

SlimyCrypto

Project description

The objective of this project is to showcase a practical application of blockchain technology beyond the realm of cryptocurrencies and financial transactions, by creating a game inspired by the popular Pokemon series. In this game, players will take ownership of unique creatures called "slimes," engaging in both player-versus-player (PVP) and player-versus-environment (PVE) battles to earn experience and in-game currency.

The project aims to enhance the gaming experience by integrating blockchain technology, which provides players with indisputable ownership of in-game elements. This approach not only taps into the growing interest in blockchain-based games but also meets a broader demand for innovative gaming experiences.

Key components of the project include:

1. A dynamic monster generation system, designed for capturing slimes and facilitating PVE encounters.
2. An in-game shop where players can purchase items to bolster their slimes in combat.
3. A monster breeding feature, enabling players to create new slimes by combining existing ones from their collection.

Github Repo

<https://github.com/rosewood28/SlimyCrypto>

Used documentation

<https://docs.multiversx.com/welcome/welcome-to-multiversx>

Project documentation

Slime NFT Values: HP, ATT, DEF
ATT range: [10-30] -> maps to R channel
DEF range [5-25] -> maps to G channel
HP range: [100-200] -> maps to B channel
Color: Generated from RGB from previous values.

Smart Contracts:

[egld-slk-swap](#): EGLD -> [SLK-7d5af3](#) (Slimekels, the game currency)

[slk-shop](#):

- [SLK-7d5af3](#) -> [SLKCATCH-27bf2b](#) (token that tracks how many catcher items you have)
- [SLK-7d5af3](#) -> [SLKATTBUFF-d28a3c](#) (token that tracks how many buffing items you have)
- [SLK-7d5af3](#) -> [SLKHPPREC-3762fd](#) (token that tracks how many healing items you have)

[slime-genetic-alg](#): handles slime genes and breeding

slime-ownership: handles slime ownership as well as calls to generate new slimes

Backend Routes:

/register_user/{tx_hash}

– Transaction must be acquiring SLK tokens

/breed/{tx_hash}

– Transaction has data “breed {slime_id_1} {slime_id_2}”

– Transaction transfers 20 SLK

Returns new slime_id

/gen/{tx_hash}

– Transaction has data “genwild”

– Transaction transfer 10 SLK

Return wild slime_id

/fight/{wild_slime_id}

{hunter: erd..., slime_id: x}

Returns status of fight

/fight_move/{wild_slime_id}

{hunter: erd..., move: [“ATT”, “BUFF”, “HEAL”, “CATCH”]}

Returns status of fight

/item/{tx_hash}

– Transaction has data “fight {wild_slime_id} use [ATK, HEAL]

– Transaction transfers SLKATTBUFF or SLKHEALPOT

– Sender is hunter

/catch/{tx_hash}

- Transaction has data “catch {wild_slime_id} rnd_str”
- Sender is hunter
- Transaction transfers 1 SLKCATCHER

Return slime_id