NURTURING POTENTIAL

SAKET GYANPEETH'S

SAKET COLLEGE OF ARTS, SCIENCE AND COMMERCE

(Permanently Affiliated to University of Mumbai)

NAAC Accredited B Grade

Saket Vidyanagari Marg, Chinchpada Road, Katemanivali, Kalyan (East) – 421306, Dist. Thane (MAH)

A Project Report on

DECENTRALIZED TRANSACTION WEB3 APPLICATION

Submitted by

TERUKULA SAI (233026)

Under the guidance of

Asst.Prof.Pradnya Jagtap

Academic Year 2023-24

SUBMITTED IN FULFILLMENT OF

REQUIREMENTS FOR QUALIFYING

Bachelor of Information Technology

(University of Mumbai)

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Department of Information Technology

CERTIFICATE

This is to certify that

TERUKULA SAI

Has Completed the Project Work Entitled

DECENTRALIZED TRANSACTION WEB3 APPLICATION

Submitted the same in the Fulfillment of B.Sc.(Information Technology) Degree of Mumbai University

Project guide	**Head of Department**

Principal	**Internal Examiner**	**External Examiner**

PROFORMA FOR THE APPROVAL PROJECT PROPOSAL

PNR No : 20210164007305 31 Roll No : 233026

1. Name of the Student : Terukula Sai

2. Title of the Project : Decentralized Transaction Web3 Application

3. Name of the Guide : Asst. Prof. Pradnya Jagtap

4. Teaching experience of the Guide :

5. Is this your first submission? Yes ☐ No ☐

Signature of Student

Date :

Signature of the Guide

Date :

Signature of the Coordinator

Date :

Abstract

The Ethereum-Based Decentralized Transaction Application redefines digital transactions through Ethereum's blockchain prowess. Enabling secure and transparent exchanges, the application empowers users to engage in direct, peer-to-peer transactions on the Ethereum network. Its features encompass transparent histories via immutable records and fortified security using Ethereum's cryptographic strengths. Through an intuitive interface, users navigate the Ethereum ecosystem effortlessly.

Architected with a client-server model, the frontend interacts with users while the backend communicates with the Ethereum blockchain. The Ethereum network hosts transactions and executes smart contracts, governing transaction logic autonomously. Leveraging Ethereum, users partake in a decentralized, tamper-proof environment fostering unwavering trust.

Technologically, the application combines Ethereum's blockchain, Solidity smart contracts and Web3.js. Frontend development employs React, backend relies on Node.js, and Ethereum wallets like MetaMask ensure secure blockchain access.

User guidance covers wallet creation, Ethereum transaction initiation, and transaction history exploration through blockchain explorers. Ethereum-specific security practices ensure user confidence.

Discussion extends to challenges like Ethereum's scalability and user onboarding, with an eye on integrating diverse blockchain networks for expanded horizons. The Ethereum-Based Decentralized Transaction Application converges decentralization and technological advancement, propelling digital transactions into a secure and autonomous future.

ACKNOWLEDGEMENT

I would like to extend my heartfelt appreciation to all those who have been instrumental in the creation and fulfillment of the Ethereum-Based Decentralized Transaction Application. While the project was undertaken and completed by an individual, the support and guidance from various quarters were invaluable.

I am especially grateful to **"Prof.Pradnya Jagtap"**, my project guide, whose expertise, insights, and mentorship were pivotal throughout the development process. Your guidance steered me in the right direction, helping me navigate challenges and make informed decisions.

I would also like to acknowledge the significant contributions of our respected Principal, **"Dr. Vasant Barhate"**, whose visionary leadership sets the tone for academic excellence. The continuous support and encouragement from our Principal greatly motivated me throughout the project.

Furthermore, I wish to express my gratitude to our esteemed Vice-Principal, **"Mrs. Rani Raghuvanshi"**, whose guidance and wisdom have been instrumental in shaping our project. Her unwavering commitment to the pursuit of knowledge and innovation has been an inspiration to us.

To my friends and family, thank you for your encouragement and unwavering belief in my capabilities.

Lastly, I extend my gratitude to the users of the Ethereum-Based Decentralized Transaction Application for their engagement and feedback. Your interaction contributes to the continuous improvement of the application.

With sincere thanks,

Terukula Sai

DECLARATION

I here by declare that the project entitled, **“Decentralize Transaction Web3 Application”** done at **“Saket College of Art’s, Science & Commerce”**, has not been in any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university.

The project is done in partial fulfillment of the requirement for the award of degree of **BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)** to be submitted as final semester as part of our curriculum.

Name and Signature of the Student

TABLE OF CONTENTS

TABLE OF FIGURES