BuildingOwnership Smart Contract

Contract Summary & Technical Breakdown

Primary Functions

- • _createRoom(): Initializes a room with shares

- • leaseRoomShares(): Allows users to lease shares

- • reclaimExpiredLease(): Owner reclaims expired leases

- • updateRoomLeaseStatus(): Updates lease availability & price

- • checkLeaseStatus(): Returns lease state info

- • getRoom() / getTenants(): View functions

Function Descriptions

- _createRoom():
- - Internal setup for each room

- leaseRoomShares():
- - Performs rent validation and share transfer

- reclaimExpiredLease():
- - Recovers shares after lease expiry

Access Control

- • OnlyOwner:
-   - reclaimExpiredLease()
-   - updateRoomLeaseStatus()

- • Public/External:
-   - leaseRoomShares()
-   - checkLeaseStatus()
-   - getRoom()
-   - getTenants()

Events

- • RoomCreated(roomId, name, shares, price)
- • RoomLeased(roomId, tenant, shares, months, totalRent)
- • LeaseReclaimed(roomId, tenant, shares)
- • RoomLeaseStatusUpdated(roomId, forLease, price)

Smart Contract Summary

- - Implements decentralized room share leasing
- - Uses ERC-1155 multi-token standard
- - Ensures safe payments and share transfers
- - Introduces room-level configuration
- - Enables automated reclaiming of expired leases