

# Implement a dAPP in Web3

dApp that reward in PTK Token the user that prove with a survery form the purchase in the restaurants



**PTK Reward** 



Mongo DB

Reward the user with 1PTK Token for 10 euros of purchase in the shop Register in Mongo DB e-mail user that request the reward in PTK Token





#### REQUEST:

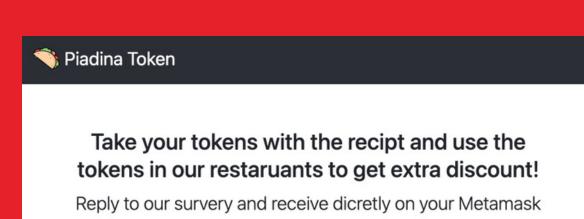
## **Project Requests:**

- At least one Smart Contract must be created that implements events;
- The code that interacts with the created Smart Contract must be written either in Python;
- There must be unit tests capable of testing the functioning of what has been created (Truffle).



#### **IMPLEMENTATIONS:**

## Django App and Moralis/Metamask Login



Connect Wallet

wallet our Token to use.

### Django

Django Web app permitt to log-in the costumer and reply to a survery form to reward token due to the last receipt received from the restaurants

Connect your Metamask Wallet

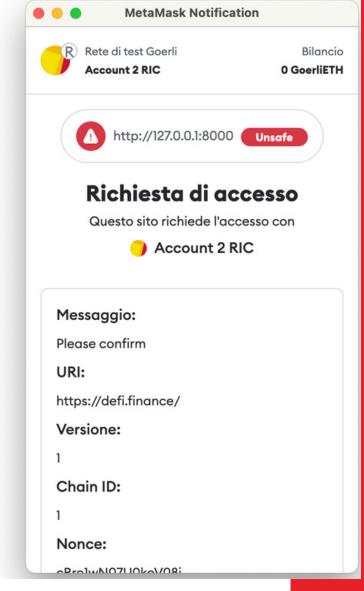
Connect

#### **Moralis and Metamask**

In order to allows you to easily integrate
Web3 functionality into our Python
applications we implemented
Moralis,Python SDK, that permit the
customer to login with Metamask









#### PROGRAMMING AND TESTING

## Truffle and Ganache to test PTK



#### **Truffle**

Build, Deply and Test PTK

Token with Truffle the
development environment,
testing framework and asset
pipeline for blockchains using
the Ethereum Virtual Machine
(EVM)

#### Contract: PiadinaToken

- ✓ Assert true
- ✓ Returr total Supply of 1000000000000000000
- Trasnfert of 100 PTK (106ms)

3 passing (194ms)



#### Ganache

Tested PTK Token on Ganache, a personal Ethereum blockchain which you can use to run tests, execute commands, and inspect state while controlling how the chain operates.



# **Programming and Deploying**

#### **Beef Burger**

Chicken, tommato, green salad, pita, ketchup, maionese, cucumber...



