



PIADINA TOKEN PTK

# Implement a dAPP in Web3

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



## PTK Reward

Reward the user with 1PTK Token for 10 euros of purchase in the restaurants



## Mongo DB

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 in Python;
- There must be unit tests capable of testing the functioning of what has been created (Truffle).



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## IMPLEMENTATIONS:

# Django App and Moralis/Metamask Login

 Piadina Token

Take your tokens with the receipt and use the tokens in our restaurants to get extra discount!

Reply to our survey and receive directly on your Metamask wallet our Token to use.

Connect Wallet

## Django

Django Web app permits to log-in the customer and reply to a survey form to reward token due to the receipts emitted from the restaurants

Connect your Metamask Wallet

Connect

## Moralis and Metamask

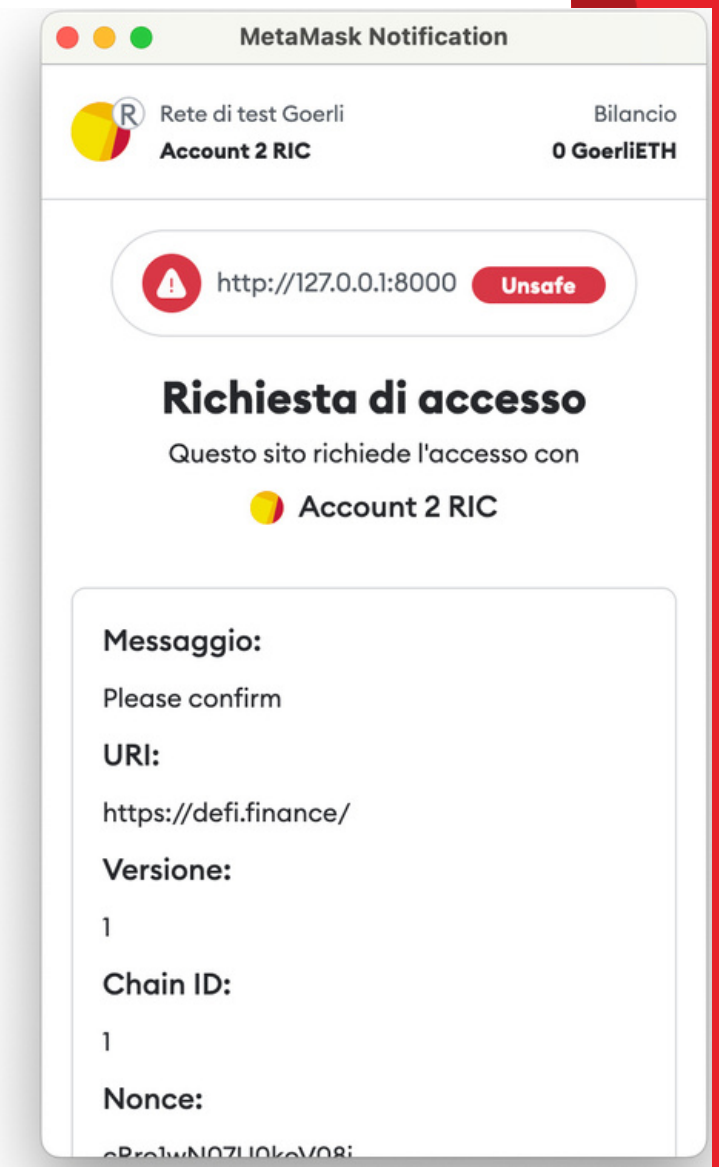
In order to allow you to easily integrate Web3 functionality into our Python applications we implemented Moralis, Python SDK, that permits the customer to login with Metamask



METAMASK



moralis



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# Truffle and Ganache to test PTK



## Truffle

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



## 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.

## Implemented TEST:

1. Correct deploy of the contract and creation of Token PTK;
2. Check the total Supply of the Token after deploying;
3. Check the correct transfer of 100 Token to an address

Contract: PiadinaToken

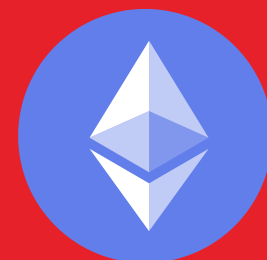
- ✓ Assert true
- ✓ Return total Supply of 1000000000000000000
- ✓ Transfer of 100 PTK (106ms)

3 passing (194ms)



