

基本资料

项目名称: SuperPetGame

立项日期: 2023.6.8

项目介绍:

SuperPetGame 项目计划开发一款桌面宠物游戏, 将游戏的信息存储在区块链上, 保证信息不被删除。这款游戏希望不仅在本地端提供游戏体验, 还可以实现宠物的链上交易功能。

Introduciton:

SuperPetGame project wish to build a desktop pet game, the game information is stored on the chain and guaranteed not to be deleted. In addition, the game also provides a pet trading function.

技术架构:

项目开发大致分为三个部分: 在本地运行的游戏 UI 界面, 与链上区块进行信息交互的客户端, 以及链上的逻辑开发。

游戏的 UI 界面使用 Bevy engine 游戏引擎, 客户端构建是使用 Subxt 库, node 基于 Substrate 建立。

Architecture:

Game development is roughly divided into three parts, a game UI running locally, the client responsible for information interaction with the nodes, and the development of logic on the chain. Game UI is build on Bevy engine, client is build using Subxt lib, and node is clone from substrate-node-template.

黑客松期间计划完成的事项

区块链端:SuperPetGameChain

- pallet-pet
 - 创建宠物 (fn mint())
 - 交易宠物 (fn transfer())

客户端:SuperPetGame

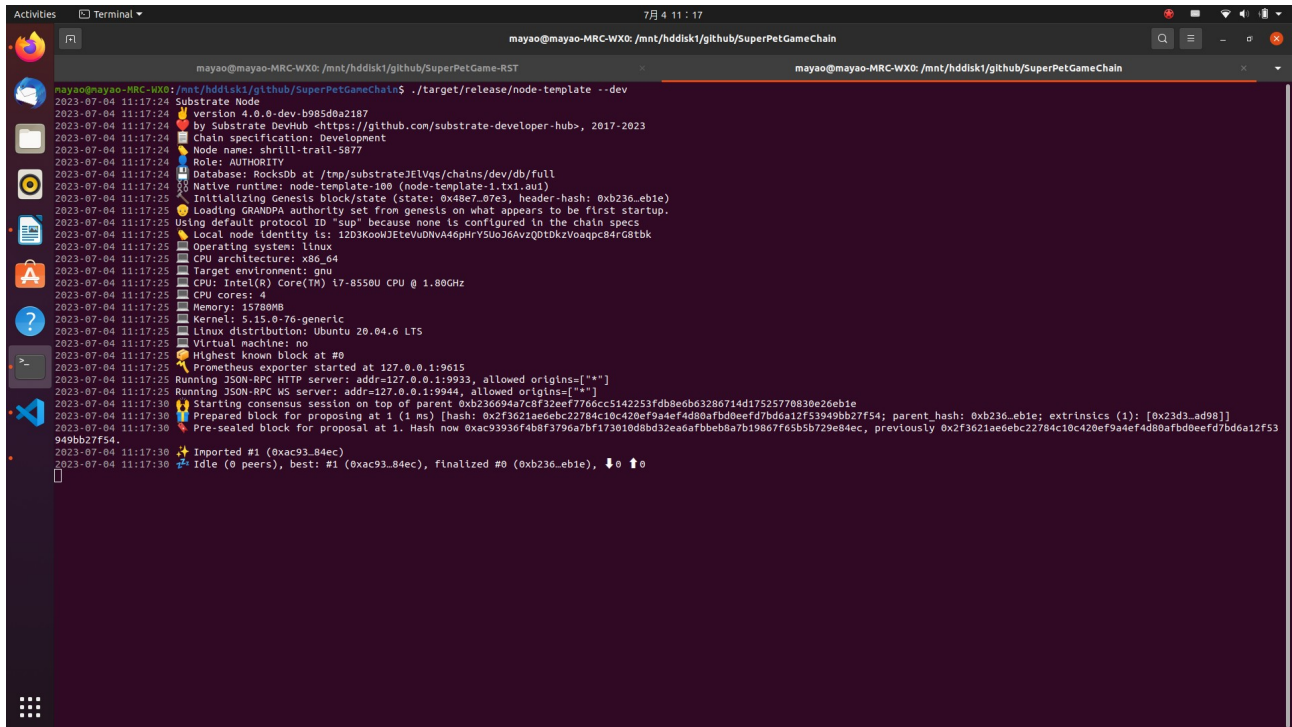
- UI
 - game.rs
 - splash.rs
 - menu.rs
- Client
 - fn mint //向链上发送创建宠物的请求, 函数在 menu.rs 文件里

程序运行截图

1.首先启动节点，在 SuperPetGameChain 目录下运行

```
cargo build --release
```

```
./target/release/node-template --dev
```



