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Preface

Pioneering Educational Perspectives: Series 2025 is a collection of thought-provoking insights and research contributions exploring contemporary educational trends and practices. This eBook presents a diverse range of perspectives on innovative teaching methodologies, digital learning strategies, and transformative approaches in education. Designed to serve as a resource for educators, researchers, and practitioners, it aims to inspire meaningful discussions and advancements in the field. Through carefully curated chapters, this publication offers fresh ideas and practical solutions to enhance learning experiences in an ever-evolving educational landscape.

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ENHANCING HTML LEARNING THROUGH REAL-TIME OPEN-SOURCE TOOLS

Marlina Muhamad[1*], Hanani Hussin[2], Norafiza Mohd Hardi[3], Norfaizah Md Nasir[4] & Mira Qerul Barriah Muhamad[5]

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ABSTRACT

The current project addresses the lack of interactivity in traditional HTML teaching methods, aiming to improve student engagement and comprehension. Utilizing a real-time HTML editor from open source, the objective is to create an interactive learning environment that enhances understanding and retention of HTML concepts. The design includes structured lessons integrated with real-time coding exercises, allowing students to see immediate results from their code, fostering a hands-on learning experience. Visuals of the user interface illustrate the project. The novelty lies in the real-time feedback mechanism, a significant advancement over static lessons. This approach benefits society by equipping students with essential web development skills, promoting inclusivity and diversity in tech education. The commercial potential includes adoption by educational institutions and development into a subscription-based online platform. This innovative teaching methodology not only overcomes traditional limitations but also offers a scalable, inclusive, and commercially viable solution for modern workforce skill development.

KEYWORDS: Real-time HTML editor, Interactive learning, Open-source tools, Web development skills, Hands-on education.

PROBLEM AND OBJECTIVE

The increasing importance of web development skills necessitates innovative teaching methods to enhance student engagement and comprehension. The traditional methods of teaching HTML in the course of Office Software Applications with the code OBM255 often lack interactivity and real-time feedback, which are crucial for effective learning. The current HTML lesson relies solely on Notepad, and it lacks real-time functionality since students must save their work and manually refresh the browser to see updates. Brown and Wilson (2020) emphasized the importance of integrating real-time feedback mechanisms in HTML lessons to enhance student engagement and comprehension. Web design is one of the topics covered in the course under the program Diploma in Office Management and Technology (BA132) of Faculty of Business and Management (FBM). The objective of this project is to utilize a real-time HTML editor from open source to create an engaging, interactive learning environment that facilitates better understanding and retention of HTML concepts.

DESIGN DESCRIPTION

The project employs a real-time HTML editor, an open-source tool, to teach students the basics of HTML. An open-source real-time HTML editor, includes “CodePen”, “JSFiddle”, “Liveweave”, “Liveditor”, “Squarefree” and many more. These tools allow students to see the immediate impact of their code on the webpage, fostering a hands-on learning experience.

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Davis (2019) highlighted the benefits of interactive learning tools in computer science education, noting that real-time editing and preview capabilities in HTML can significantly improve the learning experience.

