

Introduction to Tokens

By Edson Alcala



Course content

You will learn:

- Different types of tokens in Ethereum
- How to create your own token
- Token standards in the Ethereum blockchain
- How to deploy tokens to an Ethereum network



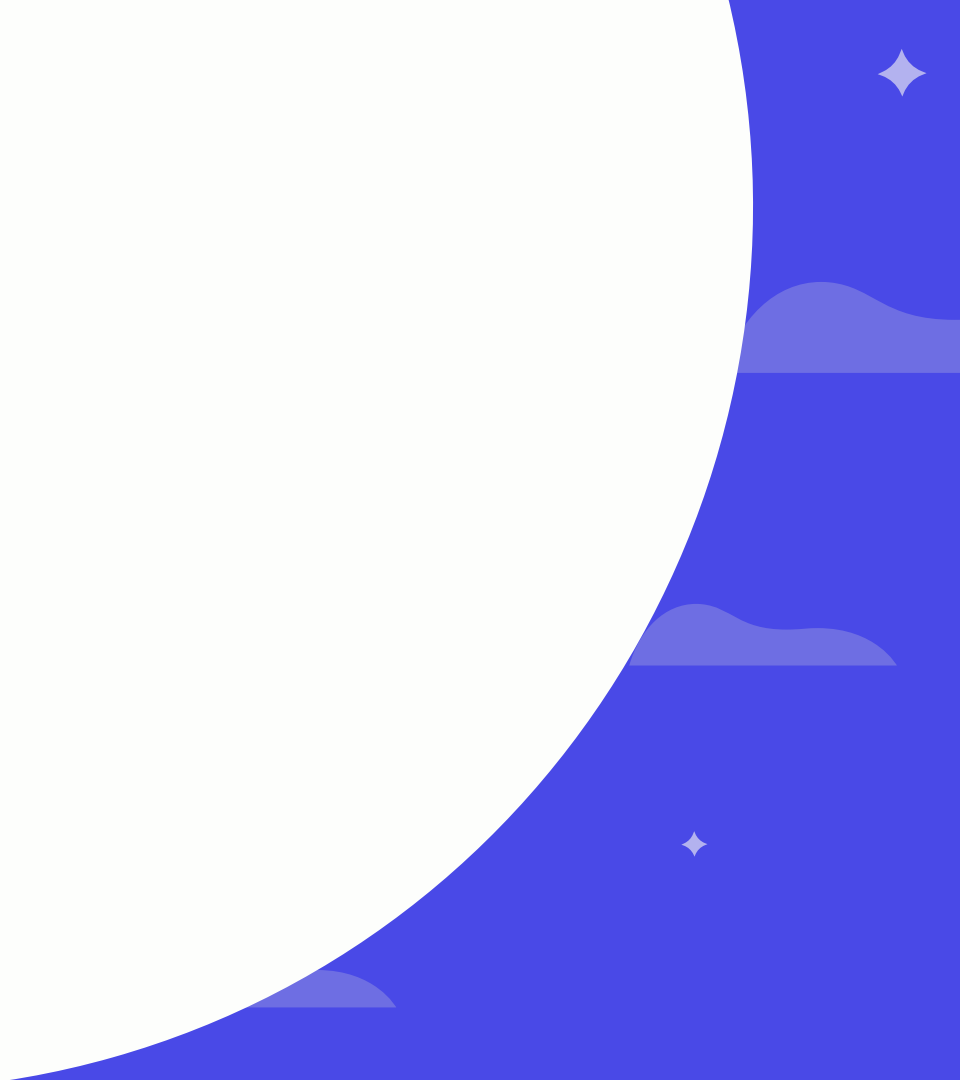
Pre requisites

You will need

- Introduction to smart contracts course
- Metamask installed

Introduction to Tokens

Overview of Tokens in Ethereum



What is a Token

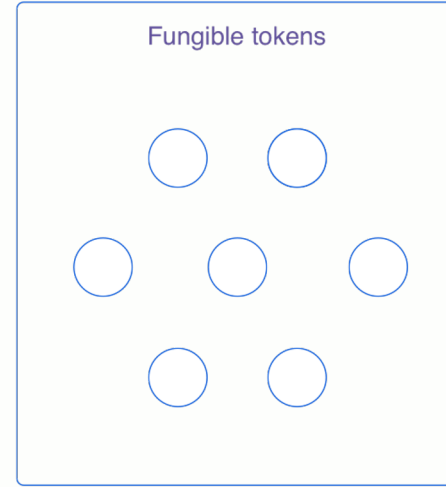
- A **token** is a digital asset, that represents any other asset on a digital ledger
- For example:
 - car
 - trade
 - title deeds
 - energy

