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Lottery system using Blockchain

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Subject - Fundamentals Of Blockchain
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Purpose of creating a Decentralized system

Third Parties

This system will replace the original lottery operations in by removing third parties in the buying process, ensuring efficiency in prize declaration, and claiming prizes.

Transparency

The proposed lottery system can ensure that the system is working with all fairness, transparency, and security.

No Human Intervention

The smart contract written to manage the lottery system makes sure that all the winnings are automatically transferred to the winner after the lottery manager has executed the function which picks a random person from the pool of participants.

Security

To facilitate fast, secure, low-cost international payment processing services through the use of encrypted distributed ledgers that provide trusted real-time verification of transactions without the need for intermediaries such as correspondent banks.
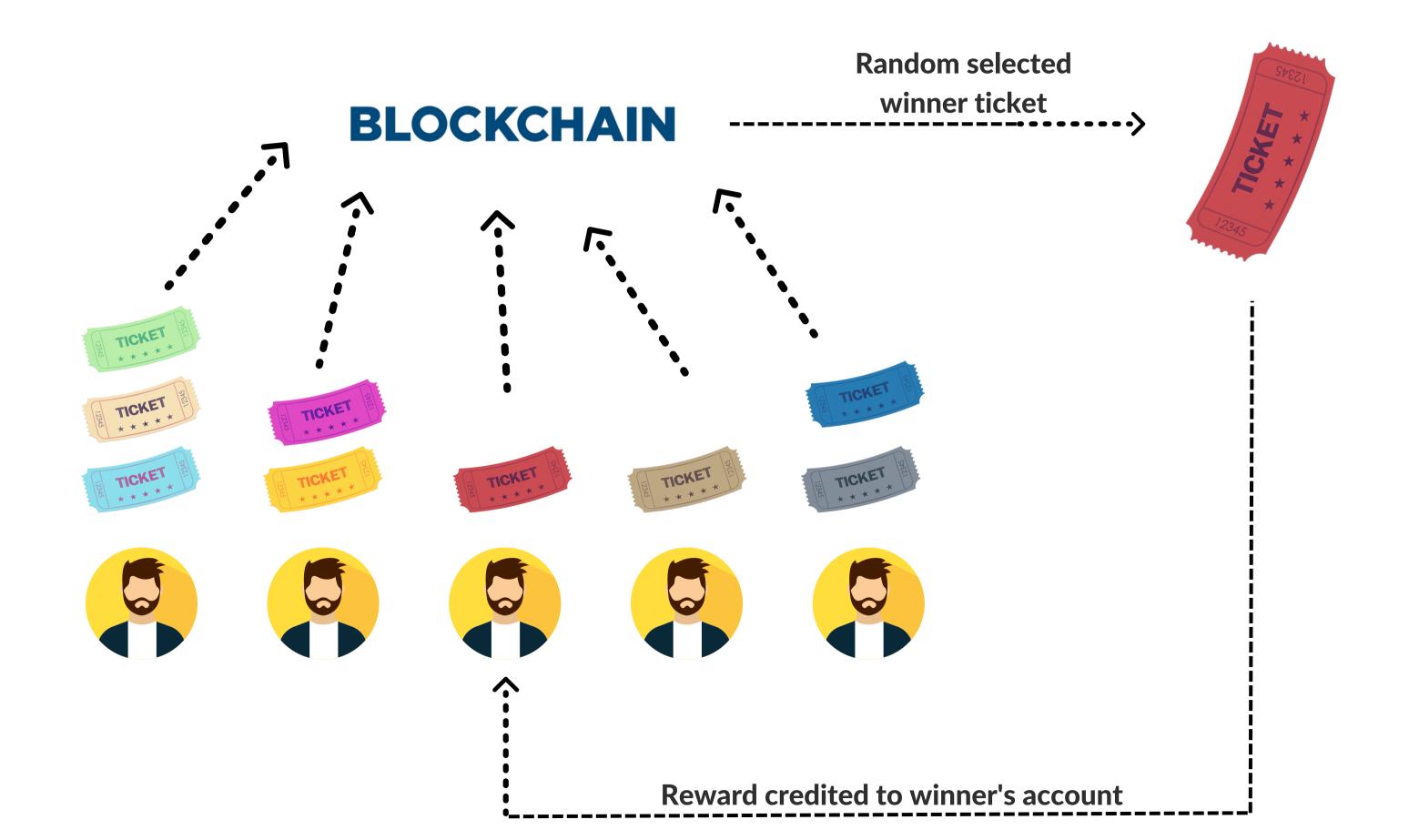
Requirements of current Lottery System

Random number generation: The lottery system must have a method for generating random numbers to ensure that the winning numbers are selected fairly and without bias.

Ticket sales and validation: The system must be able to sell and validate tickets securely and reliably, both in-person and online.

Prize structure: The system must have a defined prize structure that outlines the different prize levels and how they are awarded based on the number of winning numbers matched.

Security and integrity: The lottery system must be secure and protected against fraud, hacking, and other forms of tampering. It must also be able to maintain the integrity of the drawing process and ensure that the results are accurate and verifiable.

Architecture

Random selected
winner ticket

BLOCKCHAIN

TICKET

Reward credited to winner's account

Platform, Framework, language

Platform :

Ethereum Blockchain: Ethereum is a decentralized blockchain platform that establishes a peer-to-peer network that securely executes and verifies application code, called smart contracts

Thirdweb : It is a platform that provides a suite of tools for easily build, launch and manage a Web 3 project.

Framework :

TypeScript: it is a strongly typed programming language that builds on JavaScript, giving you better tooling at any scale.

Tailwind CSS: A utility-first CSS framework packed with classes like flex, pt-4 , text-center, and rotate-90 that can be composed to build any design, directly in your markup.

Language :

Solidity: Solidity is a statically-typed curly-braces programming language designed for developing smart contracts that run on Ethereum.

Thank You