

Introduction to Tokens

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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



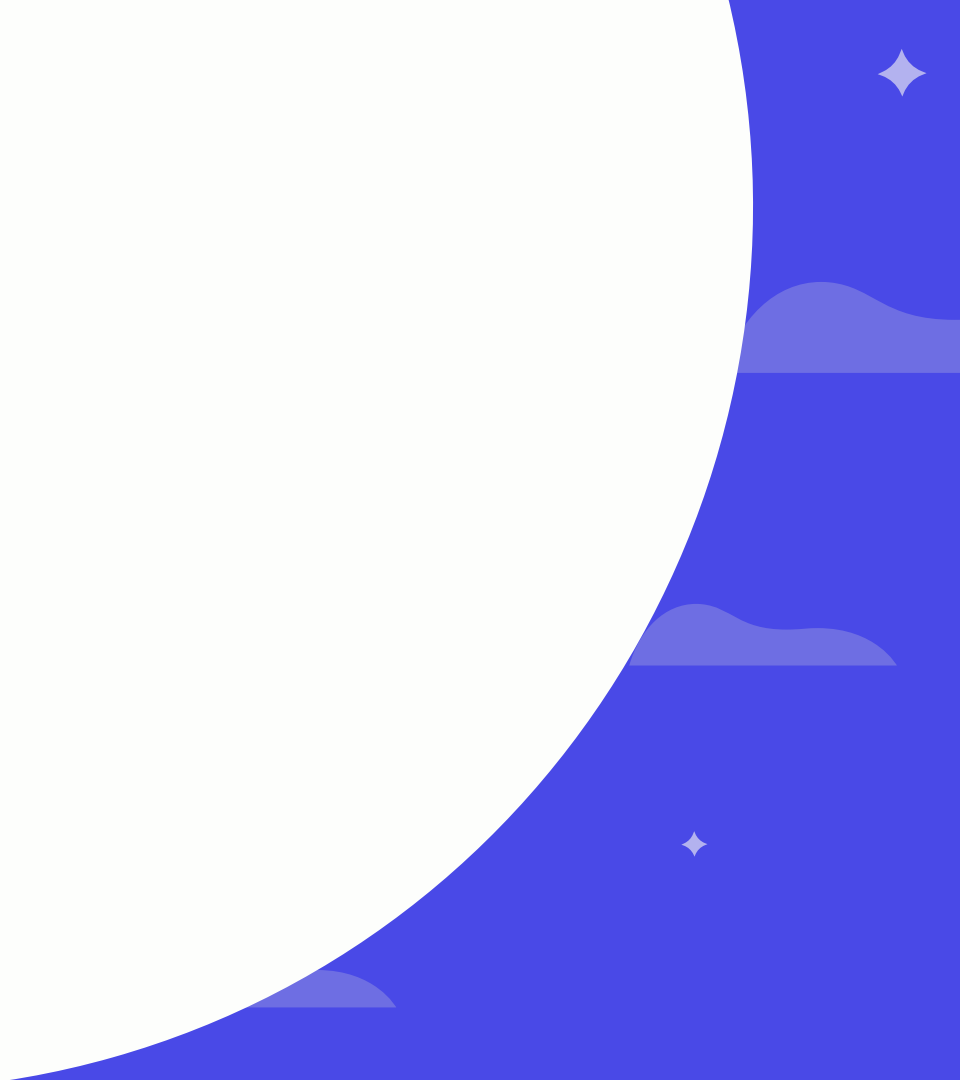
Pre requisites

You will need

- Introduction to smart contracts course
- Metamask installed

Introduction to Tokens

Overview of Tokens in Ethereum



What is a Token

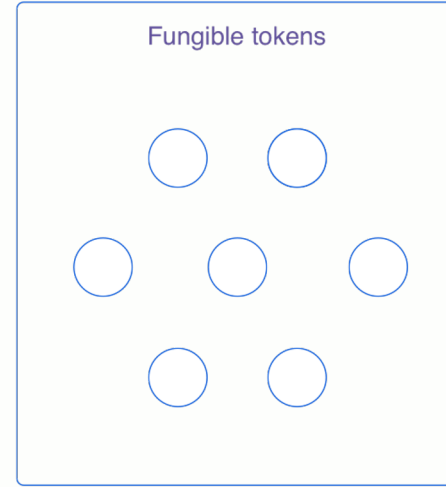
- A **token** is a digital asset, that represents any other asset on a digital ledger
- For example:
 - car
 - trade
 - title deeds
 - energy