Types of Token

- Fungible token
- Non fungible token (NFT)

Fungible tokens

- Non unique
- Divisible
- Interchangeable



Fungible tokens

- Non unique
- Divisible
- Interchangeable



Non fungible tokens

- Unique
- Non divisible



Non fungible tokens

- Unique
- Non divisible



Token standards: ERC-20

EIP-20: ERC-20 Token Standard <>

Author	Fabian Vogelsteller , Vitalik Buterin
Status	Final
Type	Standards Track
Category	ERC
Created	2015-11-19

<https://eips.ethereum.org/EIPS/eip-20>

Note: New versions of the standard are under discussions, for instance [ERC-777](#)

Token standards: ERC-721

EIP-721: ERC-721 Non-Fungible Token Standard ↔

Author	William Entriken , Dieter Shirley , Jacob Evans , Nastassia Sachs
Discussions-To	https://github.com/ethereum/eips/issues/721
Status	Final
Type	Standards Track
Category	ERC
Created	2018-01-24
Requires	165

<https://eips.ethereum.org/EIPS/eip-721>

Token standards: ERC-777

EIP-777: Token Standard <>

Author	Jacques Dafflon, Jordi Baylina, Thomas Shababi
Discussions-To	https://github.com/ethereum/EIPs/issues/777
Status	Final
Type	Standards Track
Category	ERC
Created	2017-11-20
Requires	1820

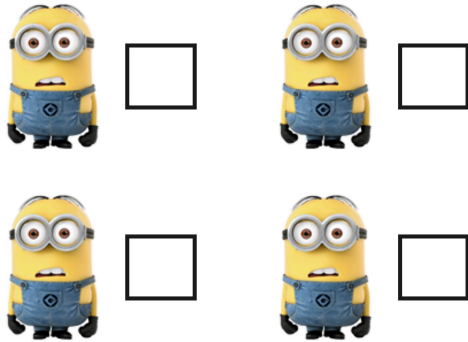
<https://eips.ethereum.org/EIPS/eip-777>

How to create Ethereum tokens

Learning how to create tokens in Ethereum



About tokens



Account	Balance
address 1	# tokens
address 2	# tokens
address 4	# tokens
.	
.	
.	
.	
address N	N # tokens

Exercise 1

Create a minimal token

Exercise 2

Create a standard [ERC-20 token](#)

