Department Of Computer Engineering

Academic Term July-Oct 2023

Class: BE Honour – Blockchain (SEM VIII)

Subject: Blockchain Development

Title of the Project	Decentralized Freelance Talent Marketplace
Date Of Performance	28st July – 16th October 2023
Date Of Submission	16th October 2023
Roll Nos.	9357 9367 9384 9457

Evaluation:

Sr. No	**Rubric**	**Grade**
1	Completeness (10)	
2	Project specific Features (8)	
3	Innovative Features (5)	
4	Project Report (7)	
5	Presentation (3)	
6	Professional Ethics (2)	
7	Total (35)	

Signature of Teacher:

Decentralized Freelance Talent Marketplace

1st Sahil Bodkhe
Roll No:9357
crce.9357.aids@gmail.com

2nd Darren Dsilva
Roll No:9367
crce.9367.aids@gmail.com

3rd Amey Managute
Roll No:9384
crce.9384.aids@gmail.com

4thAakash Lopes
Roll No:9457
crce.9457.aids@gmail.com

Abstract

The contemporary workforce has witnessed a paradigm shift with the rapid growth of the gig economy, leading to a surge in freelance professionals seeking diverse opportunities across various industries. In response to this trend, the concept of a decentralized freelance talent marketplace has gained significant traction, aiming to create a transparent, efficient, and equitable platform for both freelancers and employers.

A Decentralized Freelance Talent Marketplace leverages blockchain technology to create a trustless, peer-to-peer platform that directly connects clients with freelancers, eliminating the need for intermediaries. Smart contracts, operating on the blockchain, facilitate secure and transparent transactions, ensuring fair compensation and dispute resolution.

Keywords—Blockchain, Smart contracts, Decentralized

I. Introduction

In recent years, the landscape of employment has seen a significant shift towards freelance and remote work, owing to the growing desire for flexibility and autonomy in one's professional life. This transformation has given rise to the need for efficient and transparent platforms that connect employers with skilled freelancers, transcending geographical boundaries. Addressing this need, the concept of a decentralized freelance talent marketplace has emerged as a promising solution. Leveraging blockchain technology and smart contracts, such a platform aims to provide a secure, transparent, and accessible ecosystem for freelancers and employers to collaborate without the intervention of intermediaries. We present a comprehensive analysis of the dynamics and potential of a decentralized freelance talent marketplace system, discussing its implications for the future of work and the economy at large. Furthermore, it explores the technical aspects, challenges, and opportunities associated with the development and implementation of such a disruptive platform in the current digital landscape.

II. Related work

Blockchain technology can be used in all contexts where a decentralized system is necessary in order to ensure the involvement of many actors in the same network and guarantee a full transparency and reliability between people who do not know each other. Therefore blockchain technology is not only useful for creating digital currencies or new financial technologies, but can be applied for a wide variety of applications, such as protection systems of digital identity, provenance of documents, organizational data management, digital and physical assets. An important research is that carried out by [1]. They, designing an interdisciplinary approach, analyze legal aspects and consequences of the use of blockchain for job organizations that want to challenge the law and the labor market.

[2] instead examines the use of smart contracts, combined with intelligent multi-agent systems and Internet-of-Things devices, in order to deliver self-aware contracts with a high degree of automation for peer-to-peer collaborations. They apply a smart contract, mapped onto an automated protocol, for initiating and terminating a rental contract

III. proposed work/methodology

Our first step involved the comprehensive design of smart contracts using Solidity, leveraging its robust features to create a reliable and tamper-proof infrastructure for freelance transactions.

We implemented a secure escrow mechanism, allowing clients to deposit funds that will be released to freelancers upon satisfactory completion of predefined project milestones. This escrow contract was intricately designed to uphold the integrity of transactions and safeguard the interests of both parties.

We focused on developing an intuitive ui, enhancing accessibility and usability for both freelancers and clients. The interface will be designed to seamlessly interact with the Ethereum blockchain, providing a user-friendly environment for the initiation, tracking, and completion of projects.

