



METaverse HQ

Office Hours

Gas & Gas Simulation
w Kaikun26

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-Gas units

-GWEI

-Network fee

-Base fee

-Priority fee

-Max fee

-Gas Limit.



-Gas units

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-Base fee

-Prio fee

-Max fee

-Gas Limit.

Gas units

“Gas refers to the unit that measures the amount of computational effort required to execute specific operations on the Ethereum network.”

– ethereum.org



-Gas units

-GWEI

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Gas units

“Gas refers to the unit that measures the amount of computational effort required to execute specific operations on the Ethereum network.”

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- a) Minting 2 Doodles costs more gas units than minting 1 Doodle.
The former consumes more gas UNITS
- b) Transferring ETH from one address to another costs exactly 21000 gas UNITS.
- c) Token standards such as ERC721 are optimised in their use case.



-Gas units

-GWEI

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Gwei

1 GWEI = a billionth of an ETH. = 10^{-9} ETH

STATEMENT 1

"I paid 9000GWEI" === 0.000009ETH

STATEMENT 2

"I had to send my transaction with a 9000Gwei per gas unit"
network fee === 9000 x (Gas units used)

STATEMENT 1 IS NOT THE SAME AS STATEMENT 2



Network Fees

Network fees are in GWEI per Gas unit.
These are the fees required depending on network demand

EXAMPLE

Sending eth costs 21000 gas units.
Current network fee = 80 GWEI

$$80 * 21000 = 1680000 \text{ GWEI} \Rightarrow 0.00168 \text{ ETH (5.5\$)}$$

Payed amount in eth:

$$\text{Network fee (GWEI per gas unit)} * \text{Gas Units cost} * 10^9.$$



- Gas units
- GWEI
- Network fee
- Base fee
- Prio fee
- Max fee
- Gas Limit

Fees

BASE FEE - This is the minimum fee you're gonna have to pay to send your transaction

PRIORITY FEE - Miner tip. This is an 'optional' fee you can pay to the miner for your transaction to be prioritised from others.

MAX GAS - Maximum GWEI, per gas unit you are willing to pay (includes Base and Prio)

GAS LIMIT - Maximum amount of gas units you are willing to pay for IN your transaction. NOTE: Pay less than you require, you get out of gas error.

Ethereum Next Block — Gas Estimation

powered by the Blocknative Gas Platform API

M

EIP 1559

MORE LIKELY

LESS LIKELY

priority fee
2.00
max fee
88
99% Probability

priority fee
1.52
max fee
87
95% Probability

priority fee
1.50
max fee
87
90% Probability

priority fee
1.23
max fee
87
80% Probability

priority fee
1.07
max fee
87
70% Probability

Pending Block Number: 14537572

Transactions in Pending Block: 36

Max price in pending block: 48

Base Fee: 42.98

View Charts

View API Docs →

Share ↗

Edit gas fee

Gas option	Time	Max fee
Low	30 sec	0.00087... ETH
Market	30 sec	0.00108... ETH
Aggressive	15 sec	0.001137... ETH
Advanced	--	--

40 GWEI
Base fee

1.5 - 11 GWEI
Priority fee

Not busy

Want to learn more about gas?

Advanced gas fee

Max base fee (GWEI)

54,040111298 ≈ \$0.00

Currents: 41.37 GWEI → 12hri: 30.04 - 65.53 GWEI

Priority Fee (GWEI)


1.5 ≈ \$0.00

Currents: 1 - 14.23 GWEI → 12hri: 0 - 72.48 GWEI

☐ Save these new values as my default for "Advanced"