VISUALS

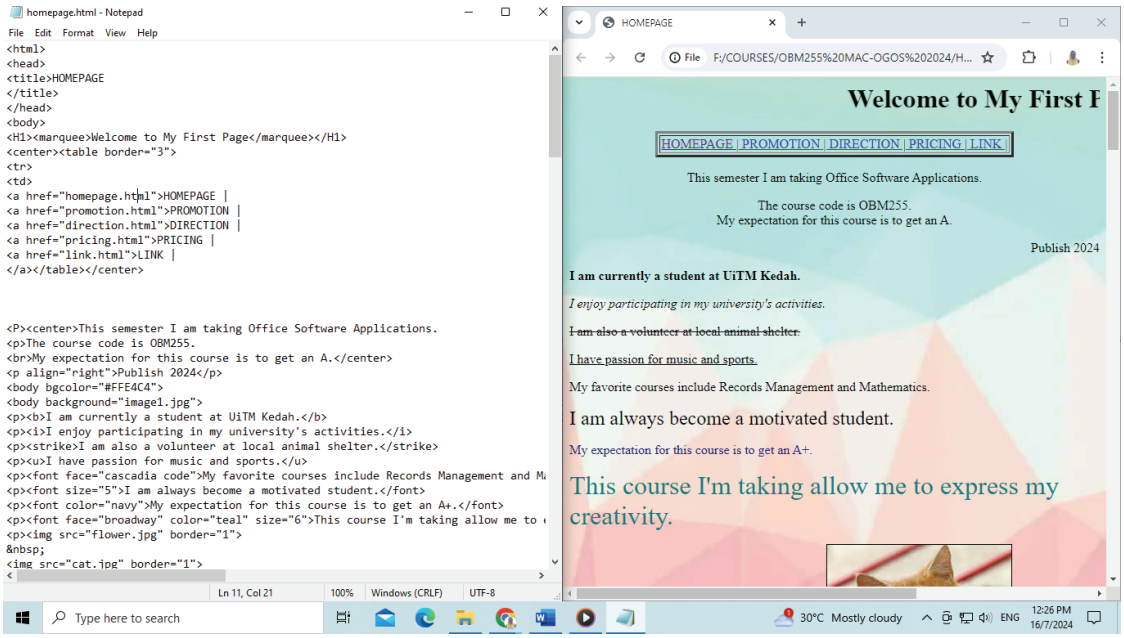


Figure 1: Current lesson using traditional notepad and browser

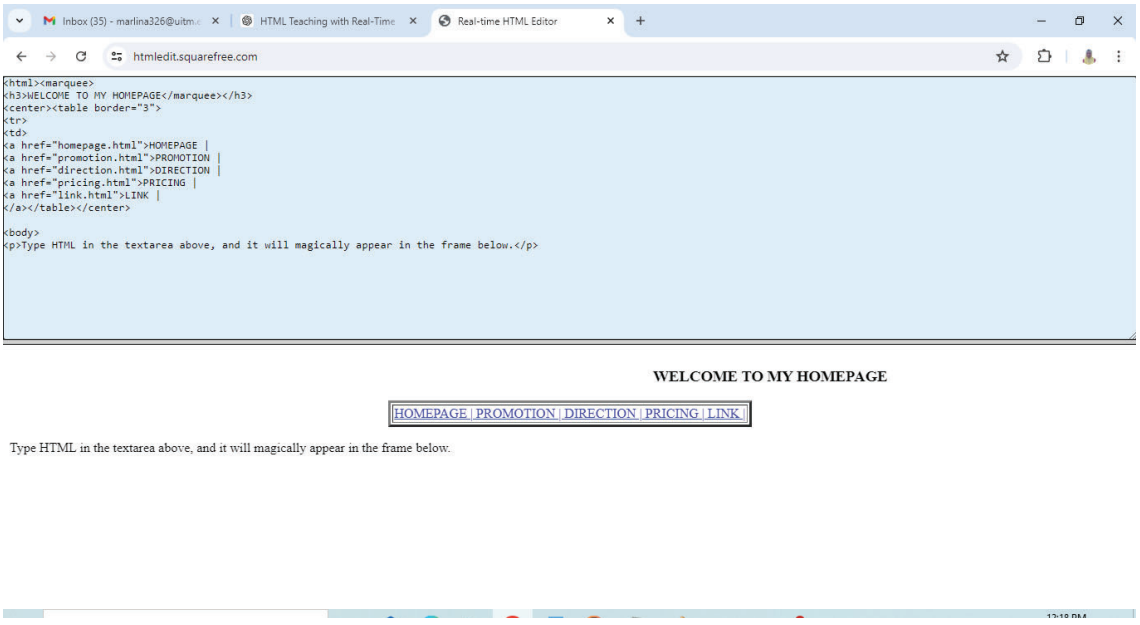


Figure 2: Example of a real-time HTML editor interface used in the project

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NOVELTY AND UNIQUENESS

This project stands out due to its integration of a real-time HTML editor into the teaching process, which is relatively novel in the context of basic HTML education. Unlike traditional static coding lessons, this approach provides instant feedback, significantly enhancing the learning experience. The use of an open-source tool also makes this solution cost-effective and accessible to a wider audience. Smith (2021) discussed the positive impact of real-time feedback in coding education, asserting that it allows students to quickly identify and correct errors, leading to a deeper understanding of HTML concepts.

BENEFITS TO MANKIND

By improving the way HTML is taught, this project aims to equip students with essential web development skills, thereby increasing their employability in the digital age. Additionally, it encourages more people to learn coding, which is a crucial skill in today's technology-driven world. This educational approach can be adapted for various demographics, including underrepresented groups in technology, thereby promoting inclusivity and diversity in the field.

COMMERCIAL POTENTIAL

The interactive and engaging nature of this teaching method presents significant commercial potential. Educational institutions can adopt this technique to enhance their web development courses. Furthermore, the project can be expanded into a subscription-based online platform, offering structured HTML courses to a global audience. The scalability of this method also allows for the inclusion of other coding languages in the future, broadening its market appeal.

CONCLUSION

The integration of a real-time HTML editor into HTML education represents a significant advancement in teaching methodology. This project not only addresses the limitations of traditional teaching methods but also provides a scalable, inclusive, and commercially viable solution. By fostering a deeper understanding of HTML through interactive learning, this project contributes to the development of essential digital skills necessary for the modern workforce.

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