

BIKE RENTAL CONTRACT

SUMMARY

The idea of the bike rental smart contract is to use blockchain technology to create an automated and decentralized bike rental process. Smart contracts will manage rental terms and conditions, payment processing and tracking of bike usage. Its goal is to provide users with a safe, transparent and hassle-free bike rental experience.

This is a summary with the main features implemented in the Bike Rental contract:

Billing: the rental fee is calculated as a function of time (i.e., duration of rental in seconds)

Payment medium: customers can pay with Ether.

Un-spent funds: Ether amount that is not spent when rental finishes, is automatically returned/refunded to customers.

Additionally, smart contracts can provide an immutable record of rental transactions, which facilitates dispute resolution and ensures accountability. Overall, the bike rental smart contract aims to provide a decentralized solution for bike rental, making the rental process simpler, safer and more transparent.

PLAYERS

Users of the Bike Rental Smart Contract include:

Bike Renters: These are individuals who want to rent a bike. They will interact with the smart contract to search for available bikes, select which ones to rent, and pay the rent.

Bike owners: These are individuals who have bikes available for rent. They will interact with the smart contract to list their bikes, set rental rates, and receive payment for rentals.

Renters and bike owners must have a digital wallet with cryptocurrency in order to interact with the smart contract. The blockchain network will ensure that all transactions are verified and recorded on the blockchain.

SCENARIO

In the bike rental smart contract, players will interact with the smart contract as follows:

Bike Renter: In order to interact with the smart contract, the bike renter must have access to a decentralized application (dApp) compatible with the blockchain platform, among them, the smart contract executes and builds. The dApp will allow renters to search for available bikes, select a bike to rent, and pay for the rental using their digital wallet.

Bike Owners: Bike owners will also need access to a compatible dApp to interact with the smart contract. They will use the dApp to list their bikes, set up rentals and collect rent.

Blockchain Network: The blockchain network will serve as an intermediary between bike rental companies and bike owners. This will provide smart contracts with the computing power to execute transactions, verify transactions, and store data in a decentralized manner.

In general, all players will communicate with the Bike Rental Smart Contract through a compatible dApp that is compatible with the blockchain platform on which the Smart Contract is built. Using a dApp, bike renters and owners can communicate with smart contracts seamlessly, securely and seamlessly.

ACTIONS

The actions that each player will take when interacting with the bike rental smart contract are as follows:

Bike renters:

- Search for available bikes on the dApp interface
- Select the bike to rent and enter the rental duration and payment details
- Confirm rental request and send payment to smart contract
- Receive rental confirmation and unlock code for rental bike
- Return bike within agreed rental period

Bike owner:

- Save his bike on the dApp interface by entering the details of the bike and renting it
- Receive an email from the renter Rental requests and approve or reject them
- Receive the payment for the approved lease from the smart contract
- Generate the unlock code rented bike and send it to renter

Blockchain Network:

- Receive rental request from renter of bike
- Valid rental request and confirm payment from renter
- Transfer payment to bike owner digital language wallet
- Record complete transaction on blockchain and update bike owner inventory
- Generate bike unlock code rented and send it to the renter

Overall, the Bike Rental Smart Contract will automate the rental process, providing renters and bike owners with a safe and transparent way to rent bikes. Smart contracts will ensure that all transactions are carried out efficiently, accurately and transparently.