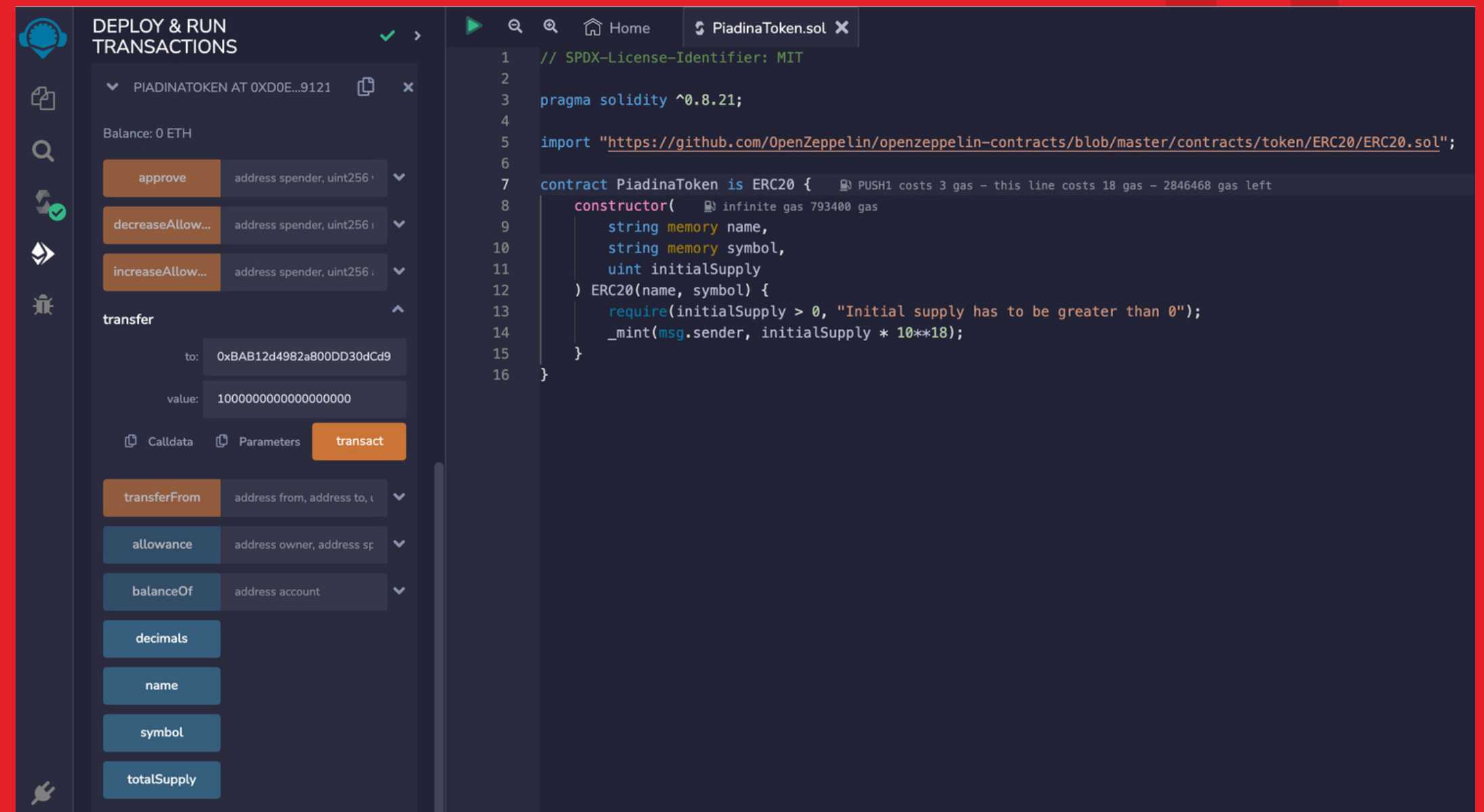
# Programming and Deploying

## Remix IDE / Solidity / Goerli ETH Test net



Remix IDE is a no-setup tool with a GUI for developing smart contracts. We test the deploy of smart contract for ERC20 PTK Token for all the function supported.


We deployed ERC30 PTK Token with REMIX IDE on Goerli ETH Test net.



# DJANGO APP in practice:

## Log in:

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

 Piadina Token


Take your tokens with the recipt and use the tokens in our restaruants to get extra discount!

Reply to our survery and receive dicretly on your Metamask wallet our Token to use.

Welcome: 0x29E7D00dc4aF4E38153d4dcf2554F4CfB0BeE0ba


Take Token

Log out

 Piadina Token

Compile the form below with the information requested:

RECEIPT



Reply to our survery and receive dicretly on your Metamask wallet our Token to spend in our shop.