Gas limit 21000 Edit

Save



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ERC721 VS ERC721A



ERC721 Doodles



ERC721 Doodles



ERC721 Doodles

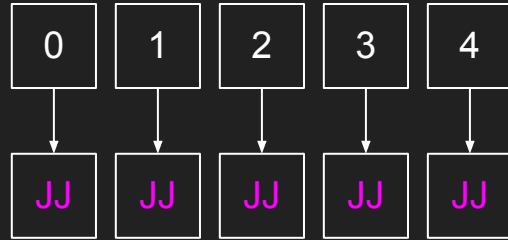
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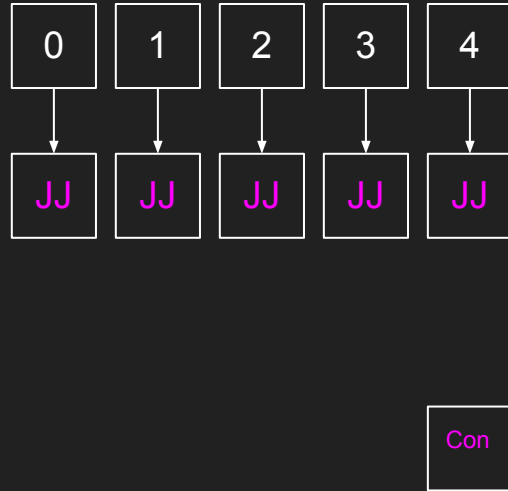
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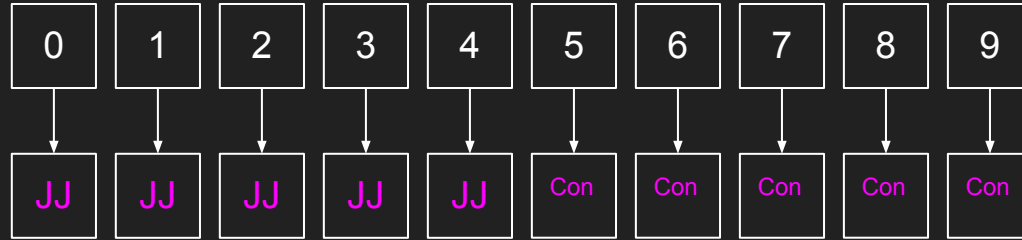
ERC721 Doodles