A. Drawback of Existing System

The existing freelance marketplace, while instrumental in connecting employers with a global pool of talented professionals, is not without its drawbacks. It fosters a fiercely competitive environment, leading to a race to the bottom in terms of pricing, often undervaluing the skills and expertise of freelancers. The prevalence of numerous low-quality or unverified profiles makes it challenging for employers to identify genuine talent, resulting in a time-consuming vetting process. Additionally, platforms often impose significant fees on both freelancers and employers, ultimately reducing the income for freelancers and increasing the costs for employers. Lack of personalized support and direct communication channels can hinder effective collaboration, leading to misunderstandings and delays in project completion. The reliance on these platforms for securing projects may result in a lack of job security and benefits, leaving freelancers vulnerable to financial instability and limited access to essential benefits such as healthcare and retirement plans.

B. Architecture Diagram

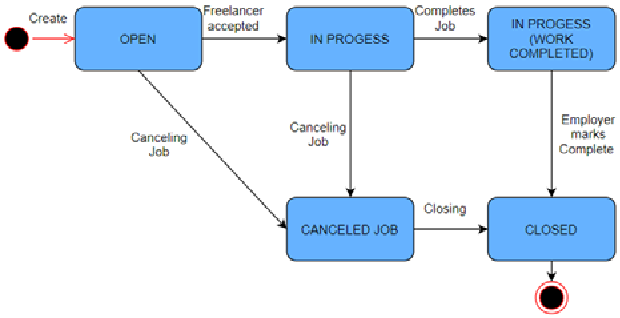
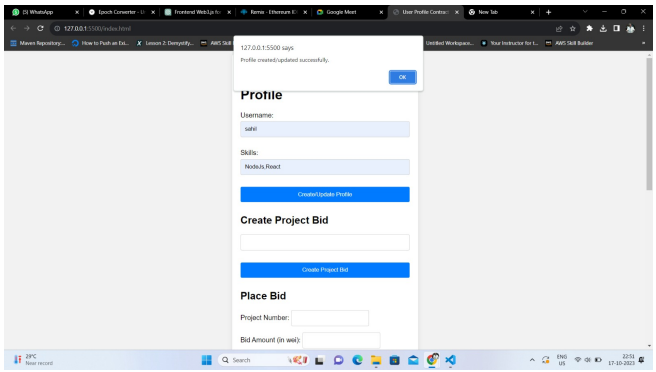


Fig.1

RESULTS AND IMPLEMENTATION



Conclusion

In summary, our implementation of the Decentralized Freelance Talent Marketplace has successfully leveraged the power of Solidity, Ethereum, smart contracts, and escrow contracts, facilitated by the robust framework of Hardhat. Through this project, we have demonstrated the practicality and efficiency of decentralized systems in revolutionizing the freelance economy. By ensuring secure, transparent, and automated transactions, we have paved the way for a more equitable and trustworthy platform for both freelancers and clients. This project marks a significant step towards the mainstream adoption of blockchain technology in the freelance industry, promising a future of fairer and more secure transactions for all stakeholders involved.

