspiring developers enabling them to transition seamlessly into the world of programming.

REFERENCES :

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2. Dr. Neeta Kumari, Dr. Harvir Singhr(2023) — This review paper provides a detailed review of online code editors.

3. Anish Raj , Alaukik Deep Rishi Chopra (2023) This review paper provides a detailed review of online code editors. This project is based on web platforms and will allows programmers to write, compile and execute code in real time. Kashyap, K. (n.d.). Digital text and speech synthesizer using smart glove.

4. Fiala, J; Yee-King, Matthew and Grierson, Mick. (2016) The recent developments in Web technologies, including full-stack reactive application frameworks, peer-to-peer communication and client-side audiovisual APIs have introduced the possibility of creative collaboration in a number of contexts. Such technologies have the potential to transform the way Internet users interact with code

5. Lukas GRANT Matthew F. TENNYSON Jason OWEN (2024) This paper introduces D-CIDE (Distributed Classroom Integrated Development Environment), a tool that is designed to improve student-teacher interactions in programming classes. DCIDE's main objective is to provide more meaningful interactions between teachers and students. Its goal is to create a more seamless and interactive learning environment for everyone who uses it. D-CIDE is a distributed integrated development environment (IDE), where the teacher (host) can manage and interact with the IDEs of all students (clients). It makes use of server-client interactions to allow live sharing and editing of code, making it a useful tool for demonstrating coding techniques and quickly addressing student questions. The front-end was developed using HTML, CSS, and JavaScript, and provides a way for the students and teachers to interact with each other. The back-end is made with JavaScript and NodeJS and handles data processing and transmission. The effectiveness of D-CIDE was analyzed through a classroom case study involving a small group of students. The study measured students' engagement, enjoyment, and learning outcomes using D-CIDE compared to traditional teaching methods. Results indicated an increase in student engagement and satisfaction when D-CIDE was used, as well as an improvement in students' learning experiences