Types of Token

- Fungible token
- Non fungible token (NFT)

Fungible tokens

- Non unique
- Divisible
- Interchangeable



Fungible tokens

- Non unique
- Divisible
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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

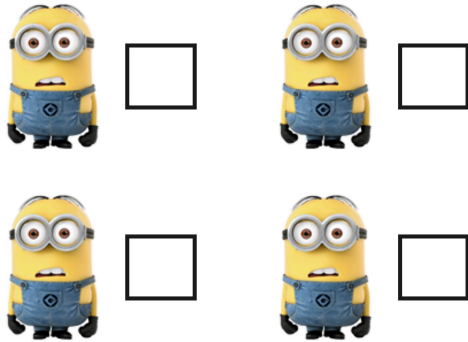
<https://eips.ethereum.org/EIPS/eip-777>

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

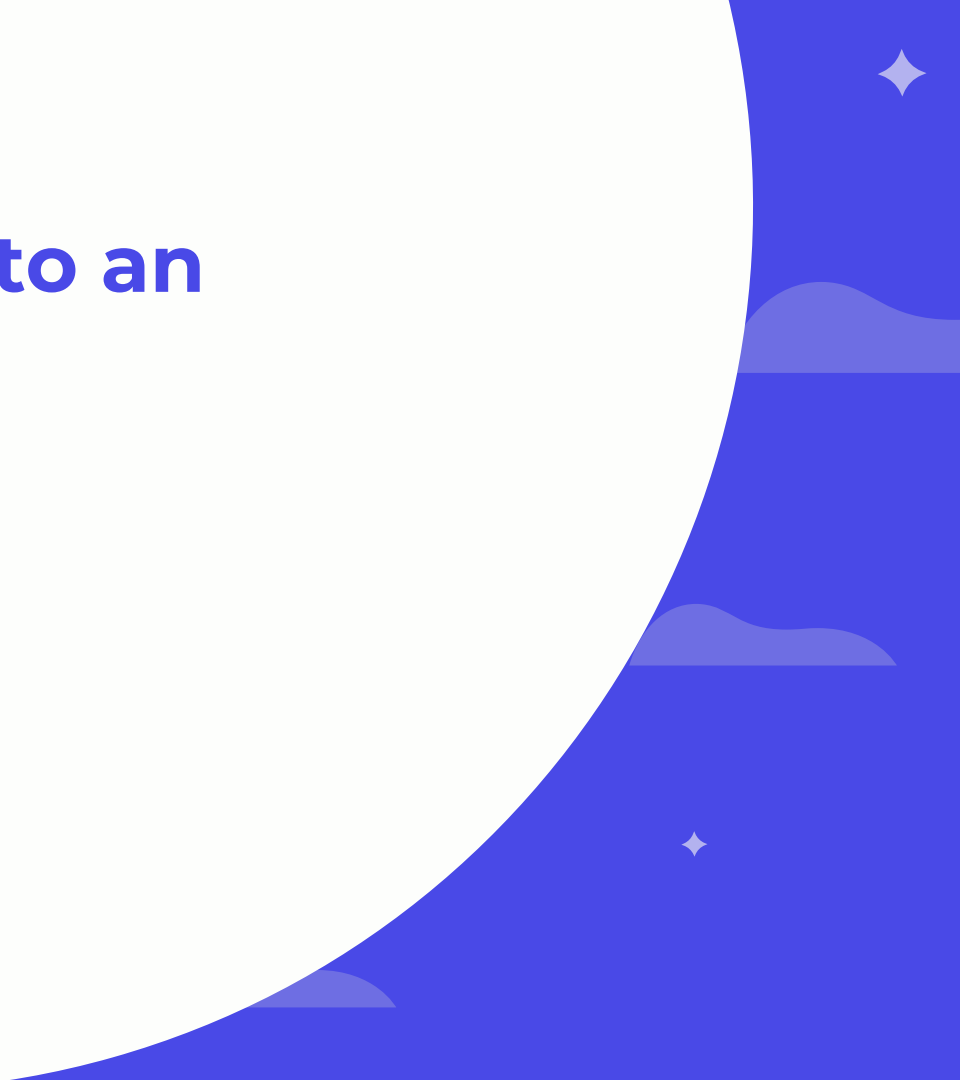
Create a standard ERC-721 token

Exercise 4

Create a standard ERC-777 token

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?

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