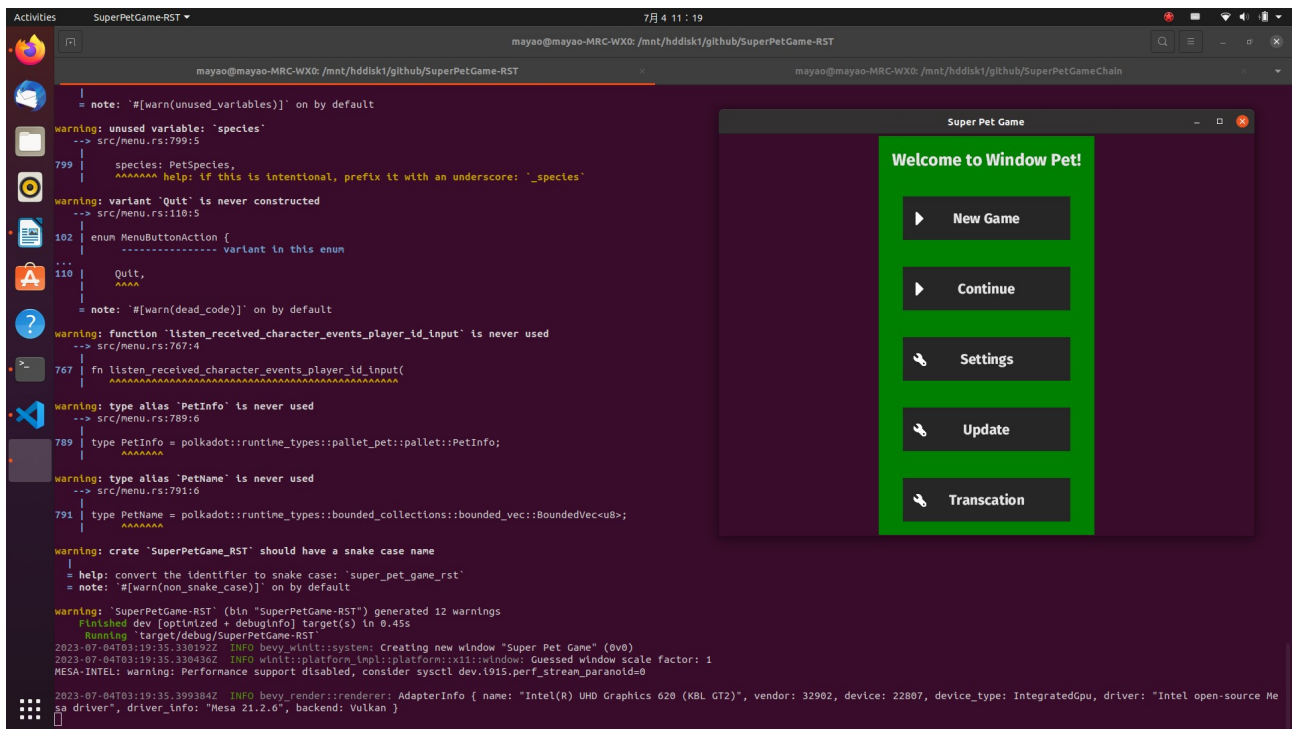
```
mayao@mayao-MRC-WX0: /mnt/hddisk1/github/SuperPetGameChain$ ./target/release/node-template --dev
2023-07-04 11:17:24 Substrate Node
2023-07-04 11:17:24 version 4.0.0-dev.b985d0a2187
2023-07-04 11:17:24 by Substrate DevHub <https://github.com/substrate-developer-hub>, 2017-2023
2023-07-04 11:17:24 Chain specification: Development
2023-07-04 11:17:24 Node name: shril1-trail-5877
2023-07-04 11:17:24 Role: AUTHORITY
2023-07-04 11:17:24 Database: RocksDB at /tmp/substrateJElVqs/chains/dev/db/full
2023-07-04 11:17:24 Native runtime: node-template-100 (node-template-1.tx1.aui)
2023-07-04 11:17:25 Initializing Genesis block/state (state: 0x48e7_07e3, header-hash: 0xb236_ebie)
2023-07-04 11:17:25 Loading GRANDPA authority set from genesis on what appears to be first startup.
2023-07-04 11:17:25 Using default protocol ID "sup" because none is configured in the chain specs
2023-07-04 11:17:25 Local node identity is: 12D3KoomJEteVuDNVA46pHRV5Uo36AvzQDtdKzVoaqpc84rG8tbk
2023-07-04 11:17:25 Operating system: linux
2023-07-04 11:17:25 CPU architecture: x86_64
2023-07-04 11:17:25 Target environment: gnu
2023-07-04 11:17:25 CPU: Intel(R) Core(TM) i7-8550U CPU @ 1.80GHz
2023-07-04 11:17:25 CPU cores: 4
2023-07-04 11:17:25 Memory: 15780MB
2023-07-04 11:17:25 Kernel: 5.15.0-76-generic
2023-07-04 11:17:25 Linux distribution: Ubuntu 20.04.6 LTS
2023-07-04 11:17:25 Virtual machine: no
2023-07-04 11:17:25 Highest known block at #0
2023-07-04 11:17:25 Prometheus exporter started at 127.0.0.1:9915
2023-07-04 11:17:25 Running JSON-RPC HTTP server: addr=127.0.0.1:9933, allowed origins=["*"]
2023-07-04 11:17:25 Running JSON-RPC WS server: addr=127.0.0.1:9944, allowed origins=["*"]
2023-07-04 11:17:30 Starting consensus session on top of parent 0xb236e94a7c8f32eef776dccc5142253fdb0eb0326874d17525778838e20eb1e
2023-07-04 11:17:30 Prepared block for proposing at 1 (1 ms) [hash: 0x2f3621ae6ebc22784c10c420ef9a4ef4d00a8fbd0eefd7bd6a12f53049bb27f54; parent_hash: 0xb236_ebie; extrinsics (1): [0x23d3_ad98]]
2023-07-04 11:17:30 Pre-sealed block for proposal at 1. Hash now 0xac93936f4b8f3796a7bf173010d8bd32eaa6afbbeb8a7b19867f65b5b729e84ec, previously 0x2f3621ae6ebc22784c10c420ef9a4ef4d00a8fbd0eefd7bd6a12f53049bb27f54.
2023-07-04 11:17:30 Imported #1 (0xac93_84ec)
2023-07-04 11:17:30 Idle (0 peers), best: #1 (0xac93_84ec), finalized #0 (0xb236_ebie), 🔄 ⬆️ ⬆️
```