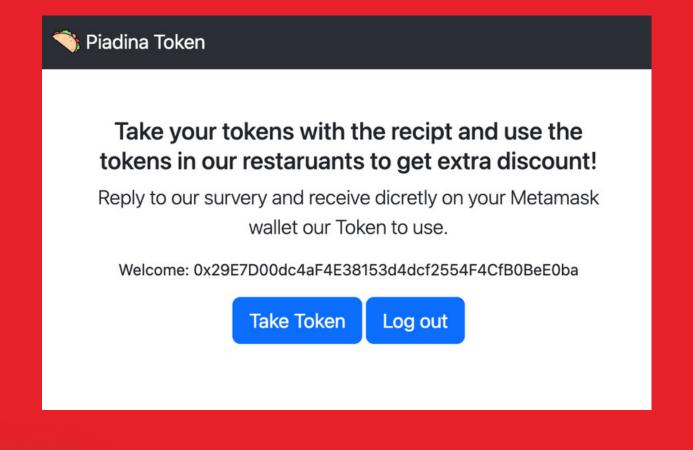
```
DEPLOY & RUN
                                                               🛱 Home 💲 PiadinaToken.sol 🗶
       TRANSACTIONS
        ➤ PIADINATOKEN AT 0XD0E...9121 🖒 🗙
                                                           pragma solidity ^0.8.21;
                                                            import "https://github.com/OpenZeppelin/openzeppelin-contracts/blob/master/contracts/token/ERC20/ERC20.sol";
                                                           contract PiadinaToken is ERC20 { 

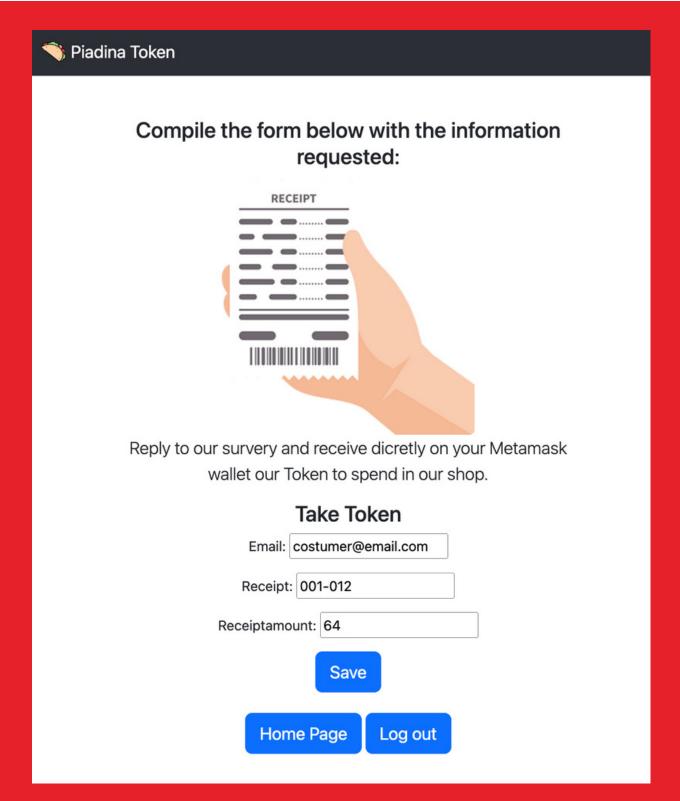
■ PUSH1 costs 3 gas - this line costs 18 gas - 2846468 gas left
                                                                   string memory name,
>>
                                                               ) ERC20(name, symbol) {
                                                                   require(initialSupply > 0, "Initial supply has to be greater than 0");
        transfer
                                                                   _mint(msg.sender, initialSupply * 10**18);
                     0xBAB12d4982a800DD30dCd9
          Calldata Parameters
            decimals
             name
```



#### Log in:

The costumer is correctly loggein in with MetaMask account and could compile the Survery Form with the information of the last receipt:





#### **Smart Contract / web3**

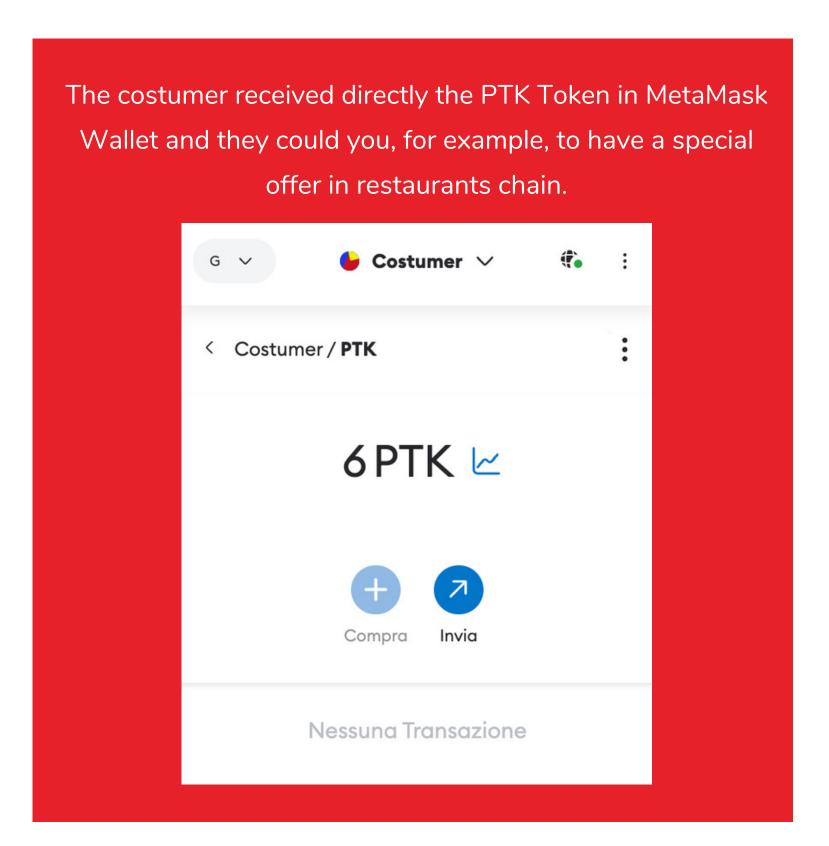


The costumer inserted all the information about the last receipt that



#### **TOKEN**

## Receive the token in Metamask wallet









PROGETTO ETHEREUM WEB3 DI MATTEO FOSCHI

# Thank for your attention

Link of the project in Git Hub

https://github.com/matteo-foschi/ethweb3



**Personal Link** 

<u>123 - 456 - 7890</u>