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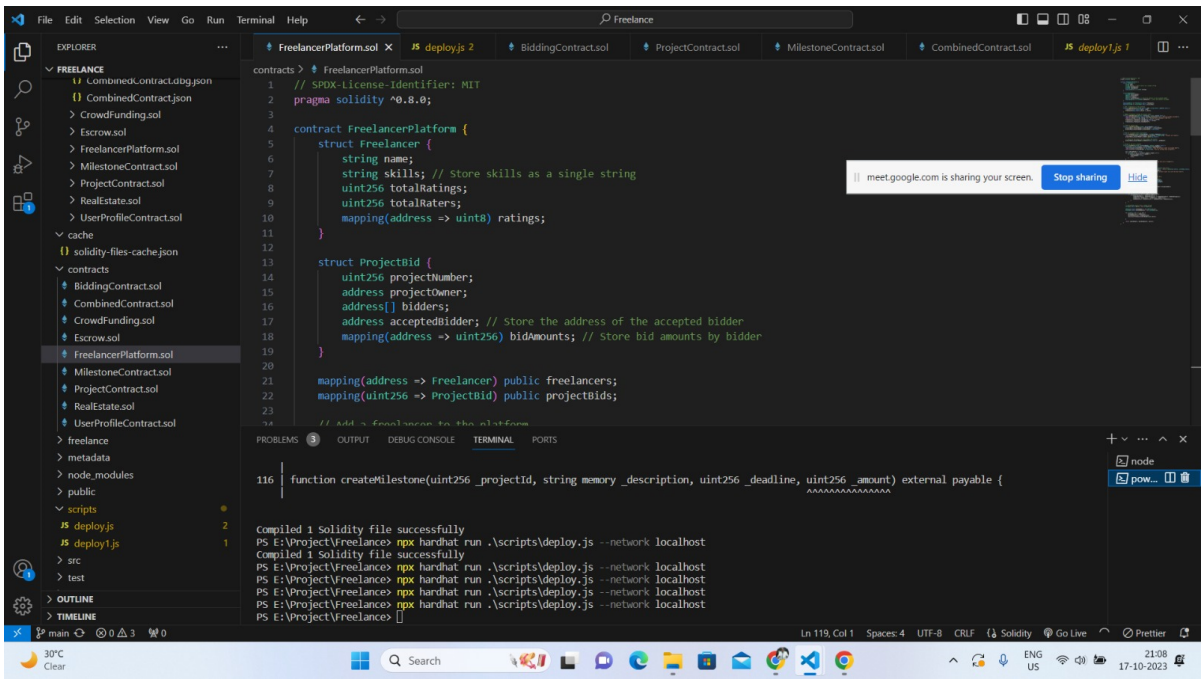
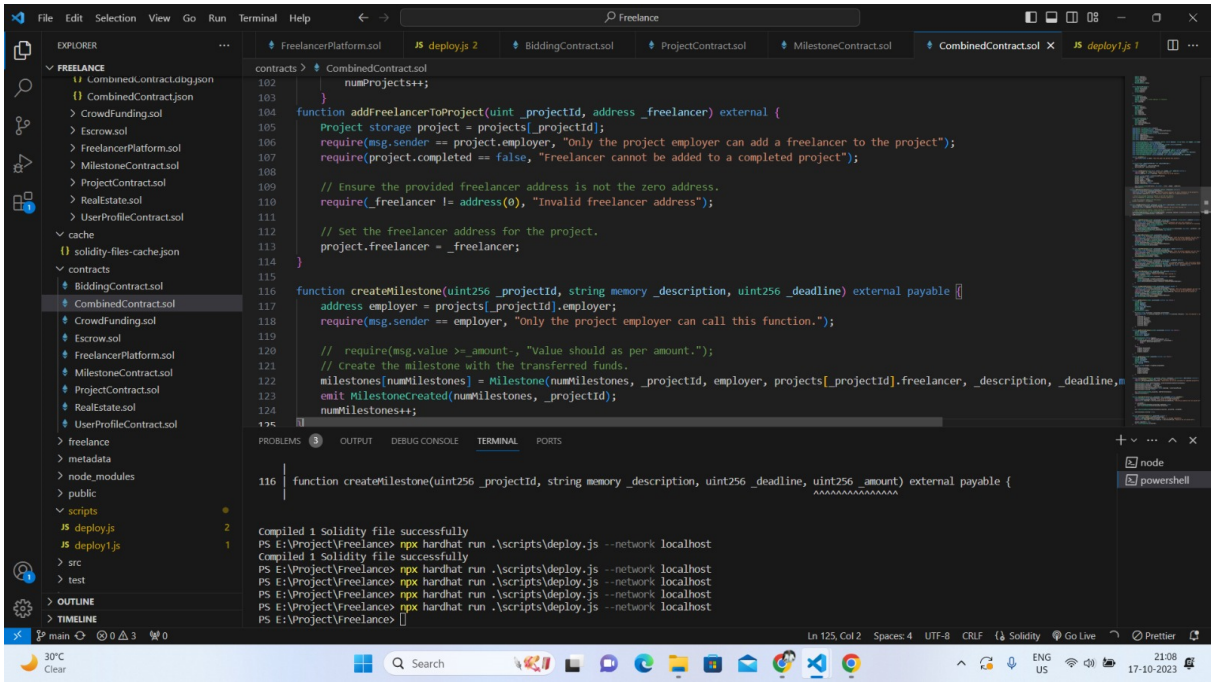
Project Drive Link:

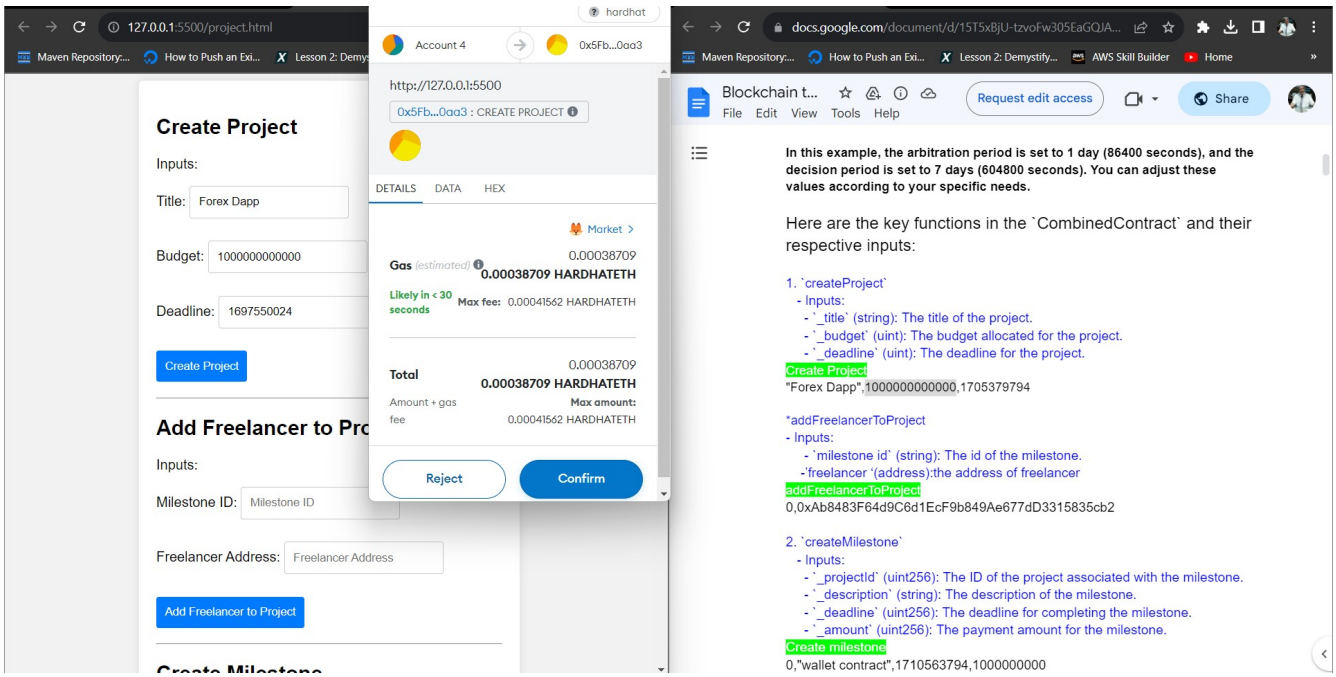
https://drive.google.com/file/d/19_vyC7h3U8FhqIqPRVGIeYKt6BGdYcqk/view?usp=sharing