2.启动游戏，在 SuperPetGame 目录下运行

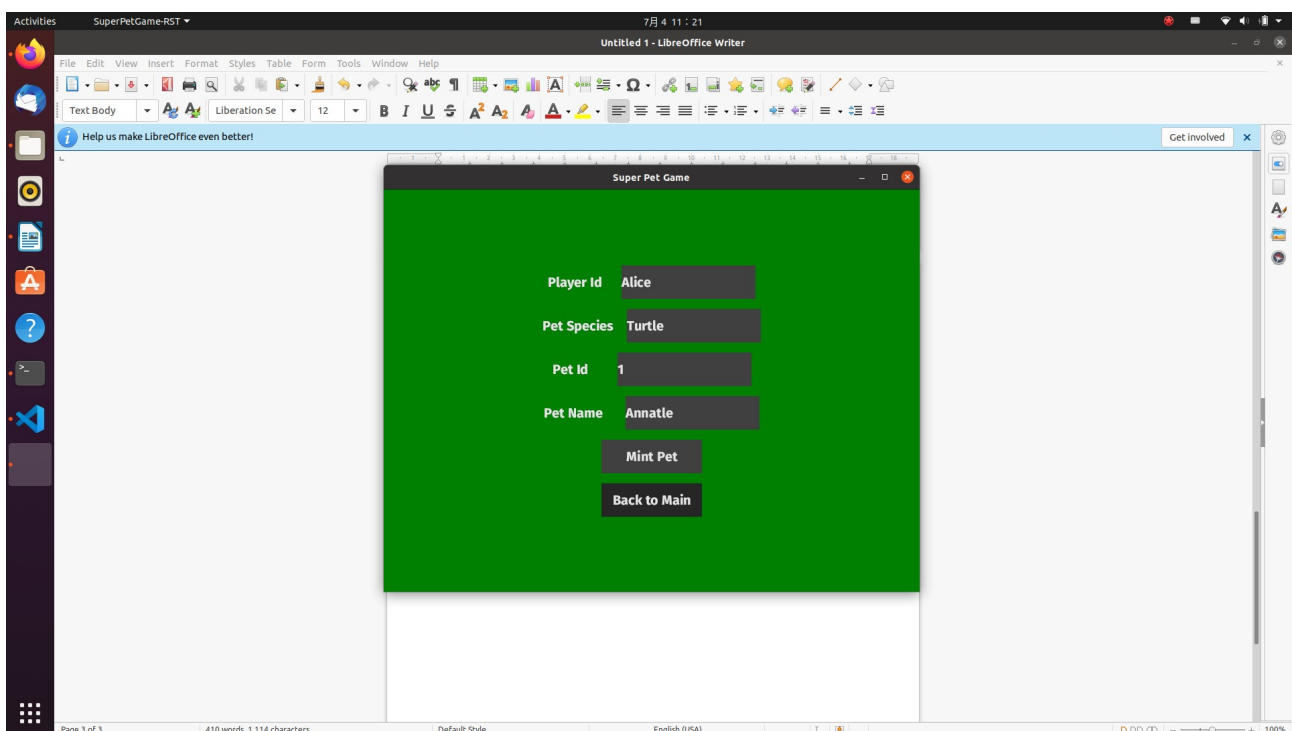
```
cargo build
```

```
cargo run
```

启动游戏界面



3. 点击 New Game 按钮，然后用户和宠物信息，点击 Mint，开始创建宠物。



命令行界面显示信息包含：Yeah, you have your own pet! 宠物创建成功，游戏自动跳转到 Game 界面。