Take Token

Email:

Receipt:

Receiptamount:

Save

Home Page

Log out


## MongoDB

All the suervry are saved on MongoDB

```
{
  "_id": {...},
  "id": 4,
  "author_id": 3,
  "date": {...},
  "email": "costumer@email.com",
  "receipt": "001-012",
  "receiptAmount": 64
}
```

## Smart Contract / web3

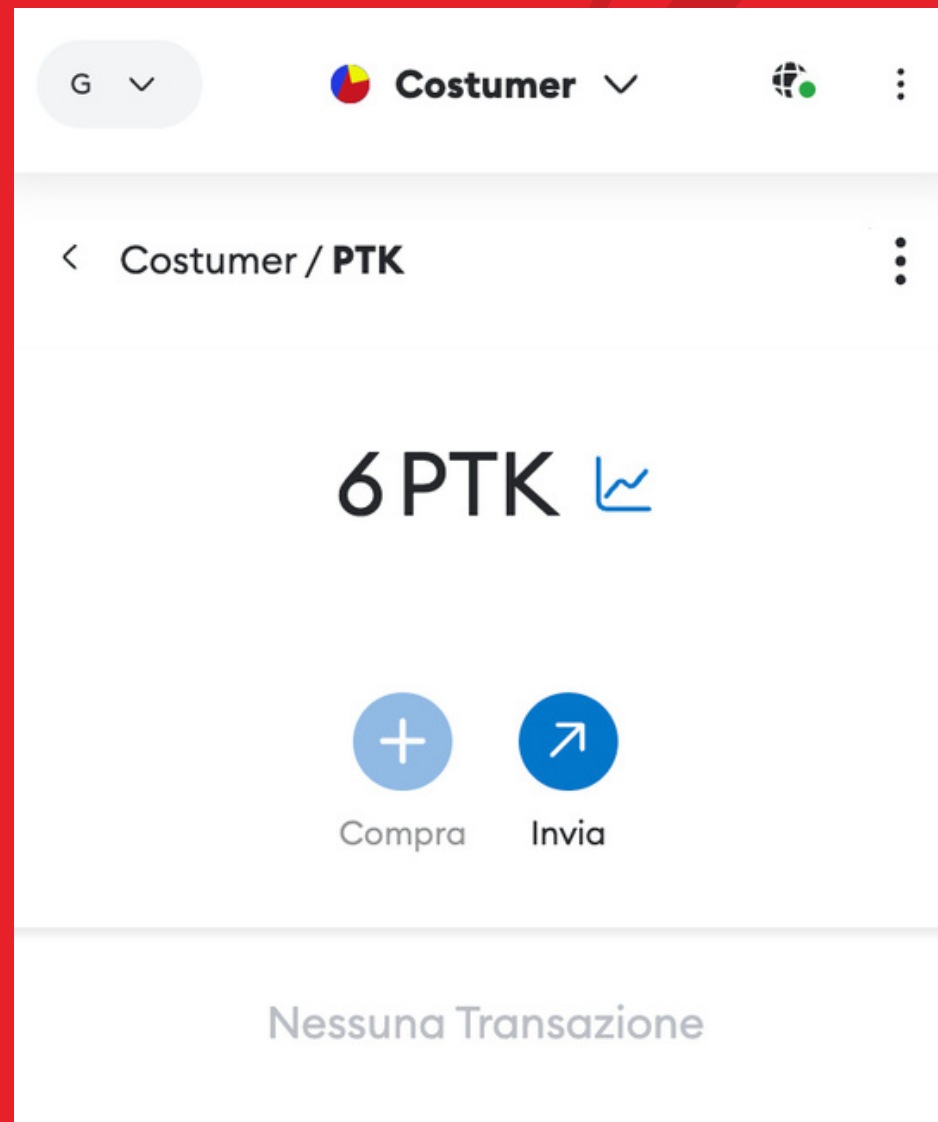
The costumer inserted all the information about the receipt and save the form. The app will return 1 PTK token for each 10 euros of amount. (in the example the amount is 64 euros that will be 6 PTK)

 **PIADINA TOKEN PTK**

TOKEN

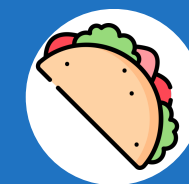
# Receive the token in Metamask wallet

The customer received directly the PTK Token in MetaMask Wallet and they could use, for example, to have a special offer in restaurants chain.



Offer Of The Month

## Free Delivery



3 TOKEN PTK



Get It Fast

## Take 15% Discount!



5 TOKEN PTK





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**

<https://www.linkedin.com/in/foschimatteo>



**Contract Address**

[0xd0E7330A453fA1B0AE0E077C531525347AE91218](https://etherscan.io/address/0xd0E7330A453fA1B0AE0E077C531525347AE91218)



**PIADINA TOKEN PTK**