Exercise 3

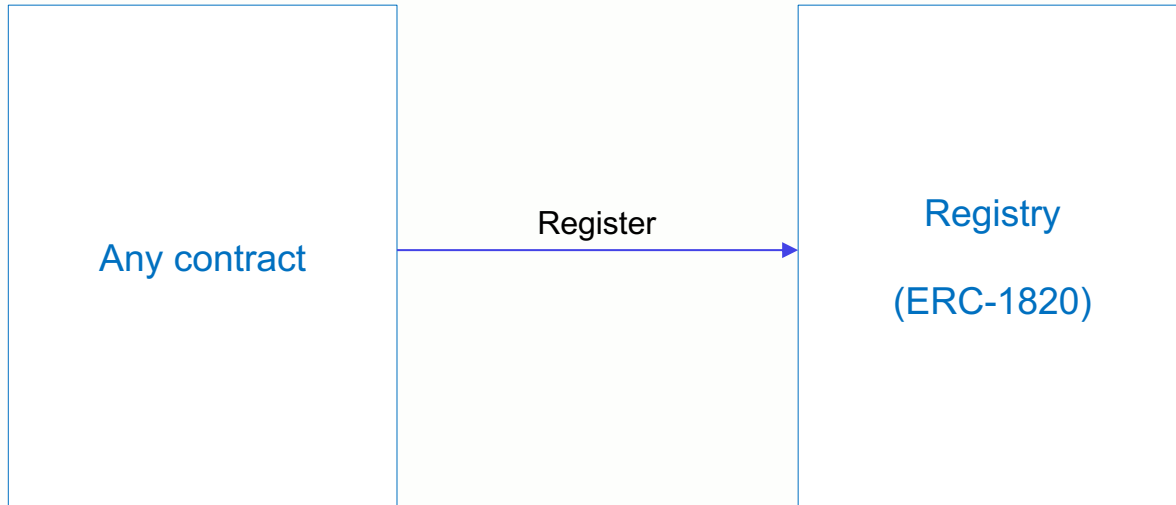
Create a standard ERC-721 token

Exercise 4

Create a standard ERC-777 token

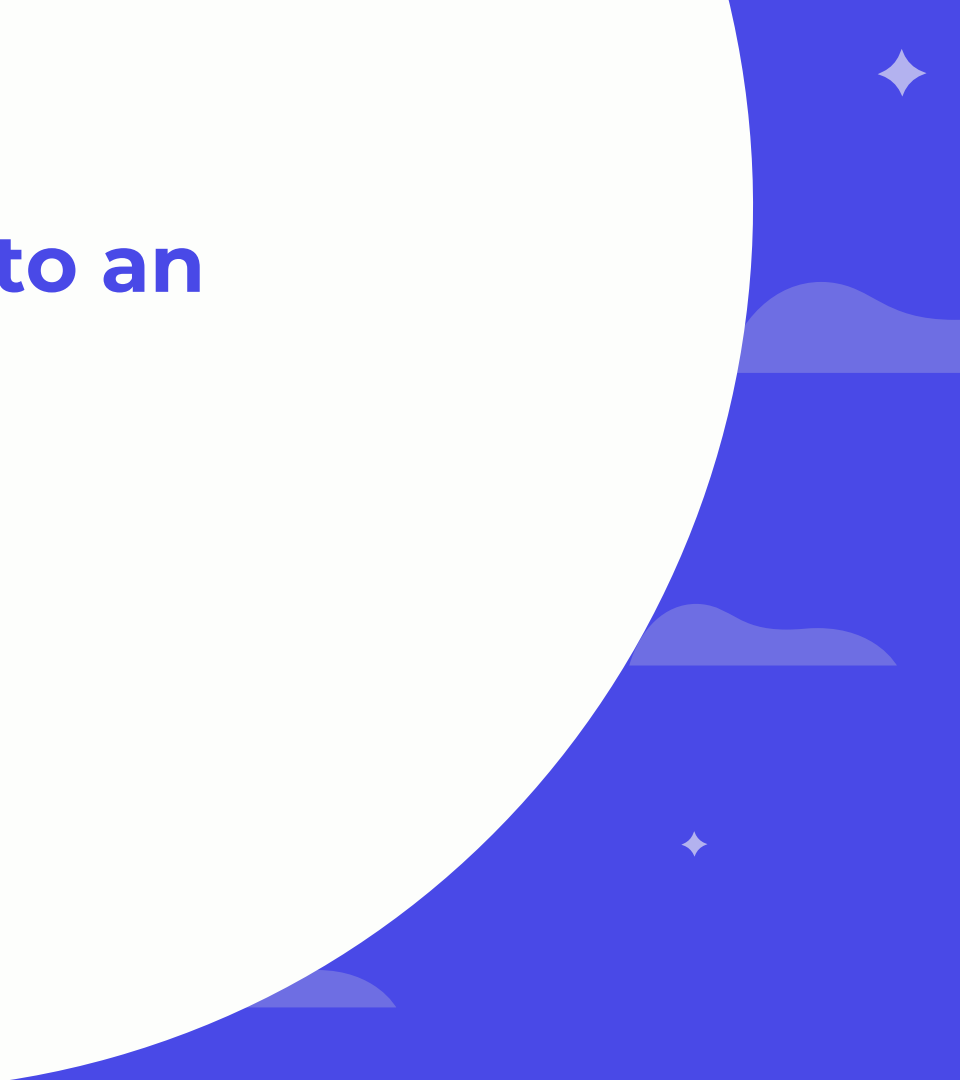
ERC-1820

Any address (contract or regular account) can register which interface it supports.



Deploying Tokens to an Ethereum testnet

Learning how to deploy tokens in Ethereum



Exercise

Deploy the standard ERC-20 token to an Ethereum test network (Rinkeby)

Make transfers between accounts and check its balances

Thanks!

Do you have any questions?

hello@defi-academy.com