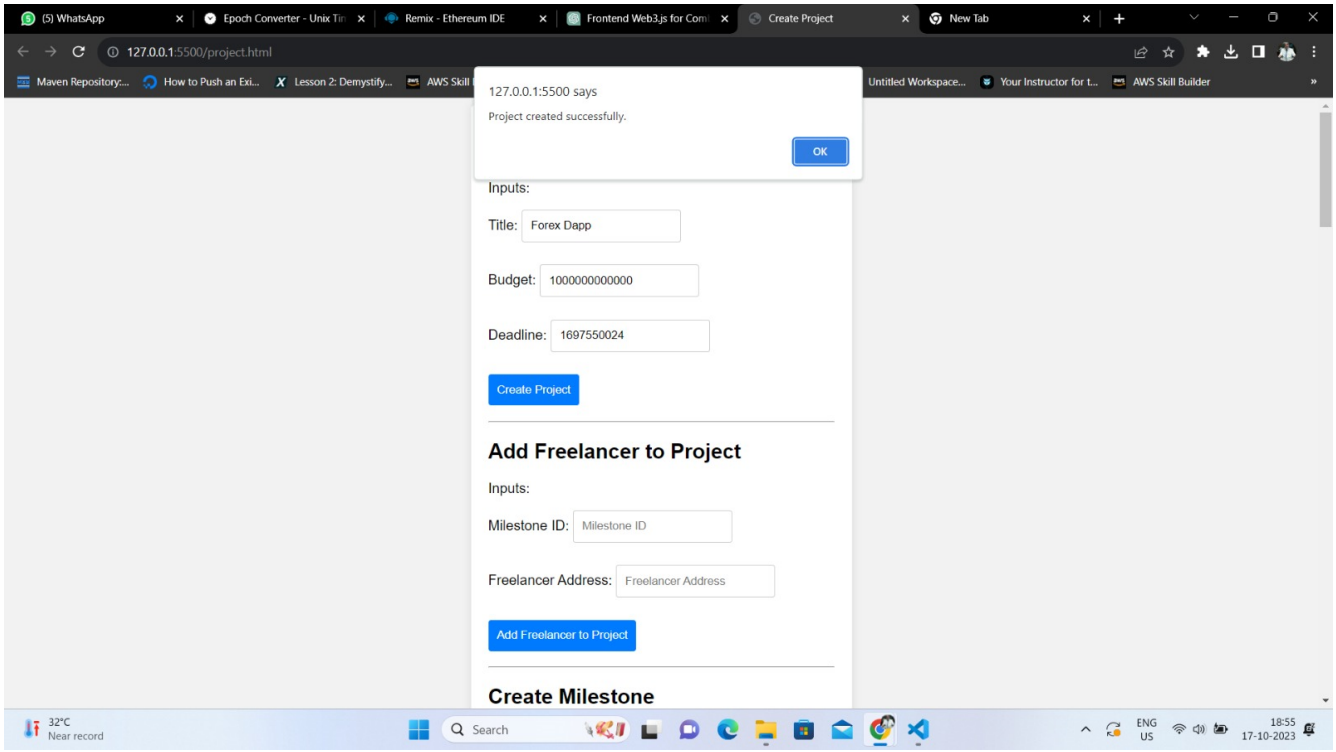
Code Snippets:





Output screenshot

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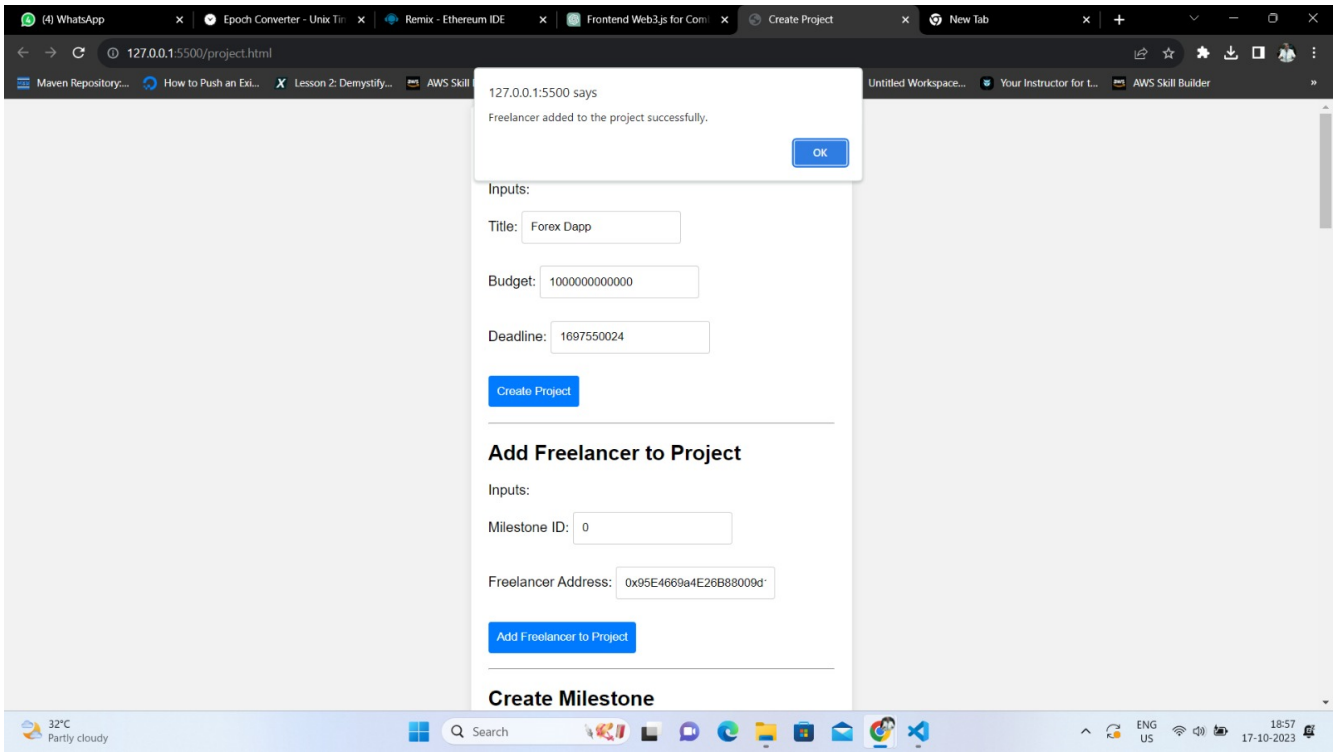
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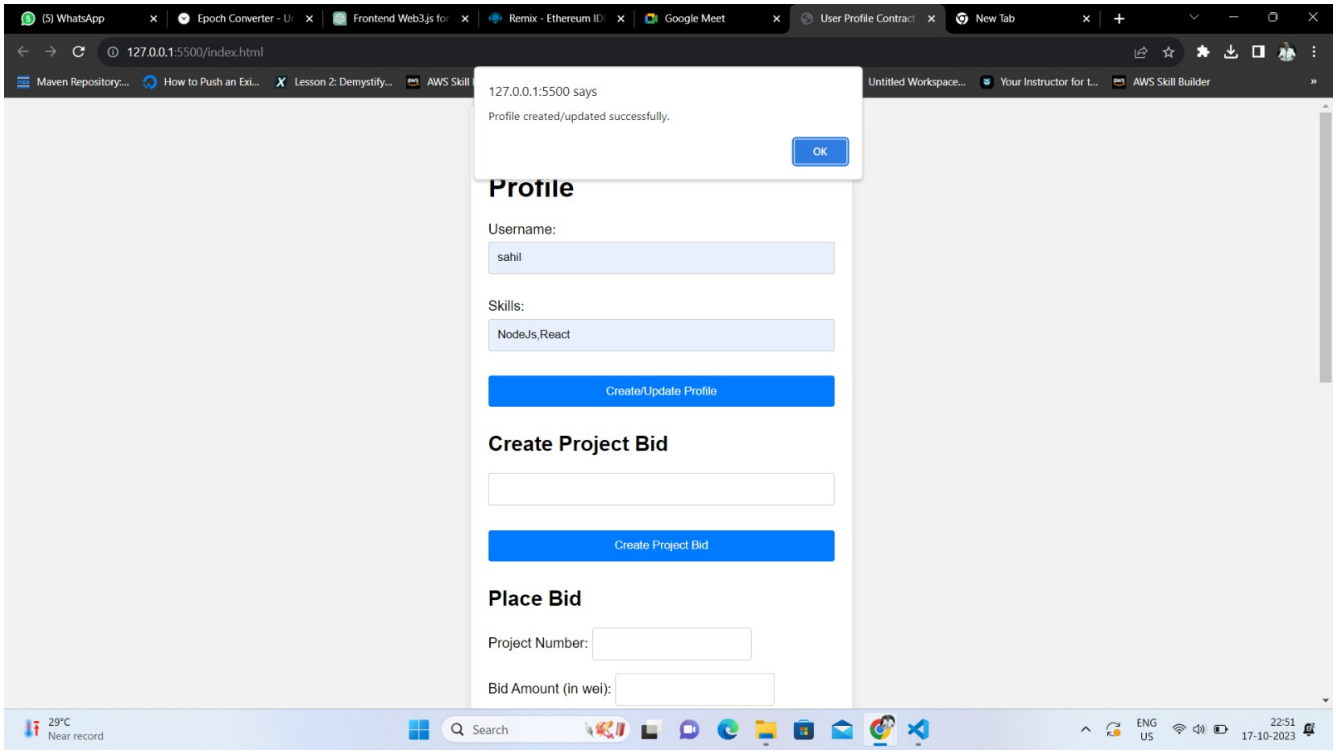
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