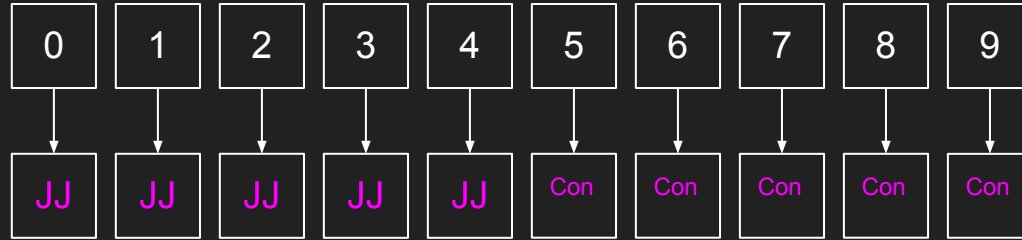
ERC721 Doodles



ERC721 Doodles



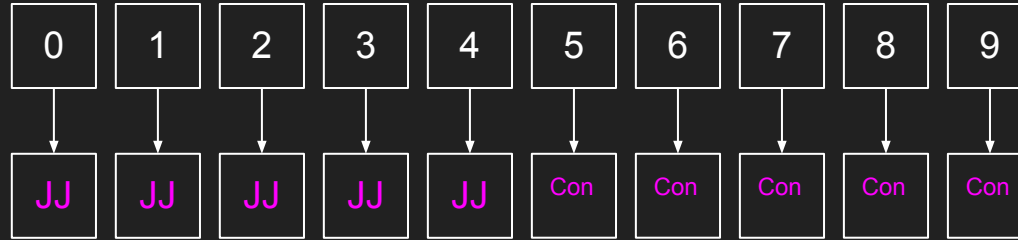
ERC721 Doodles



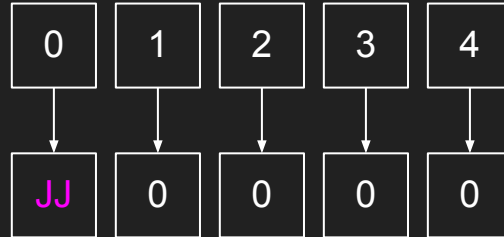
ERC721A Azuki



ERC721 Doodles



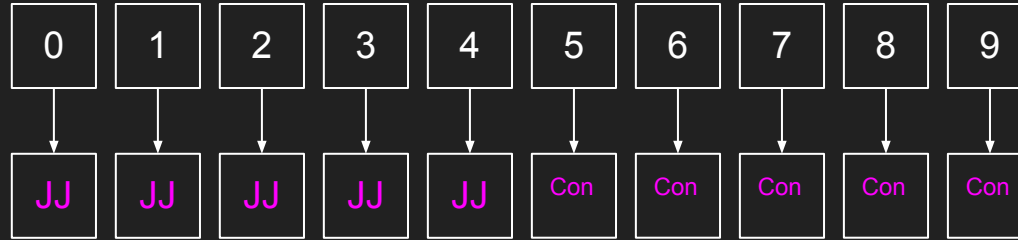
ERC721A Azuki



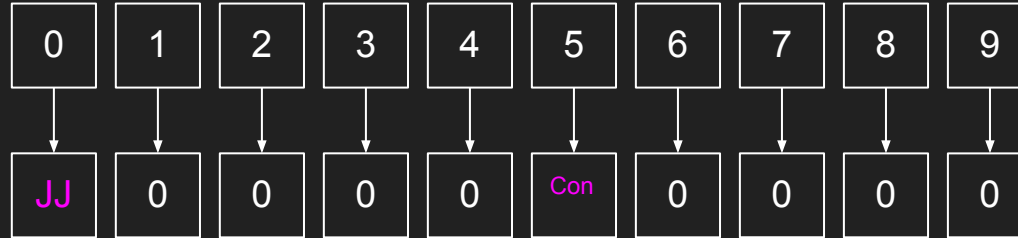
nextTokenID = 5



ERC721 Doodles



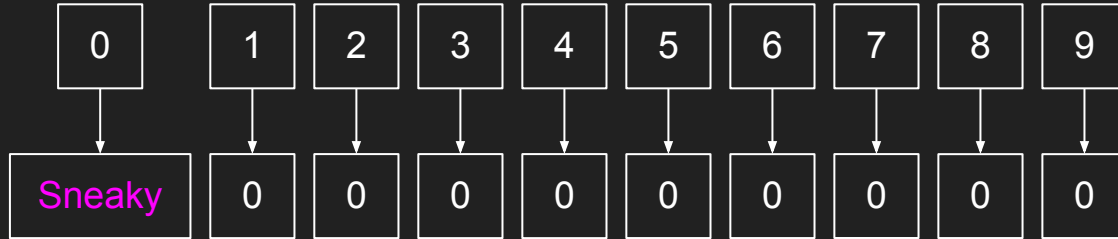
ERC721A Azuki



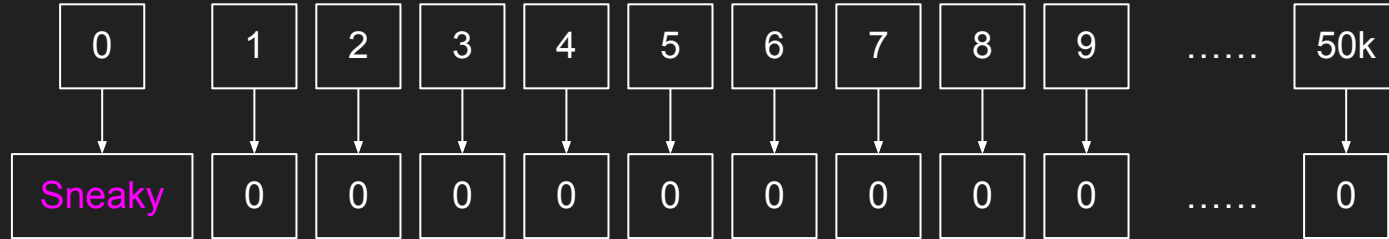
nextTokenID = 10



ERC721A potential problem



ERC721A potential problem



WORKSHOP TIME

Github Repo -

https://github.com/dewindtk/mvhq_officehours_GAS

